APPENDIX H

TRANSPORTATION ANALYSIS







1212 South Winchester Hotel Development



Transportation Analysis

Prepared for:

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Table of Contents

Executive	Summary	
1. Intro	oduction	1
2. Exis	sting Transportation Setting	15
	QA Transportation Analysis	
	cal Transportation Analysis	
	nclusions	
Append		
Appendix	A San Jose VMT Evaluation Tool Output Sheet	
Appendix	B Traffic Counts	
Appendix	C Approved Trips Inventory	
Appendix	Appendix D Volume Summary	
Appendix E Intersection Level of Service Calculations		
Appendix	F Queue Length Calculations	
Appendix	G Signal Warrant Check	
List of	Tables	
Table 1	CEQA VMT Analysis Screening Criteria for Development Projects	
Table 2	Equivalent Retail Space	
Table 3	Project Trip Generation Estimates	
Table 4	Signalized Intersection Level of Service Definitions Based on Control	
Table 5	Intersection Level of Service Results	
Table 6	, , , ,	
Table 7	Freeway Segment Capacity	55
List of I	Figures	
Figure 1	Site Location	2
Figure 2	Proposed Site Plan	3
Figure 3	VMT per Capita Heat Map in San Jose	8
Figure 4	VMT per Job Heat Map in San Jose	9
Figure 5	Low VMT per Capita Areas in San Jose	10
Figure 6	Low VMT per Job Areas in San Jose	11
Figure 7	Existing Bicycle Facilities	17
Figure 8	Existing Transit Services	19
Figure 9	VMT per Employee Heat Map in Project Area	22
Figure 10		
Figure 11	Project Trip Assignment	29
Figure 12	•	
Figure 13		
Figure 14	·	
Figure 15	· · · · · · · · · · · · · · · · · · ·	
Figure 16		
Figure 17		
Figure 18	•	



Figure 19 Cadillac Residential Parking Program......52



Executive Summary

This report presents the results of a Transportation Analysis (TA) for the proposed Winchester Hotel development at 1212-1224 South Winchester Blvd in the City of San Jose. The project site is located along the east side of Winchester Boulevard, approximately 450 feet north of Payne Avenue and within a designated Urban Village (Winchester Boulevard.

As proposed, the development would consist of the replacement of two single-family homes on-site with a 119-room hotel providing a total of 67 off-street parking spaces within a single below grade parking level. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard.

Transportation Analysis Scope

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), the City of Campbell traffic analysis guidelines, and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

CEQA Transportation Analysis Scope

The CEQA transportation analysis for the project consists of a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

Local Transportation Analysis Scope

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential multi-modal issues) at intersections in the general vicinity of the project site. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

CEQA VMT Analysis

CEQA Transportation Analysis Exemption Criteria

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are



based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

Since the characteristics of the proposed hotel would have similar trip generating characteristics to retail space, the proposed hotel was converted into an equivalent amount of retail space based on trip generation estimates derived utilizing trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* (2017). Based on the hotel rooms to retail space conversion, the proposed hotel project is expected to generate traffic equivalent to approximately 38,600 square feet of retail space.

Per the City of San Jose VMT screening criteria, retail projects of 100,000 square feet or less are considered local-serving. Therefore, the proposed hotel does not require a detailed CEQA VMT analysis.

Cumulative (GP Consistency) Evaluation

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The project site is located within the Winchester Boulevard Urban Village. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan. The project is consistent with the General Plan and Winchester Boulevard Urban Village goals and policies for the following reasons:

- The project frontage along Winchester Boulevard will be consistent with planned streetscape design features of Grand Boulevards and the Winchester Boulevard Urban Village Plan.
- The project frontage along Winchester Boulevard will be designed to accommodate the planned Winchester Boulevard Complete Street improvements including protected bicycle lanes, wider sidewalks, and other pedestrian safety features.
- The project site is adjacent to bus stops and bicycle lanes on Winchester Boulevard.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as 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 Analysis

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric.

The LTA includes the analysis of AM and PM peak-hour traffic conditions for four signalized and one unsignalized intersections, following the standards and methodology set forth by the Cities of San Jose and Campbell.

Trip Generation

After applying the ITE trip rates, and appropriate trip reductions, it is estimated that the project would generate an additional 1,455 daily vehicle trips, with 64 trips (37 inbound and 27 outbound) occurring



during the AM peak hour and 75 trips (37 inbound and 38 outbound) occurring during the PM peak hour.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the Cities of San Jose and Campbell, and CMP intersection operations standard of LOS D and E, respectively, under background conditions, background plus project, and cumulative plus project conditions during both the AM and PM peak hours.

I-280/Winchester Boulevard Interchange Area Transportation Development Policy

The TDP provides partial funding, via a traffic impact fee imposed on proposed development, for the implementation of a new westbound off-ramp from I-280 to Winchester Boulevard to reduce traffic congestion at the I-880/Stevens Creek and Stevens Creek Boulevard corridors. The traffic fee is based on the estimated trips to be added to the new westbound off-ramp from I-280 to Winchester Boulevard during the PM peak hour by each individual development. It is estimated that the proposed project will result in the addition of four PM peak hour trips to the planned I-280 to Winchester Boulevard ramp.

Site Access and On-Site Circulation

Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Recommended Site Access and On-Site Circulation Improvements

<u>Winchester Complete Street Improvements.</u> The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks.
- In order to close the sidewalk gap on the east side of Winchester Boulevard, it is recommended that the City staff work with the owner of the adjacent property to the north to install a sidewalk per City design standards.

Adhere to City of San Jose Design Standards and Guidelines. The design of the project site, including but not limited to driveways, sidewalks, corner radii, street width, parking dimensions, and signage, should adhere to City of San Jose design standards and guidelines. Specific site access and on-site circulation recommended improvements are summarized below:

- In addition to providing a 20-foot sidewalk along the project frontage, the site driveway design
 must ensure the safe travel of pedestrians and bicyclists along Winchester Boulevard.
 Appropriate visible and/or audible warning signals should be provided at the garage entrance to
 alert pedestrians and bicyclists of vehicles exiting the parking garage.
- The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to final design.
- It is recommended that the parking spaces located at the end of the dead-end aisle be dedicated for employee use.



- In lieu of providing off-street loading spaces, it is recommended that the project applicant work with City staff to determine the feasibility of providing a public loading zone on Winchester Boulevard along the project frontage.
- The City may not be supportive of the proposed loading zone along Winchester Boulevard and may require that the loading area be moved on-site. The project should work with the City to determine the feasibility of the proposed passenger loading zone on Winchester Boulevard.
- The site should provide time restricted parking spaces on-site for guest check-in and a valet drop-off/pick-up area that can accommodate the storing of at least two vehicles.

Parking Supply

Vehicular Parking

The City's parking requirements for hotels are as follows: one parking space per room and one parking space per employee. The project would have 119 rooms and a maximum of 10 employees on-site. Based on the City's parking code requirements, the project would need to provide a total of 129 off-street parking spaces. The project is located in the Winchester Boulevard Urban Village. The Urban Village Overlay allows for a 20 percent reduction in parking with the implementation of a Transportation Demand Management (TDM) plan. With the 20 percent reduction, the required parking would be reduced to 104 parking spaces. The project proposes a total of 67 parking spaces, which is a 52 percent reduction from the City's standard parking requirements.

In accordance with Sections 20.70.330 and 20.90.220 of the San Jose Code of Ordinances, which allows up to a 50% parking reduction, the additional 32 percent reduction could be allowed with the implementation and maintenance of a TDM plan. A separate TDM plan for the proposed project that meets the requirements set forth in the City's Zoning Code will be prepared by Hexagon. The project will be required to submit and have approved by the City its TDM program.

Bicycle Parking

According to the City's Bicycle Parking Standards, the project is required to provide 13 bicycle parking spaces. The project site plan indicates that two bicycle storage areas will be located within the basement level of the parking garage. The storage areas are shown to provide space for a total of 27 bicycles. Therefore, the proposed bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking.

Pedestrian, Bicycle, and Transit Analysis

Pedestrian Facilities

Existing sidewalks along Winchester Boulevard provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Crosswalks with pedestrian signal heads are located at the signalized intersection of Winchester Boulevard and Payne Avenue. All of the roadways in the vicinity of the project site have sidewalks on both sides of the street, except a short segment on the east side of Winchester Boulevard along the frontages of the project site and one adjacent property to the north. The project will install a 20-foot sidewalk along its frontage on Winchester Boulevard. However, in order to close the sidewalk gap on the east side of Winchester Boulevard, it is recommended that the City staff work with the owner of the adjacent property to the north to install a sidewalk per City design standards.



Bicycle Facilities

The bikeways within the vicinity of the project site would remain unchanged under project conditions. Currently, no bike facilities exist on Winchester Boulevard between Payne Avenue and Moorpark Avenue that would provide connections to other bicycle facilities in the project vicinity.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Winchester Boulevard, between Payne Avenue and Moorpark Avenue
- Cypress Avenue, between Williams Road and Moorpark Avenue

Class III bike routes are planned for:

- Payne Avenue, between Winchester Boulevard and Greenbriar Avenue
- Greenbriar Avenue, between Payne Avenue and Westfield Avenue
- Westfield Avenue, between Greenbriar Avenue and Daniel Way

Transit Services

The project site is adequately served by the existing VTA transit services. The nearest bus stop to the project site are located at the Winchester Boulevard/Payne Avenue intersection approximately 400 feet from the project site and are served by Route 60. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

As a Grand Boulevard it is envisioned that Winchester Boulevard could potentially be included in the VTA Bus Rapid Transit (BRT) System. However, there are no plans at this time for a BRT line on Winchester Boulevard.



1. Introduction

This report presents the results of a Transportation Analysis (TA) for the proposed Winchester Hotel development at 1212-1224 South Winchester Blvd in the City of San Jose. The project site is located along the east side of Winchester Boulevard, approximately 450 feet north of Payne Avenue and within a designated Urban Village (Winchester Boulevard). According to the Envision San Jose 2040 General Plan, the Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

As proposed, the development would consist of the replacement of two single-family homes on-site with a 119-room hotel providing a total of 67 parking spaces. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard. The project site location, the surrounding study area, and the Winchester Boulevard Urban Village boundary are shown on Figure 1. The project site plan is shown on Figure 2.

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), the City of Campbell traffic analysis guidelines, and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

Transportation Policies

Historically, transportation analysis has utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to proposed/planned growth. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections and in 2013 passed Senate Bill (SB) 743, which requires jurisdictions to stop using congestion and delay metrics, such as Level of Service (LOS), as the measurement for CEQA transportation analysis. With the adoption of SB 743 legislation, public agencies will soon be required to base the determination of transportation impacts on Vehicle Miles Traveled (VMT) rather than level of service.



Figure 1 Site Location

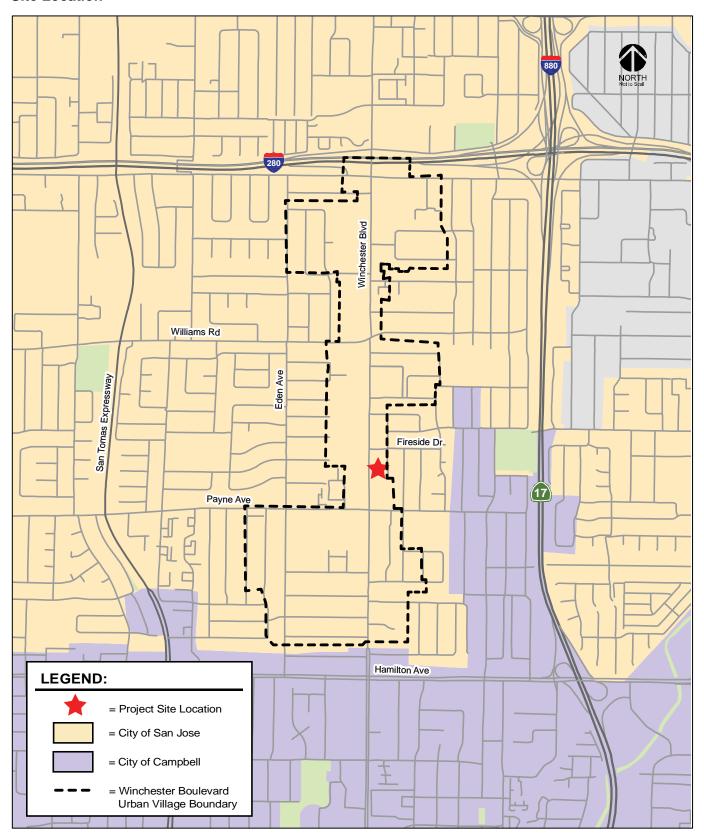




Figure 2 Proposed Site Plan

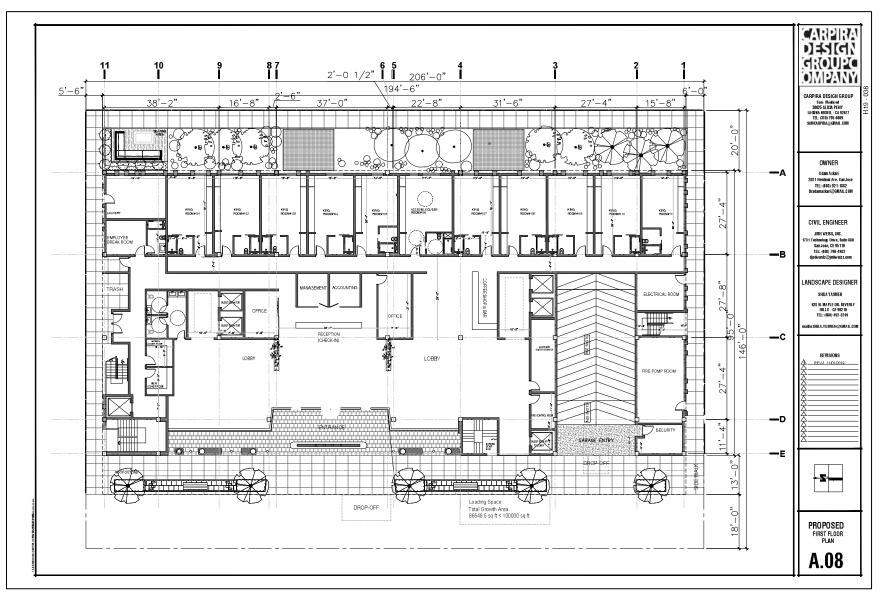
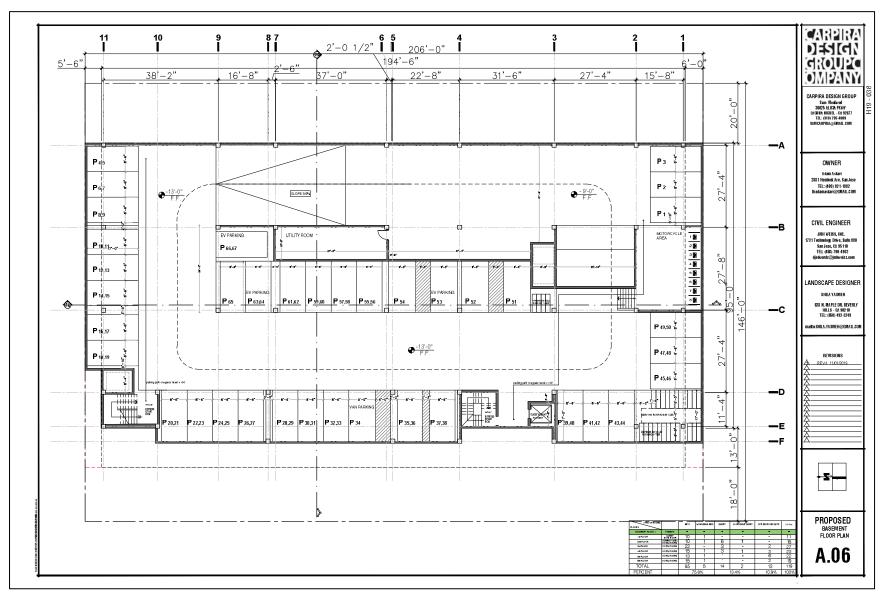




Figure 2 (Cont'd)
Proposed Site Plan (Basement Parking Level)





In adherence to SB 743, the City of San Jose has adopted a new Transportation Analysis Policy, Council Policy 5-1. The policy replaces its predecessor (Policy 5-3) and establishes the thresholds for transportation impacts under the CEQA based on vehicle miles traveled (VMT) instead of levels of service (LOS). The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway auto capacity to a reduction in vehicle emissions, and the creation of robust multimodal networks that support integrated land uses. The new transportation policy aligns with the currently adopted General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and supporting service land uses to internalize trips and reduce VMT. All new development projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1.

The Circulation Element of the *Envision San José 2040 General Plan* includes a set of balanced, long-range, multi-modal transportation goals and policies that provide for a transportation network that is safe, efficient and sustainable (minimizes environmental, financial, and neighborhood impacts). These transportation goals and policies are intended to improve multi-modal accessibility to all land uses and create a city where people are less reliant on driving to meet their daily needs. 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:

- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- 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 biking, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- 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. In addition, require that new development is designed to
 accommodate and to provide direct access to transit facilities (TR-3.3);
- 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 Villages and Corridors and
 other growth areas (TR-8.6);
- Encourage private property owners to share their underutilized parking supplies with the general public and/or other adjacent private developments (TR-8.7);
- 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):
- Encourage all developers to install and maintain trails when new development occurs adjacent
 to a designated trail location. Use the City's Parkland Dedication Ordinance and Park Impact
 Ordinance to have residential developers build trails when new residential development occurs
 adjacent to a designated trail location, consistent with other parkland priorities. Encourage
 developers or property owners to enter into formal agreements with the City to maintain trails
 adjacent to their properties (PR-8.5).

CEQA Transportation Analysis Scope

The CEQA transportation analysis for the project consists of a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

VMT Analysis

The City of San Jose's Transportation Analysis Policy 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 established 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.

Typically, development projects that are farther from other, complementary land uses (such as a business park far from housing) and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options. Therefore, developments located in a central business district with high density and diversity of complementary land uses and frequent transit services are expected to internalize trips and generate shorter and fewer vehicle trips than developments located in a suburban area with low density of residential developments and no transit serve in the project vicinity.

VMT Evaluation Tool

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 development projects. For non-residential or non-office projects, very large projects, or projects that can potentially shift travel patterns, the City's Travel Demand Model can be used to determine project VMT.

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 project area. Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT 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 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. Figures 3 and 4 show the current VMT levels estimated by the City's travel demand model. Areas are color-coded based on the level of existing VMT:

- Green-filled areas are parcels with existing VMT less than the City's residential and employee
 thresholds of 10.12 VMT per capita and 12.21 per employee. The thresholds are calculated by
 subtracting 15 percent from the citywide average of 11.91 VMT per capita and regional average
 of 14.37 per employee.
- Yellow-filled areas are parcels with existing VMT between the residential and employee thresholds and the city-wide average of 11.91 VMT per capita and regional average 14.37 VMT per employee.
- Orange-filled areas are parcels with existing VMT greater than the residential and employee thresholds. However, a project's VMT impact may be mitigated by implementing VMT-reducing measures.
 - Red-filled areas are parcels with existing VMT greater than the residential and employee threshold. Implementing VMT-reducing measures will not be sufficient to reduce a project's VMT to less than the threshold of significance.

Average per-capita and per-employee VMT for all the existing developments within ½ mile buffer of each parcel in the City serves as the baseline from which a project is evaluated. The VMT in the proposed project site vicinity is presented in further detail in Chapter 3.

Screening for VMT Analysis

The City's VMT methodology includes screening criteria that are used to identify types, characteristics, and/or locations of projects that would not exceed the CEQA thresholds of significance. If a project or a component of a mixed-use project meets the screening criteria, it is then presumed that the project or the component would result in a less-than-significant VMT impact and a VMT analysis is not required. The type of development projects that may meet the screening criteria include the following:

- (1) small infill projects
- (2) local-serving retail
- (3) local-serving public facilities
- (4) projects located in Planned Growth Areas with low VMT and High-Quality Transit
- (5) deed-restricted affordable housing located in Planned Growth Areas with High-Quality Transit

Figures 5 and 6 identify areas within the City that currently have low VMT levels estimated by the City for residents and workers, respectively, for which transit supportive development located within a priority growth area would be screened out of the evaluation of VMT. Table 1 summarizes the screening criteria that must be considered for each type of development project as identified in the City of San Jose Transportation Analysis Handbook.

For the purpose of VMT evaluation, hotel rooms are converted to equivalent retail space to provide an estimate of similar trip-making characteristics (origin and destination of trips). Per the City of San Jose VMT screening criteria, retail projects of 100,000 square feet or less are considered local-serving. Based on the hotel rooms to retail space conversion, the proposed hotel project is expected to generate traffic equivalent to 38,600 square feet of retail space. Therefore, the proposed hotel will be less than the 100,000 s.f. retail threshold screening criterion for local-serving retail and does not require a detailed CEQA transportation analysis, as described in further detail in Chapter 3.



Figure 3 VMT per Capita Heat Map in San Jose

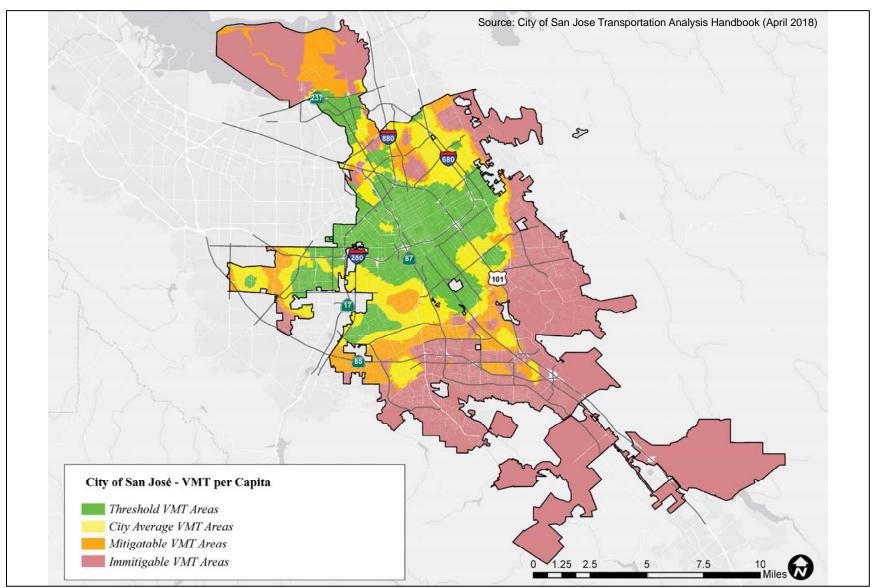




Figure 4 VMT per Job Heat Map in San Jose

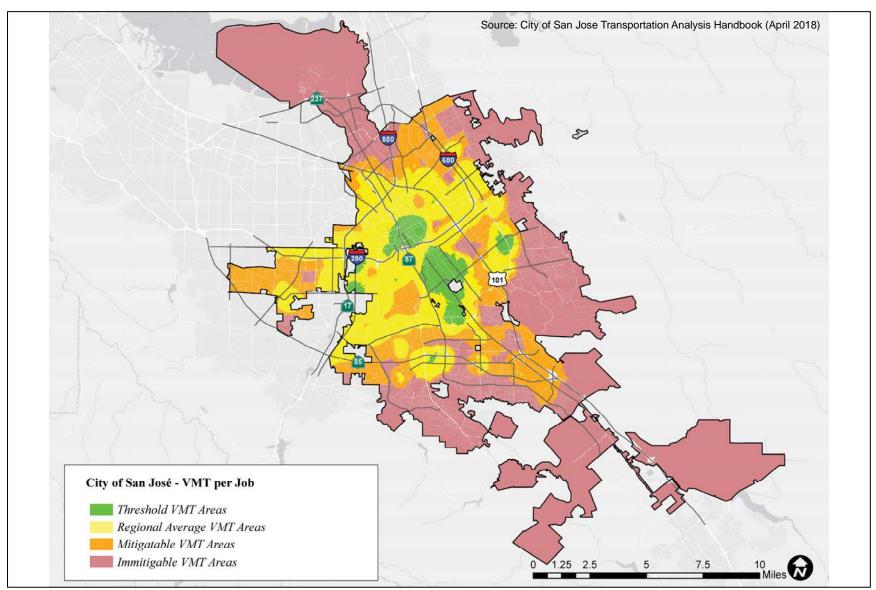




Figure 5 Low VMT per Capita Areas in San Jose

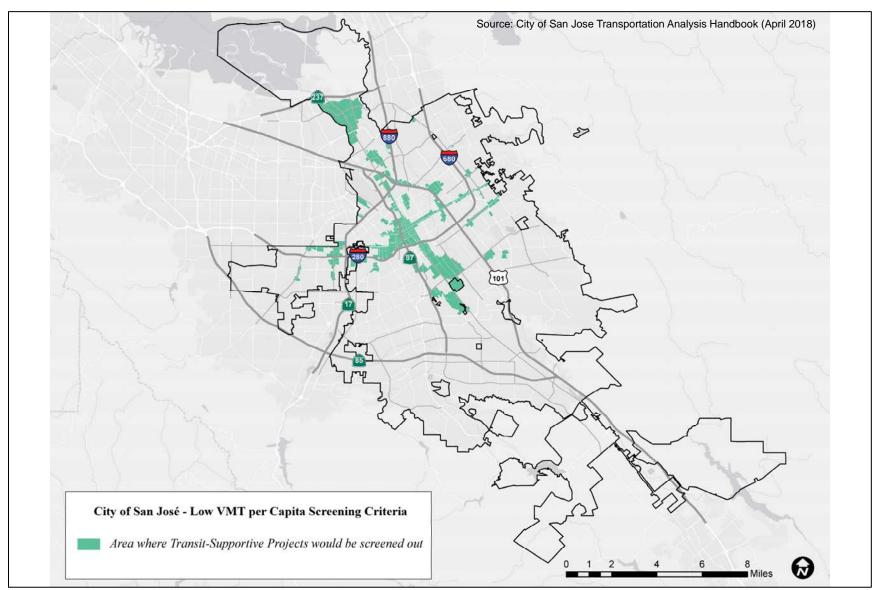




Figure 6 Low VMT per Job Areas in San Jose

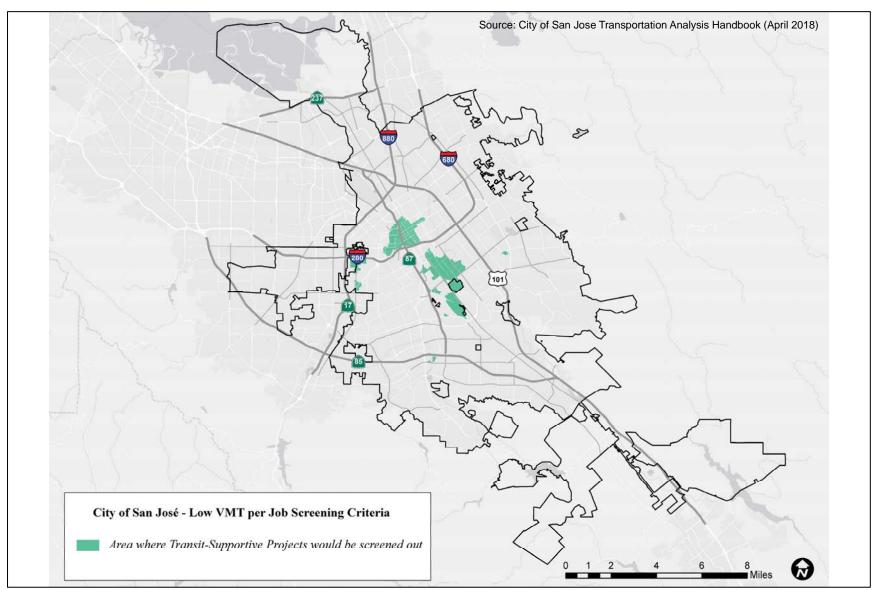




Table 1
CEQA VMT Analysis Screening Criteria for Development Projects

Screening Criteria				
Single-family detached housing of 15 units or less; <u>OR</u> Single-family attached or multi-family housing of 25 units or less; <u>OR</u> Office of 10,000 square feet of gross floor area or less; <u>OR</u> Industrial of 30,000 square feet of gross floor area or less				
100,000 square feet of total gross floor area or less without drive-through operations				
Local-serving public facilities				
 Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan; AND High-Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high-quality transit corridor; AND Low VMT: Located in an area in which the per capita VMT is less than or equal to the CEQA significance threshold for the land use; AND Transit-Supporting Project Density: Minimum Gross Floor Area Ratio (FAR) of 0.75 for office projects or components; Minimum of 35 units per acre for residential projects or components; If located in a Planned Growth Area that has a maximum density below 0.75 FAR or 35 units per acre, the maximum density allowed in the Planned Growth Area must be met; AND Parking: No more than the minimum number of parking spaces required; If located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure. 				
 Affordability: 100% restricted affordable units, excluding unrestricted manager units; affordability must extend for a minimum of 55 years for rental homes or 45 years for for-sale homes; AND Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan; AND High Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high quality transit corridor; AND Transit-Supportive Project Density: Minimum of 35 units per acre for residential projects or components; If located in a Planned Growth Area that has a maximum density below 35 units per acre, the maximum density allowed in the Planned Growth Area must be met; AND Transportation Demand Management (TDM): If located in an area in which the per capita VMT is higher than the CEQA significance threshold, a robust TDM plan must be included; AND Parking: No more than the minimum number of parking spaces required; If located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure. 				

Source: City of San José Transportation Analysis Handbook, April 2018.



Local Transportation Analysis Scope

A local transportation analysis (LTA) supplements the CEQA VMT analysis and identifies transportation and traffic operational issues that may arise due to a development project. The LTA includes an evaluation of the effects of the project on transportation, access, circulation, and related safety elements in the proximate area of the project.

Intersection Operations Analysis

The evaluation of a project's impact on level of service at intersections under the jurisdiction of the City of San Jose is no longer required. Per Senate Bill (SB) 743 and the updated CEQA Guidelines. (Section 15064.3) Nov 2017, beginning July 1, 2020 the use of intersection level of service as a metric for determining impacts of development growth on the transportation system will no longer be permitted. Therefore, the identification of level of service impacts in adjacent jurisdictions due to the development within San Jose, would not be consistent with the updated CEQA guidelines nor current City of San Jose transportation Policy.

However, since the VTA's Congestion Management Program (CMP) and City of Campbell have yet to adopt and implement guidelines and standards for the evaluation of transportation impacts using VMT, the effects of the proposed project traffic on the CMP-designated intersection of Winchester Boulevard and Hamilton Avenue within the City of Campbell and freeway segments in the vicinity of the project area were evaluated following the current peak-hour LOS standards and methodologies as outlined in the VTA Transportation Impact Analysis Guidelines and City of Campbell traffic analysis guidelines. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential multi-modal issues) at intersections in the general vicinity of the project site.

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 weekday traffic congestion occurs on the roadways in the study area.

Intersection operations conditions were evaluated for the following scenarios:

- Existing Conditions. Existing AM and PM peak hour traffic volumes at all study intersections
 were obtained from the CMP, previously completed traffic studies, and supplemented with new
 turning-movement counts.
- Background Conditions. Background traffic volumes were estimated by adding to existing
 peak hour volumes the projected volumes from approved but not yet completed developments.
 The approved project traffic was provided by the City of San Jose in the form of the Approved
 Trips Inventory (ATI) and by the City of Campbell in the form of a list of projects.
- 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. Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project.
- **Cumulative Conditions**. Cumulative traffic volumes reflect projected traffic volumes on the planned roadway network with completion of the pending developments in the area as well as



the proposed project and approved developments. Lists of pending projects in the vicinity was provided by the Cities of San Jose and Campbell.

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

Report Organization

The remainder of this report is divided into four chapters. Chapter 2 describes existing transportation system including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the CEQA transportation analysis, including VMT analysis methodology, baseline and potential project VMT impacts, and potential cumulative transportation impacts. Chapter 4 describes the LTA including the method by which project traffic is estimated, intersection operations analysis methodology, any adverse intersection traffic 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 Transportation Setting

This chapter describes the existing conditions of the transportation system within the study area of the project. It describes transportation facilities in the vicinity of the project site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via SR 17 and I-280. These facilities are described below.

SR 17 is a six-lane freeway in the vicinity of the site. It extends from Santa Cruz to I-280 in San Jose, at which point it makes a transition to I-880 to Oakland. Access to the site is provided via its interchange with Hamilton Avenue.

I-280 is an eight-lane freeway in the vicinity of the site. It extends northwest to San Francisco and east to King Road in San Jose, at which point it makes a transition to I-680 to Oakland. North of I-880, I-280 has high occupancy vehicle (HOV) lanes in both directions. Access to and from northbound I-280 to the site is provided via its interchange with Winchester Boulevard and via SR 17 to Hamilton Avenue.

Local access to the site is provided by Winchester Boulevard, Moorpark Avenue, Williams Road, Payne Avenue, Hamilton Avenue, San Tomas Expressway, and Eden Avenue. These roadways are described below.

Winchester Boulevard is a divided six-lane north-south roadway that runs from Los Gatos to Lincoln Street in Santa Clara. In the project vicinity, Winchester Boulevard is considered a "Main Street" based on the City's General Plan 2040 Street Typologies and has a posted speed limit of 35 mph with sidewalks on both sides of the street and on-street bike lanes between I-280 and Stevens Creek Boulevard. Direct access to and from the project site is provided via a right-in/right-out only driveway along Winchester Boulevard.

Moorpark Avenue is a four-lane east-west roadway that runs from Lawrence Expressway to Bascom Avenue. Moorpark Avenue is considered a "City Connector Street" based on the City's General Plan 2040 Street Typologies. East of Bascom Avenue, Moorpark Avenue makes a transition into a three-lane one-way roadway to Leigh Avenue. Moorpark Avenue provides access to the project site via Winchester Boulevard.

Williams Road is a two-lane east-west roadway in the vicinity of the project site. It extends east from Moorpark Avenue to South Daniel Way, just east of Winchester Boulevard and is considered as "On-Street Primary Bicycle Facility" based on the City's General Plan 2040 Street Typologies. Williams Road provides access to the project site via Winchester Boulevard.



Payne Avenue is a two-lane east-west roadway in the vicinity of the project site. It extends east from Saratoga Avenue to Almarida Drive, just east of Winchester Boulevard and is considered a "Local Connector Street" based on the City's General Plan 2040 Street Typologies. Payne Avenue provides access to the project site via Winchester Boulevard.

Hamilton Avenue is a six-lane east-west roadway between Marathon Drive and Leigh Avenue. West of Marathon Drive, Hamilton Avenue narrows to a four-lane roadway and extends west to Campbell Avenue. East of Leigh Avenue, Hamilton Avenue narrows to a four-lane roadway and extends west to Meridian Avenue. Hamilton Avenue provides access to the project site via Winchester Boulevard.

San Tomas Expressway is a north-south expressway that begins at its interchange with US 101 and extends southward through Santa Clara and San Jose and into Campbell, where it transitions into Camden Avenue at SR 17. San Tomas Expressway provides access to and from the project site via Williams Road and Payne Avenue.

Eden Avenue is a two-lane north-south roadway in the vicinity of the project site. It extends north from Hamilton Avenue to Moorpark Avenue. Eden Avenue provides access to the project site via Williams Road and Payne Avenue.

Existing Bicycle and Pedestrian Facilities

Class II Bikeway (Bike Lane). Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Within the vicinity of the project site, striped bike lanes are present on the following roadway segments.

- Winchester Boulevard, between Hamilton Avenue and Payne Avenue
- Hamilton Avenue, west of SR 17
- · Payne Avenue, west of Winchester Boulevard
- Williams Road, west of Baywood Avenue
- Moopark Avenue, west of Thornton Way
- Monroe Street, between Tisch Way and Stevens Creek Boulevard
- Winchester Boulevard, between Tisch Way and Stevens Creek Boulevard

Class III Bikeway (Bike Route). Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. In the vicinity of the project site, the following roadway segments are designated as bike routes.

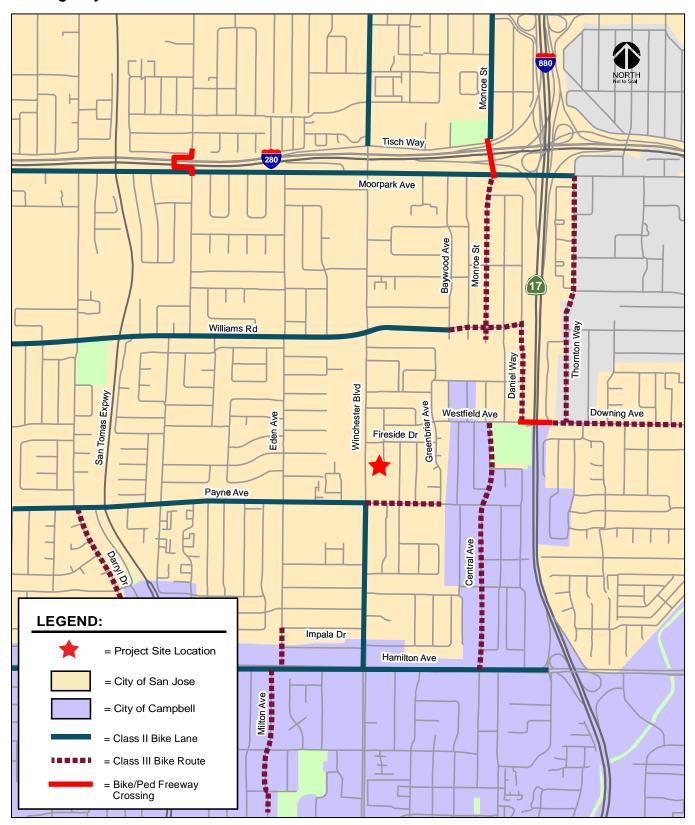
- Payne Avenue, between Winchester Boulevard and Greenbriar Avenue
- Eden Avenue, between Impala Drive and Hamilton Avenue
- Milton Avenue, south of Hamilton Avenue
- Darryl Drive, between Hamilton Avenue and Payne Avenue
- Monroe Street, between Moopark Avenue and Williams Road
- Williams Road, between Baywood Avenue and Daniel Way
- Daniel Way, between Williams Road and Westfield Avenue
- Thornton Way, between Moorpark Avenue and Downing Avenue
- Central Avenue, bewteen Hamilton Avenue and Westfield Avenue
- Downing Avenue, east of SR 17

Although none of the residential streets near the project site provide bike lanes or are designated as bike routes, due to their low traffic volumes, many of them are conducive to bicycle usage. The existing bicycle facilities are shown in Figure 7.

The locations of three pedestrian footbridge crossings over freeways in vicinity of the project site are listed below and shown in Figure 7.



Figure 7
Existing Bicycle Facilities





- SR 17 pedestrian footbridge connecting Westfield Avenue and Downing Avenue
- I-280 pedestrian footbridge connecting Moorpark Avenue and Cypress Avenue
- I-280 pedestrian footbridge connecting Moopark Avenue and Tisch Way

Controlled crosswalks across Winchester Boulevard are provided near the project site at the signalized Williams Road and Payne Avenue intersections with Winchester Boulevard. Overall, the existing network of sidewalks and crosswalks provides good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the area.

Existing Transit Services

Existing transit service to the study area is provided by the VTA. The VTA transit services are described below and shown on Figure 8.

VTA Bus Services

The project site is served directly by the following VTA bus routes.

Frequent Route 25 runs from the De Anza College to Alum Rock Transit Center and operates from 5:00 AM to 12:30 AM on weekdays with 15- to 30-minute headways during commute periods. Route 25 operates along Winchester Boulevard and Williams Road in the project area. The closest bus stop is located approximately 2,000 feet north of the project site at the intersection of Winchester Boulevard and Williams Road.

Local Route 56 runs from Lockheed Martin to Tambien Station and operates from 5:00 AM to 10:30 PM on weekdays with 30-minute headways during commute periods. The closest bus stop is located approximately 0.6 mile south of the project site at the intersection of Winchester Boulevard and Hamilton Avenue.

Frequent Route 60 runs from the BART Station in Milpitas to Winchester Station via SJC Airport and operates from 5:00 AM to 12:30 AM on weekdays with 15-minute headways during commute periods. Route 60 operates along Winchester Boulevard in the project area. The closest southbound and northbound bus stops to the project site are located approximately 500 feet south of the project site near the Winchester Boulevard and Payne Avenue intersection.

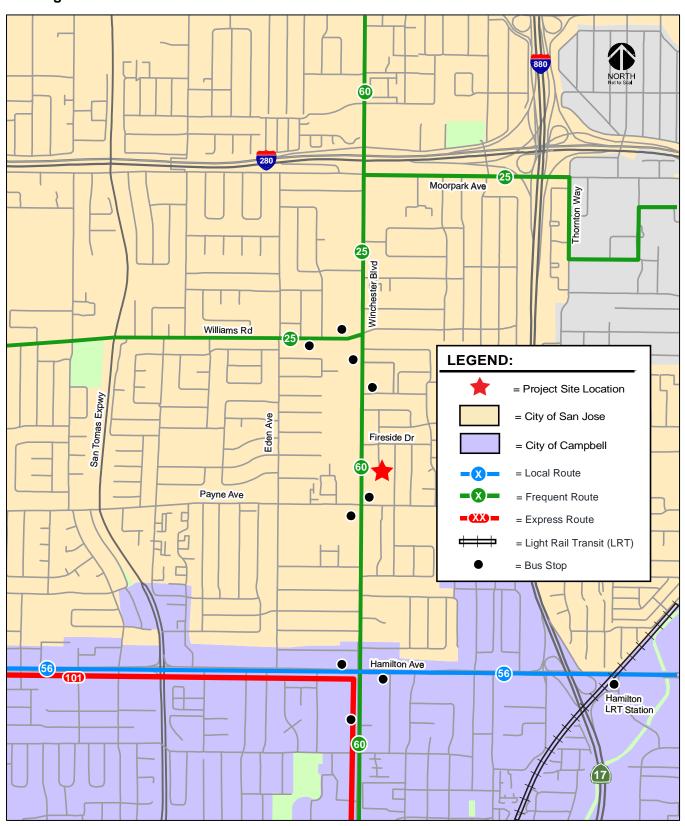
Express Route 101 runs from the Camden Avenue near Highway 85 to Stanford Research Park in Palo Alto and operates two northbound trips during the morning commute period and two southbound trips during the afternoon commute period with 50- to 60-minute headways. The closest bus stop is located approximately 0.6 mile south of the project site at the intersection of Winchester Boulevard and Hamilton Avenue.

VTA Light Rail Transit (LRT) Service

LRT Green Line runs from the Winchester Transit Center in Campbell to Old Ironsides in Santa Clara and operates from 5:00 AM to 1:00 AM with 15-minute headways during the peak commute periods. The closest LRT station is located approximately 1.4 miles from the project site at the interchange of SR 17 and Hamilton Avenue.



Figure 8
Existing Transit Services





3. **CEQA Transportation Analysis**

This chapter describes the CEQA transportation analysis, including the VMT analysis methodology and significance criteria, potential project impacts on VMT, mitigation measures recommended to reduce significant impacts, and an evaluation of consistency with the City of San Jose's General Plan.

VMT Analysis Methodology

Per Council Policy 5-1, the effects of the proposed project on VMT was evaluated using the methodology outlined in the City's *Transportation Analysis Handbook*. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle-trips with one end within the project. When the proposed project is relatively small and would not significantly alter existing traffic patterns, the City's VMT evaluation tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact.

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 VMT 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 should be enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

VMT Evaluation Tool

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 development projects. Based on the assessor's parcel number (APN) of a project, the VMT evaluation tool identifies the



existing average VMT per employee for the project area. Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT evaluation tool calculates the project VMT. Projects located in areas where the existing VMT is greater than 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. Figure 9 shows the current VMT levels estimated by the City for workers in the immediate project area.

Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT evaluation tool calculates the project VMT. However, the City's VMT Evaluation Tool is limited to the evaluation of four general land use categories: residential, office, industrial, and retail. Thus, the use of the VMT evaluation tool for the evaluation of land uses other than the four general land uses described above, such as the proposed hotel, requires the conversion of the proposed land use to an equivalent amount (based on trip generation characteristics) of residential units, office space, industrial space, or retail space.

Since the characteristics of the proposed hotel would have similar trip generating characteristics to retail space, the proposed hotel was converted into an equivalent amount of retail space based on trip generation estimates derived utilizing trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* (2017). Based on the ITE daily trip rate for hotel (ITE Land Use Code 310), the proposed 119-room hotel is estimated to generate 1,455 daily trips, which is equivalent to the trips estimated to be generated by approximately 38,600 s.f. of retail space. Table 2 presents the retail equivalency calculation.

Table 2
Equivalent Retail Space

			Dai	aily		
Land Use		Size	Rate	Trip		
Hotel (ITE Land Use 310) ¹		119 Rooms	12.23	1,455		
Shopping Center (ITE Land Use 820) ¹	Equivalent Retail Space ² =	38,600 Square Feet	37.75	1,455		
Notes: 1ITE Trip Generation Manual, 10 th Edition 2017 (Average Rates) 2Rounded to the nearest 100 square feet.						

CEQA Transportation Analysis Exemption Criteria

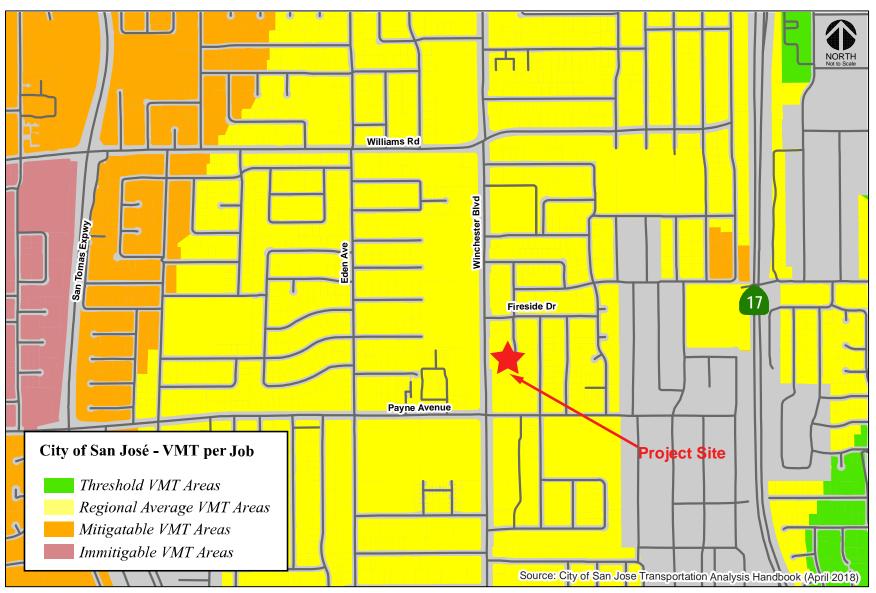
The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location.

As discussed previously, hotel rooms are converted to equivalent retail space to provide an estimate of similar trip-making characteristics (origin and destination of trips) for the purpose of VMT evaluation. Based on the hotel rooms to retail space conversion, the proposed hotel project is expected to generate traffic equivalent to approximately 38,600 square feet of retail space.

Per the City of San Jose VMT screening criteria, retail projects of 100,000 square feet or less are considered local-serving. Therefore, the proposed hotel does not require a detailed CEQA VMT analysis.



Figure 9 VMT per Employee Heat Map in Project Area





Cumulative (GP Consistency) Evaluation

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The project site is located within the Winchester Boulevard Urban Village, which is generally bounded by I-280 to the north, SR 17 to the east, Hamilton Avenue to the south, and San Tomas Expressway to the west (see Figure 1). Urban villages were developed as one of the major strategies of the *Envision San José 2040 General Plan*. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan.

The Winchester Boulevard Urban Village Plan identifies the following goals to improve traffic flow, alternative transportation options, and reduce neighborhood cut-through traffic.

- Improve traffic flow through multimodal data collection and application and signal coordination and timing improvements.
- Reduce congestion from the road by encouraging off-peak travel as well as more travel through sustainable modes, including walking, biking, transit and ridesharing.
- Support robust technology improvements, and appropriately accommodate new technologies, such as autonomous vehicles, in ways that provide net benefit.
- Improve transit options and connections to regional transit facilities by prioritizing transit and by upgrading existing bus stop facilities.
- Improve walkability and bikeability with better connections, wider walkways, improved over/undercrossings, shared bikeway in residential neighborhoods, protected or buffered bike lanes on major streets, and better bike parking.
- Limit cut-through traffic, speeding, and parking overflow in residential neighborhoods by slowing speeds and increasing cut-through travel-times in residential neighborhoods, and by providing enough parking to meet the needs of businesses and residents.
- Improve wayfinding in ways that reinforce and enhance the identity of the Urban Village and its surrounding neighborhood.
- Remain consistent with the community's top priorities for future designs of Winchester Boulevard, which are sufficient vehicular travel lanes and protected bike lanes.

The project is consistent with the General Plan and Winchester Boulevard Urban Village goals and policies for the following reasons:

- The project frontage along Winchester Boulevard will be consistent with planned streetscape design features of Grand Boulevards and the Winchester Boulevard Urban Village Plan.
- The project frontage along Winchester Boulevard will be designed to accommodate the planned Winchester Boulevard Complete Street improvements including protected bicycle lanes, wider sidewalks, and other pedestrian safety features.
- The project site is adjacent to bus stops and bicycle lanes on Winchester Boulevard.



Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as 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

This chapter describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for existing, background, and background plus project, any adverse effects on study intersections caused by the project, intersection vehicle queuing analysis, freeway segment capacity, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking.

Project Description

As proposed, the development would consist of the replacement of two single-family homes on-site with a 119-room hotel providing a total of 67 parking spaces. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard.

The project site is located within a designated Urban Village (Winchester Boulevard) per the Envision San Jose 2040 General Plan. Urban villages are walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the General Plan's environmental goals.

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

Proposed Project Trips

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates. The average trip generation rates for Hotel (Land Use 310) as published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition (2017) were applied to the proposed number of hotel rooms to estimate the project trips.



Trip Reductions

In accordance with San Jose's *Transportation Analysis Handbook* (April 2018, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline (gross) trip generation described above. Based on the 2018 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 Tool, the project site is located within a designated urban area with low access to transit. Therefore, the baseline project trips were adjusted to reflect an urban low-transit mode share. Urban low-transit is characterized as an area with good accessibility, low vacancy, and middle-aged housing stock. Developments within urban low-transit areas have a vehicle mode share of 87%. Thus, a 13% reduction was applied to the trips generated by the proposed project.

Based on the ITE rates with trip reductions, the proposed hotel development would generate a total of 1,266 daily vehicle trips, with 64 trips (37 inbound and 27 outbound) occurring during the AM peak hour and 75 trips (37 inbound and 38 outbound) occurring during the PM peak hour. The project trip generation estimates are presented in Table 3.

Existing Site Trips

Two homes are currently occupying the project site. Field observations revealed that the two homes are generating less than 10 trips during each of the peak hours. Therefore, the LTA utilized a conservative approach and did not take trip credit for the homes.

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was developed based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern, with an emphasis on freeway access and project driveway location. Figure 10 shows the trip distribution pattern, and Figure 11 shows the net trip assignment of project traffic on the local transportation network.

Intersection Operations Methodology

This section presents the methods used to evaluate traffic operations at the study intersections. It includes descriptions of the data requirements, the analysis methodologies, the applicable level of service standards, and the criteria defining adverse effects at the study intersections.

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection is not considered a CEQA impact metric.

Study Intersections

The study includes an analysis of AM and PM peak-hour traffic conditions for four signalized intersections and one unsignalized intersection. Intersections were selected for study if the project is expected to add 10 vehicle trips per hour per lane to a signalized intersection that meets one of the following criteria as outlined in the *Transportation Analysis Handbook*.



Table 3
Project Trip Generation Estimates

					AM Peak Hour						PM Peak Hour					
	ΠE ¹		Daily		Pk-Hr	r Split			Trip		Pk-Hr	Split		Trip		
Land Use	Land Use Code	Size	Rate	Trip	Rate	ln	Out	ln	Out	Total	Rate	In Out	ln	Out	Total	
Proposed Land	<u>Use</u>															
Hotel	#310 - Occupied Hotel Rooms	119 Rooms	12.23	1,455	0.62	58%	42%	43	31	74	0.73	49% 51%	43	44	87	
Location-Based F	Reduction (Urban Low-Transit - 13%) ²			-189				-6	-4	-10			-6	-6	-12	
Total				1,266				37	27	64			37	38	75	

Notes:



TITE Trip Generation Manual, 10th Edition 2017 (Average Rates)

²The project site is located within an urban low-transit area based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The trip reductions are based on the percent of mode share for all of the other modes of travel besides vehicle for retail uses.

Figure 10 Project Trip Distribution

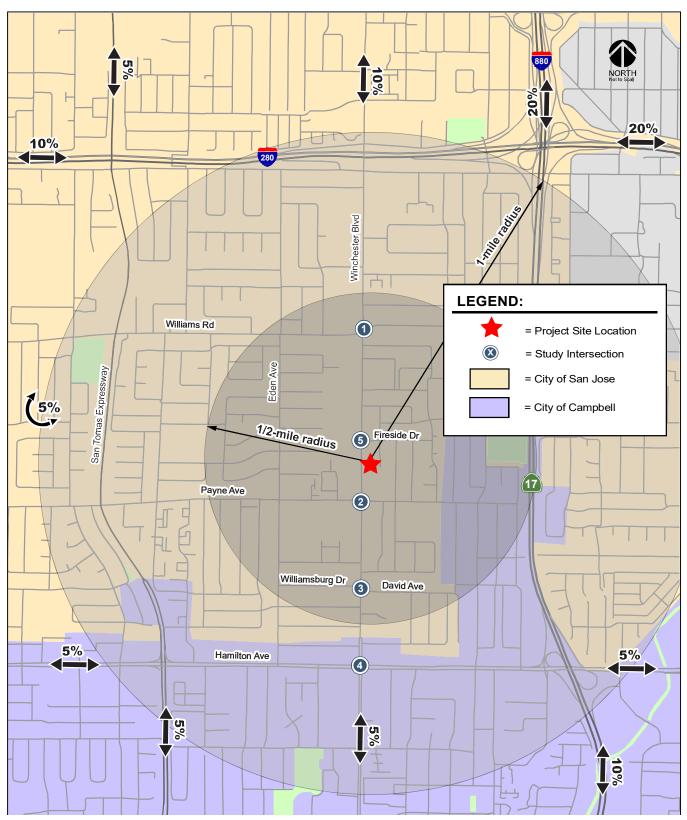
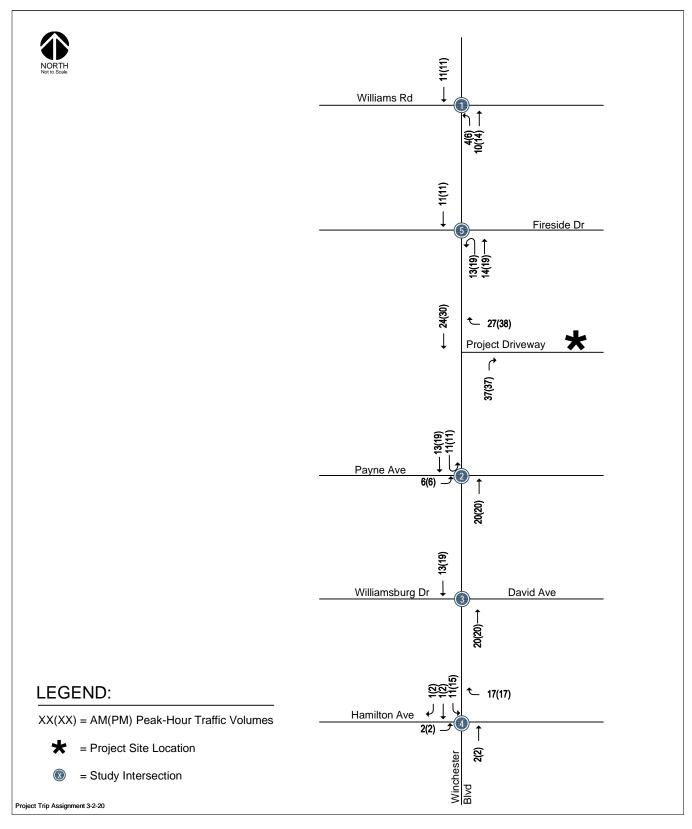




Figure 11 Project Trip Assignment





- Within a ½-mile buffer from the project's property line;
- Outside a ½-mile buffer but within a one-mile buffer from the project AND currently operating at D or worse;
- Designated Congestion Management Program (CMP) facility outside of the City's Infill Opportunity Zones;
- Outside the City limits with the potential to be affected by the project, per the transportation standards of the corresponding external jurisdiction;
- With the potential to be affected by the project, per engineering judgement of Public Works.

The following study intersections are located between a one-half mile and one-mile radii from the project site and were selected based on the above criteria (see Figure 10).

- 1. Winchester Boulevard and Williams Road (San Jose)
- 2. Winchester Boulevard and Payne Avenue (San Jose)
- 3. Winchester Boulevard and David Avenue/Williamsburg Drive (San Jose)
- 4. Winchester Boulevard and Hamilton Avenue* (Campbell)
- 5. Winchester Boulevard and Fireside Drive (San Jose Unsignalized)

The signalized intersection of Winchester Boulevard and Hamilton Avenue is located within the City of Campbell. However, it is also a CMP designated intersection and subject to CMP LOS standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the CMP, the Cities of San Jose and Campbell, and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations
- signal timing and phasing
- approved project trips

Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 12.

It is assumed in this analysis that the transportation network under background, background plus project, and cumulative plus project would be the same as the existing transportation network, with the following exceptions as part of the Winchester Boulevard Complete Street Improvements.

The Winchester Boulevard Urban Village Plan identifies the improvement of Winchester Boulevard between Hamilton Avenue and I-280 to a complete street. Complete streets are roadways designed to safely accommodate many different users, including people who bike, people who walk, transit riders, motorists, and emergency vehicles. The planned streetscape design for Winchester Boulevard includes features of Grand Boulevards and Complete Streets as defined in San José's General Plan and Complete Streets Design Guidelines (see Figure 13). The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.



^{*}Denotes CMP Intersection

Figure 12 Existing Lane Configurations

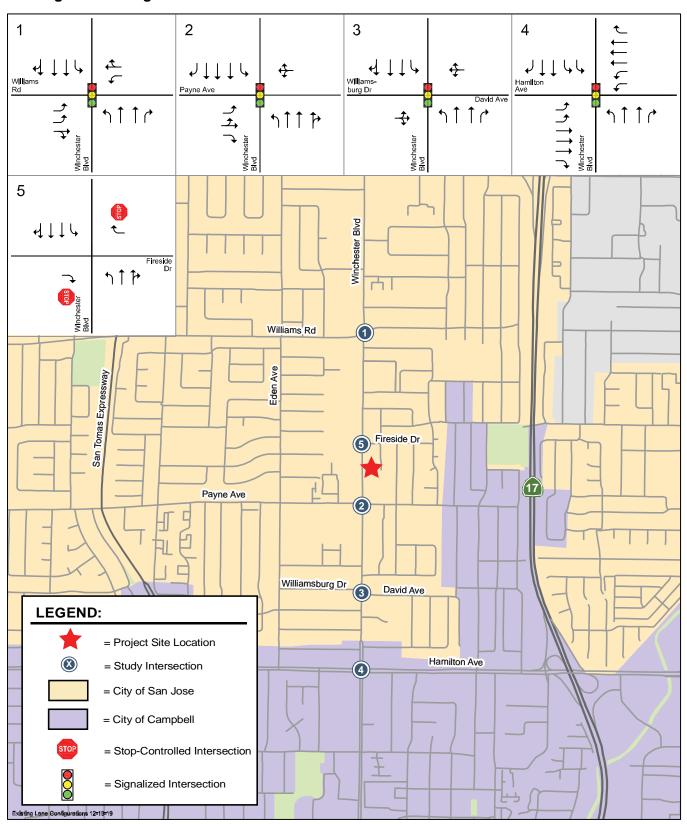




Figure 13 Winchester Boulevard Complete Street Improvement

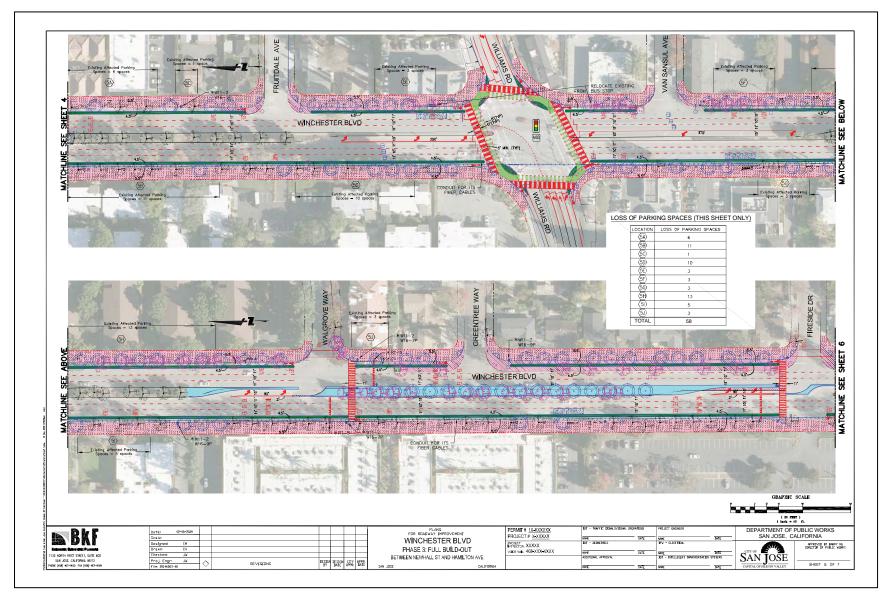




Figure 13 (Continued)
Winchester Boulevard Complete Street Improvement

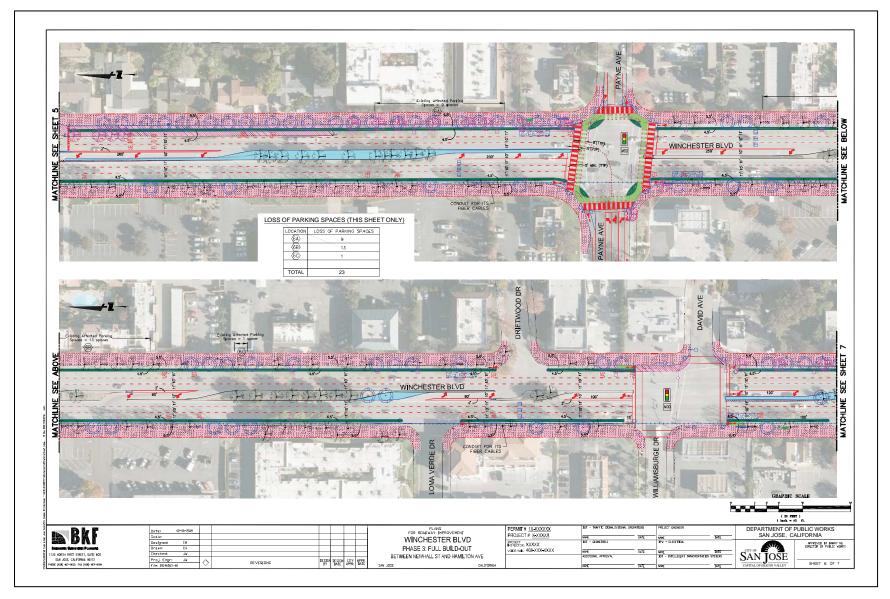
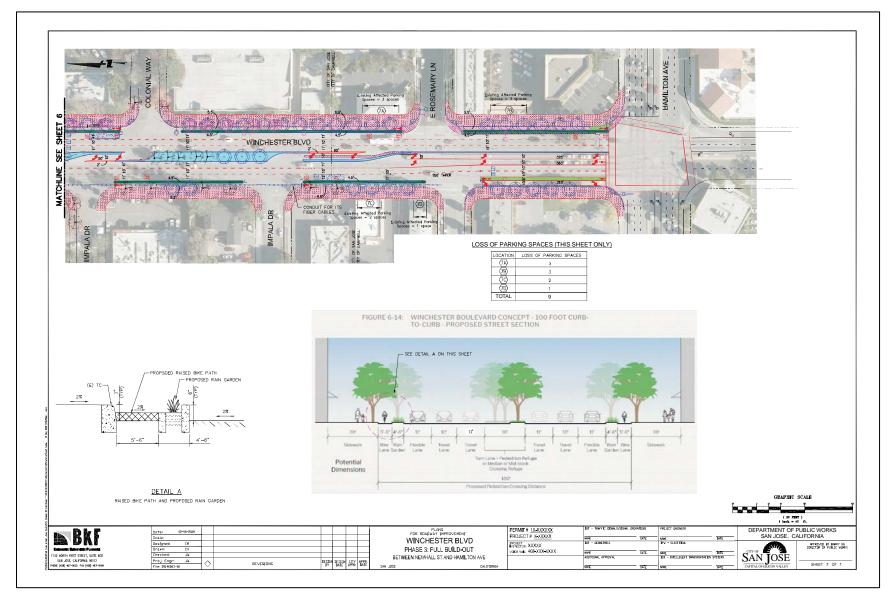




Figure 13 (Continued)
Winchester Boulevard Complete Street Improvement





Construction of a raised median with limited breaks.

This study conservatively assumes Winchester Boulevard would have four vehicular travel lanes (two lanes in each direction) during the AM and PM peak hours.

Traffic Volumes

Existing Conditions

Existing peak hour traffic volumes at all study intersections were obtained from the CMP, previously completed traffic studies, and supplemented with new turning-movement counts. The existing peak-hour intersection volumes are shown on Figure 14. Intersection turning-movement counts conducted for this analysis are presented in Appendix B. Peak hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix D.

Future Conditions

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City of San Jose's Approved Trips Inventory (ATI) database. Trips associated with approved projects in the City of Campbell were estimated based on a list provided by City of Campbell staff. The background traffic scenario predicts a realistic traffic condition that would occur as approved development is built. Background traffic volumes are shown in Figure 15. Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 16).

Traffic volumes under cumulative plus project conditions were estimated by adding to the background plus project traffic volumes the trips from proposed, but not yet approved (pending) development projects within the Cities of San Jose and Campbell. Pending project trips and/or pending project information was obtained from the Cities of San Jose and Campbell. The cumulative plus project traffic volumes at study intersections are shown Figure 17.

The approved and pending project information are included in Appendix C. The approved trips, proposed project trips, and traffic volumes for all components of traffic are tabulated in Appendix D.

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 analysis methods are described below.

All study intersections were evaluated based on the 2000 Highway Capacity Manual (HCM) level of service methodology using the TRAFFIX software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. TRAFFIX is also the CMP-designated intersection level of service methodology, thus, the City of San Jose employs the CMP default values for the analysis parameters. The correlation between average control delay and level of service at signalized intersections is shown in Table 4.

Signalized study intersections, with the exception of the CMP-designated intersection at Winchester Boulevard and Hamilton Avenue, are subject to the City of San Jose level of service standards. The City of San Jose has established LOS D as the minimum acceptable intersection operations standard for all signalized intersections unless superseded by an Area Development Policy.



Figure 14
Existing Traffic Volumes

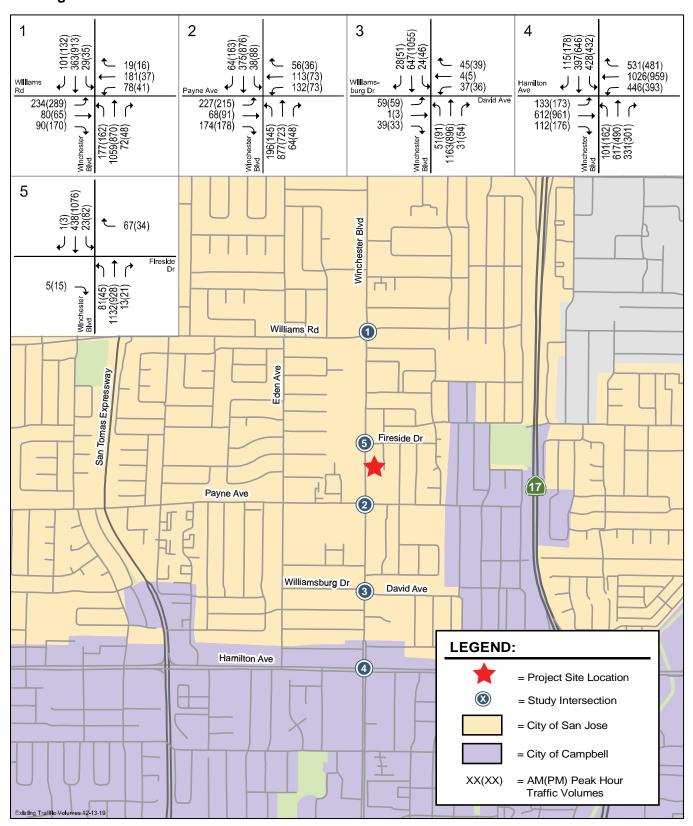




Figure 15
Background Traffic Volumes

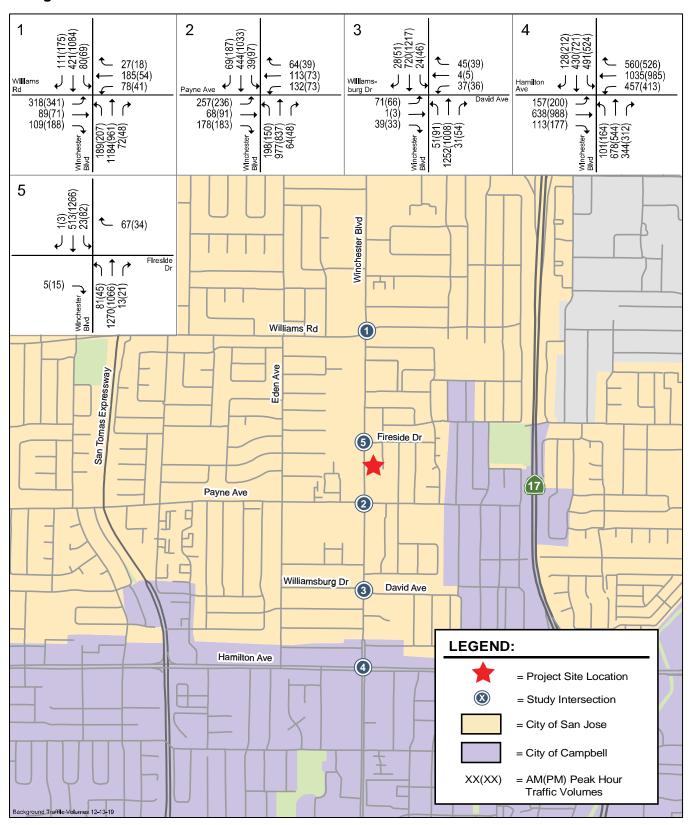




Figure 16
Background Plus Project Traffic Volumes

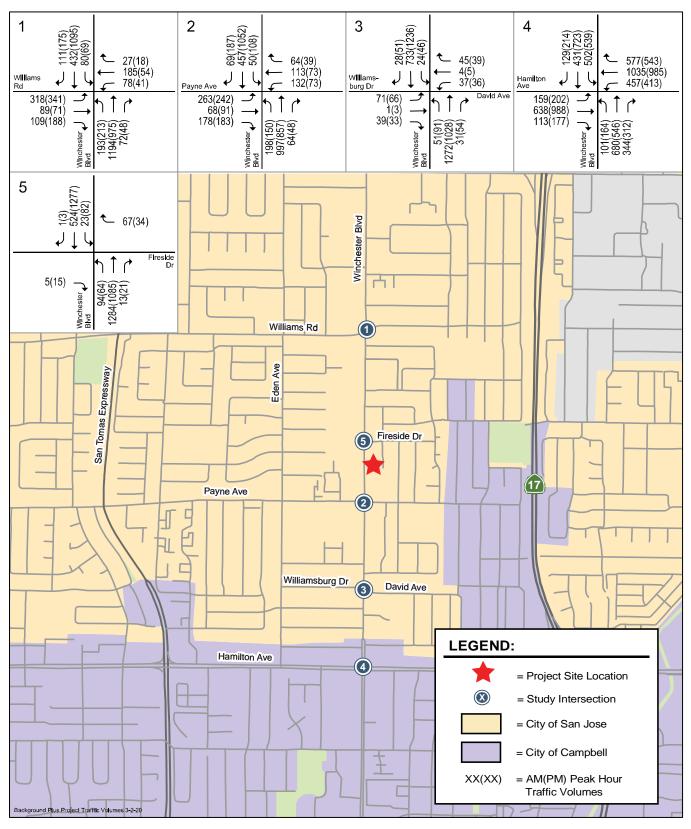




Figure 17
Cumulative Plus Project Traffic Volumes

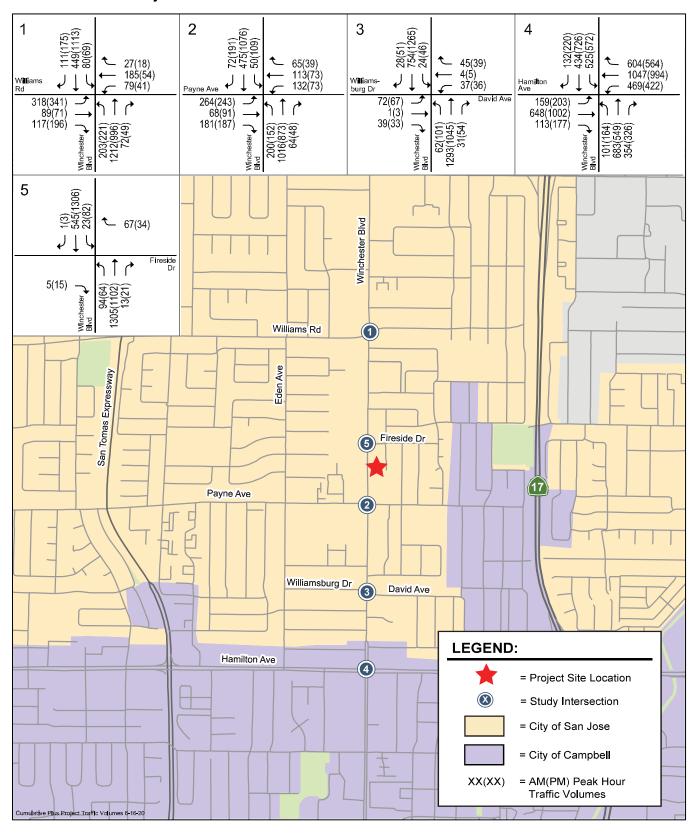




Table 4
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
А	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
В	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
С	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	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
E	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
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0
	ransportation Research Board, 2000 Highway Capacity Manual. Tra uidelines, Santa Clara County Transportation Authority Congestion N	

City of San Jose Definition of Adverse Intersection Operations Effects

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

- 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 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 are negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

An adverse intersection operations effect by City of San Jose standards may be addressed by implementing measures that would restore intersection level of service to background conditions or better. The City recommends prioritizing improvements related to alternative transportation modes,



parking measures, and/or TDM measures. Improvements that increase vehicle capacity are secondary and must not have unacceptable effects on existing or planned transportation facilities. Unacceptable effects on existing or planned transportation facilities include the following:

- Inconsistent with the General Plan Transportation Network and Street Typologies;
- Reduction of any physical dimension of a transportation facility below the minimum design standards per the San José Complete Streets Design Standards and Guidelines; OR
- Substantial deterioration in the quality of existing or planned transportation facilities, including pedestrian, bicycle, and transit systems and facilities, as determined by the Director of Transportation.

Conformance to the CMP Standard

The intersection at Winchester Boulevard and Hamilton Avenue is a CMP-designated intersection. Based on CMP criteria, a project would fail to meet the CMP intersection standard if the additional project traffic caused one of the following during either peak hour:

- 1. The level of service at the intersection degrades from an acceptable LOS E or better under background conditions to an unacceptable LOS F under project conditions, or
- 2. The level of service at the intersection is an unacceptable LOS F under background conditions and the addition of project trips causes 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.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e. the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 0.01 or more.

An adverse intersection effect by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Intersection Operations Analysis Results

The intersection level of service analysis is summarized in Table 5.

Existing Intersection Operation Conditions

Intersection levels of service were evaluated against applicable Cities of San Jose and Campbell, and CMP operations standards. The results of the level of service analysis show all study intersections currently operate at an acceptable LOS D or better during both the AM and PM peak hours, based on the Cities of San Jose and Campbell, and CMP intersection operations standards of LOS D and E, respectively. The level of service calculation sheets are included in Appendix E.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field.



Table 5
Intersection Level of Service Results

						Existing		Background		Background Plus Project				Cumulative Plus Project	
Int. #	Intersection	Jurisdiction	LOS Standard	Peak Hour	Count Date	Avg. Delay	Los	Avg. Delay	LOS	Avg. Delay	Los	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	Los
1	Winchester Boulevard and Williams Road	San Jose	D	AM PM	11/19/19 11/19/19	32.9 34.7	C C	35.9 35.5	D D	35.9 35.6	D D	0.0 0.3	0.003 0.007	36.0 36.0	D D
2	Winchester Boulevard and Payne Avenue	San Jose	D	AM PM	11/19/19 11/19/19	38.0 39.2	D D	37.5 37.5	D D	37.7 37.8	D D	0.3 0.1	0.015 0.007	37.7 37.8	D D
3	Winchester Boulevard and David Avenue/Williamsburg Drive	San Jose	D	AM PM	11/19/19 11/19/19	19.7 22.9	B C	18.9 20.6	B C	18.8 20.5	B C	-0.1 -0.1	0.006 0.006	18.8 20.7	B C
4	Winchester Boulevard and Hamilton Avenue*	CMP	E	AM PM	04/24/18 12/13/18	40.0 47.7	D D	41.1 49.2	D D	41.2 49.3	D D	0.1 0.2	0.004 0.006	41.4 49.6	D D
	* Denotes CMP Intersection														



Field observations revealed the following operational problem that may not be reflected in level of service calculations:

During the PM peak hour, the eastbound queue on Hamilton Avenue intermittently extended back from the SR 17 interchange to Winchester Boulevard resulting in the southbound Winchester Boulevard to eastbound Hamilton Avenue left-turn movement unable to proceed during its green phase. This only occured during a few signal cycles during the peak 15 minutes of the PM peak hour.

All other study intersections operate without any major operational problems.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the Cities of San Jose and Campbell, and CMP intersection operations standard of LOS D and E, respectively, under background conditions, background plus project, and cumulative plus project conditions during both the AM and PM peak hours. The intersection level of service calculation sheets are included in Appendix E.

At the intersections of Winchester Boulevard/David Avenue/Williamsburg Drive and Winchester Boulevard/Payne Avenue, the addition of background and/or project traffic causes the overall average intersection delays to improve slightly. This occurs when project trips are added to movements where the delay is lower than the overall intersection average.

I-280/Winchester Boulevard Interchange Area Transportation Development Policy

The I-280/Winchester Boulevard interchange area Transportation Development Policy (TDP) provides for additional capacity in the immediate area of the I-880/Stevens Creek Boulevard and I-280/Winchester Boulevard interchanges. The TDP was completed for the purpose of managing existing traffic congestion in the I-880/Stevens Creek and I-280/Winchester interchange areas as well as provide additional traffic capacity to accommodate future development such as the proposed project. The I-880/Stevens Creek and I-280/Winchester interchanges serve as the primary access points to regional freeway facilities in the project area. As such, the Stevens Creek Boulevard and Winchester Boulevard corridors that serve the I-880/Stevens Creek and I-280/Winchester interchanges currently experience traffic congestion during the peak commute hours. The corridors include two Protected Intersections that are currently and projected to continue to operate well below the City's standard Level of Service Policy. There are no further vehicular capacity improvements available at the intersections.

The TDP provides partial funding, via a traffic impact fee imposed on proposed development, for the implementation of a new westbound off-ramp from I-280 to Winchester Boulevard to reduce traffic congestion at the I-880/Stevens Creek and Stevens Creek Boulevard corridors. The traffic fee is based on the estimated trips to be added to the new westbound off-ramp from I-280 to Winchester Boulevard during the PM peak hour by each individual development. It is estimated that the proposed project will result in the addition of four PM peak hour trips to the planned I-280 to Winchester Boulevard ramp.

Intersection Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis at intersections where the project would add a substantial number of trips to the left-turn movements. The queuing analysis is presented for informational purposes only, since the Cities of San Jose and Campbell have 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 gueue per lane

 λ = average # of vehicles in the gueue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles for a particular left-turn 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 left-turn movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at intersections.

For signalized intersections, the 95th 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 95th 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). Thus, turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. Vehicle queuing at unsignalized intersections are evaluated based on the delay experienced at the specific study turn movement.

A vehicle queuing analysis was conducted for high demand turn movements at the intersections of Winchester Boulevard/Payne Avenue and Winchester Boulevard/Fireside Drive (see Table 6). The analysis indicates that, with the addition of project traffic, the 95th percentile vehicle queues could be accommodated by the storage provided at all study locations. The queue length calculations are included in Appendix F.

Signal Warrant Analysis

The need for signalization of an unsignalized intersection is assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD)*, Part 4, Highway Traffic Signals, 2014. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Additional analysis may include unsignalized level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

A peak-hour traffic signal warrant check was conducted for the unsignalized intersection of Winchester Boulevard and Fireside Drive. The results indicate that the projected traffic volumes at the intersection would fall below the thresholds that warrant signalization under all study scenarios during the AM and PM peak hours. The traffic signal warrant calculations are included in Appendix G.



Table 6 Queuing Analysis Summary

		oulevard and Avenue	Winchester Boulevard and Fireside Drive				
	Southbo	ound Left	Northbound Left				
Measurement	AM	PM	AM	PM			
Existing Conditions							
Cycle Length/Control Delay (sec) ¹	126	140	8.4	10.9			
Lanes	1	1	1	1			
Volume (vph)	38	88	81	45			
Volume (vphpl)	38	88	81	45			
95 th %. Queue (veh/ln.)	3	7	1	1			
95 th %. Queue (ft./ln) ²	75	175	25	25			
Storage (ft./ ln.)	200	200	250	250			
Adequate (Y/N)	YES	YES	YES	YES			
Background Conditions							
Cycle Length/Control Delay (sec) ¹	126	140	8.7	12.1			
Lanes	1	1	1	1			
Volume (vph)	39	97	81	45			
Volume (vphpl)	39	97	81	45			
Avg. Queue (veh/ln.)	1.4	3.8	0.2	0.2			
Avg. Queue ¹ (ft./ln)	34	94	5	4			
95 th %. Queue (veh/ln.)	3	7	1	1			
95 th %. Queue (ft./ln) ²	75	175	25	25			
Storage (ft./ ln.)	200	200	250	250			
Adequate (Y/N)	YES	YES	YES	YES			
Background Plus Project Conditions	S						
Cycle Length/Control Delay (sec) ¹	126	140	8.8	12.4			
Lanes	1	1	1	1			
Volume (vph)	50	108	94	64			
Volume (vphpl)	50	108	94	64			
95 th %. Queue (veh/ln.)	4	8	1	1			
95 th %. Queue (ft./ln) ²	100	200	25	25			
Storage (ft./ ln.)	200	200	250	250			
Adequate (Y/N)	YES	YES	YES	YES			

Notes:



¹ Cycle length for signalized intersection and control delay for unsignalized intersection

² Assumes 25 feet per vehicle queued

Site Access and On-Site Circulation

The evaluation of site access and circulation is based on the site plan prepared by the Carpira Design Group. Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. Onsite vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Site Access

Vehicular access to the project site at its proposed driveway would be restricted to right-in/right-out turn movements only due to the existing median along Winchester Boulevard. Therefore, inbound project traffic from southbound Winchester Boulevard would be required to proceed past the project site and make a U-turn at the Payne Avenue intersection. Similarly, outbound project traffic that is bound for southbound Winchester Boulevard would be required to exit the project driveway and proceed north along Winchester Boulevard to make a U-turn at the Fireside Drive intersection. It is anticipated that this driveway would serve approximately 64 AM peak hour trips (37 inbound and 27 outbound) and 75 PM peak hour trips (37 inbound and 38 outbound). The estimated gross project trips at the site driveway are shown on Figure 18.

According to the City of San Jose municipal code, on-site two-way drive aisles must be a minimum of 26 feet wide and driveway widths should match the 26 feet wide drive aisles. The widths of the proposed driveway and on-site drive aisle are shown to be more than 26 feet, which satisfy the City's driveway design requirement. The driveway has a clear throat of approximately 25 feet (measured between the driveway face of curb and the security check point), which can accommodate one vehicle. Vehicle queuing issues are not expected to occur at the parking garage entrance based on the relatively low number of project trips at the entrance. There may be brief moments when vehicles exiting and entering the parking garage would block the sidewalk. However, it is anticipated that delays to pedestrians on the sidewalk would be relatively brief and it would generally not impact traffic operations on Winchester Boulevard.

Sight Distance

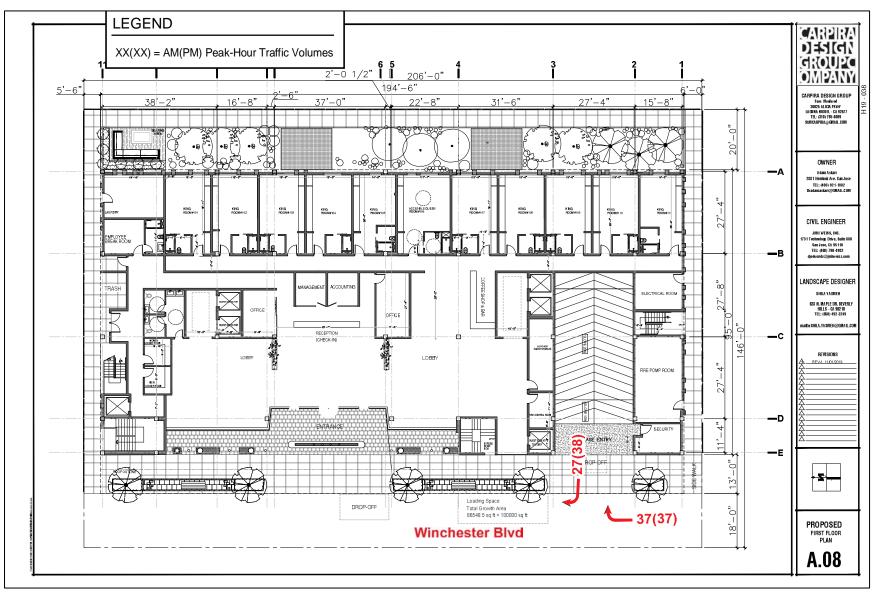
Adequate sight distance will be required at the project driveway along Winchester Boulevard. The project driveway should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on Winchester Boulevard. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Recommendation: Appropriate visible and/or audible warning signals should be provided at the garage entrance to alert pedestrians and bicyclists of vehicles exiting the parking garage.

Adequate sight distance (sight distance triangles) should be provided at the project driveway in accordance with the *American Association of State Highway Transportation Officials* (AASHTO) standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway and locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the AASHTO stopping sight distance. Sight distance requirements vary depending on the roadway speeds. Winchester Boulevard has a posted speed limit of 40 miles per hour (mph). The AASHTO stopping sight distance for a facility with a posted speed limit of 40 mph is 305 feet. Thus, a driver exiting the proposed project driveway on Winchester Boulevard must be able to see 305 feet to the south along Winchester Boulevard.



Figure 18 Gross Project Trips at Site Driveways





Based on the project site plan and observations in the field, vehicles exiting the project site driveway on Winchester Boulevard would be able to see approaching traffic on northbound Winchester Boulevard at least to Payne Avenue located approximately 450 feet to the south. Therefore, it can be concluded that the project driveway on Winchester Boulevard would meet the AASHTO minimum stopping sight distance standards.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of San Jose Zoning Code and generally accepted traffic engineering standards. The parking garage entrance on Winchester Boulevard would lead straight to the ramp down to the basement level. The parking garage follows a standard 90-degree parking layout. The parking aisles are more than 26 feet wide, which meets the City's standard for 90-degree parking. The widths of the garage entrance and the ramp are also more than 26 feet as shown on the site plan, which meets the City's standard. The dimensions of the regular parking spaces are 8.6 feet by 17 feet, which do not meet the minimum City standards of 8.5 feet by 18 feet for full-size car spaces.

Recommendation: The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to final design. Upon entering the garage at ground floor parking level, vehicles would turn left onto a ramp that leads to the lower basement level of the garage. Overall, the parking layout would provide for adequate vehicular circulation within the parking garage.

A dead-end aisle will exist at the end of the drive aisle on the basement parking level of the garage. Dead end aisles are undesirable because drivers will enter the aisle, and upon discovering that there is no available parking, must back out or conduct three-point turns. In areas where parking spaces are designated for specific individuals, dead end aisles are less problematic.

Recommendation: It is recommended that the parking spaces located at the end of the dead-end aisle be dedicated for employee use.

Bike and Pedestrian On-Site Circulation

Pedestrian access to the project site is provided at multiple locations along the frontage on Winchester Boulevard and pathways adjacent to the north and south property lines. On Winchester Boulevard project frontage, pedestrian access is provided to the main entrance connected to the proposed 20-foot sidewalk on Winchester Boulevard. Pathways connected to the sidewalks on Winchester Boulevard along the north and south perimeters of the project site provide pedestrian access via entry doors to the building ground level and stairwells to upper levels of the building. Pedestrian circulation within the site appears to provide adequate connectivity between vehicle parking, off-site pedestrian facilities, and onsite amenities. There are three stairwells and six elevators shown on the site plan, each reasonably evenly distributed throughout the site. One of the stairwells and one of the elevators provide access to the basement parking level.

Truck Access

The site plan does not indicate that a loading space will be provided on-site.

Recommendation: In lieu of providing off-street loading spaces, it is recommended that the project applicant work with City staff to determine the feasibility of providing a public loading zone on Winchester Boulevard along the project frontage.

A designated trash collection area is shown on the ground floor level adjacent to the north pathway in the exterior area of the building. Because garbage trucks would not be able to access near the trash collection area, trash bins would have to be wheeled out to the trash staging area along the Winchester



Boulevard project frontage where garbage trucks would perform their operations outside of the development at the curb.

Guest and Valet Drop-off/Pick-up Zone Operations

The project proposes to provide an on-street drop-off and pick-up zone along its frontage on Winchester Boulevard, north of the site driveway. There is currently no on-street parking provided along the project frontage. In addition, the planned complete street improvement of Winchester Boulevard would provide two travel lanes with a Class IV bike lane and no on-street parking along the project frontage. Also, since the guest/valet drop-off/pick-up area will be located on a public street, the area will not be restricted to the use of only the hotel and may not be available for guest/valet use at all times. Therefore, the City may not be supportive of the loading zone along Winchester Boulevard and may require that the loading area be moved on-site. The project should work with the City to determine the feasibility of the proposed passenger loading zone on Winchester Boulevard.

Based on the estimated trip generation, a maximum of 37 inbound trips would need to be served at the proposed guest and valet drop-off/pick-up zone along Winchester Boulevard during the PM peak-hour, or approximately one vehicle every 1.5 minutes. The number of vehicles that can be served at the valet drop-off/pick-up zone will depend on the proposed valet parking operations. However, it is recommended that a minimum of two to three valet staff be present during the peak arrival/departure periods for the hotel. In addition, vehicles should not be retrieved in advance of guests being present at the valet area. Given the limited storage space for valet operations along Winchester Boulevard, the valet area should not be used for transportation network companies (TMCs) such as Uber, Lyft, etc. while waiting for customers.

The site plan does not indicate on-site designated parking spaces for guest check-in or valet drop-off/pick-up areas. The site should provide time restricted parking spaces on-site for guest check-in and a valet drop-off/pick-up area that can accommodate the storing of at least two vehicles.

Twenty-four two car mechanical parking lifts will be provided within the basement parking level. The parking lifts would extend outward onto the drive aisle while parking or retrieving a vehicle from the upper level of the lift. Parking and retrieving vehicles from the mechanical parking lifts would momentarily interfere with vehicular circulation as most of the drive aisle would be blocked by the extended lift. However, all parking operations will be operated by valets who will be familiar with the operations of stacker parking lifts. The project should work with City staff to ensure that specific requirements for the valet operations and mechanical lifts are met.

Recommended Site Access and On-Site Circulation Improvements

<u>Winchester Complete Street Improvements.</u> The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks.
- In order to close the sidewalk gap on the east side of Winchester Boulevard, it is recommended
 that the City staff work with the owner of the adjacent property to the north to install a sidewalk
 per City design standards



Adhere to City of San Jose Design Standards and Guidelines. The design of the project site, including but not limited to driveways, sidewalks, corner radii, street width, parking dimensions, and signage, should adhere to City of San Jose design standards and guidelines. Specific site access and on-site circulation recommended improvements are summarized below:

- In addition to providing a 20-foot sidewalk along the project frontage, the site driveway design
 must ensure the safe travel of pedestrians and bicyclists along Winchester Boulevard.
 Appropriate visible and/or audible warning signals should be provided at the garage entrance to
 alert pedestrians and bicyclists of vehicles exiting the parking garage.
- The proposed parking space dimensions, while not an unusual design, do not meet City standards and show be reviewed by City staff prior to final design.
- It is recommended that the parking spaces located at the end of the dead-end aisle be dedicated for employee use.
- In lieu of providing off-street loading spaces, it is recommended that the project applicant work with City staff to determine the feasibility of providing a public loading zone on Winchester Boulevard along the project frontage.
- The City may not be supportive of the proposed loading zone along Winchester Boulevard and may require that the loading area be moved on-site. The project should work with the City to determine the feasibility of the proposed passenger loading zone on Winchester Boulevard.
- The site should provide time restricted parking spaces on-site for guest check-in and a valet drop-off/pick-up area that can accommodate the storing of at least two vehicles.

Parking Supply

Vehicular Parking

The City's parking requirements for hotels are as follows: one parking space per room and one parking space per employee. The project would have 119 rooms and a maximum of 10 employees on-site. Based on the City's parking code requirements, the project would need to provide a total of 129 off-street parking spaces. The project is located in the Winchester Boulevard Urban Village. The Urban Village Overlay allows for a 20 percent reduction in parking with the implementation of a Transportation Demand Management (TDM) plan. With the 20 percent reduction, the required parking would be reduced to 104 parking spaces. The project proposes a total of 67 parking spaces, which is a 52 percent reduction from the City's standard parking requirements.

In accordance with Sections 20.70.330 and 20.90.220 of the San Jose Code of Ordinances, which allows up to a 50% parking reduction, the additional 32 percent reduction could be allowed with the implementation and maintenance of a TDM plan. A separate TDM plan for the proposed project that meets the requirements set forth in the City's Zoning Code will be prepared by Hexagon. The project will be required to submit and have approved by the City its TDM program.

Bicycle Parking

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide bicycle parking for the project at a rate of one bicycle parking space plus one space per 10 guest rooms. This equates to a total requirement of 13 bicycle parking spaces. The project site plan indicates that two bicycle storage areas will be located within the basement level of the parking garage. The storage areas are shown to provide space for a total of 27 bicycles. Therefore, the proposed



bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking.

Surrounding On-Street Parking

The project site is located just outside the perimeter of the Cadillac Residential Parking Program (RPP) zone, where a permit is required to use on-street parking from 10:00 PM to 6:00 AM every day except on holidays. In order to obtain a parking permit, the applicant must live in or own a residential property or operate a business in a parking permit zone. Generally, this means that the residence or business must be located on the same side of the street and block face where permit parking signs are posted. The locations of on-street parking, where an RRP permit is required, are shown on Figure 19.

With the implementation of the required TDM plan, the project will provide adequate parking spaces onsite to satisfy its parking demand and will not have an effect on the Cadillac RPP.

Pedestrian, Bicycle, and Transit Analysis

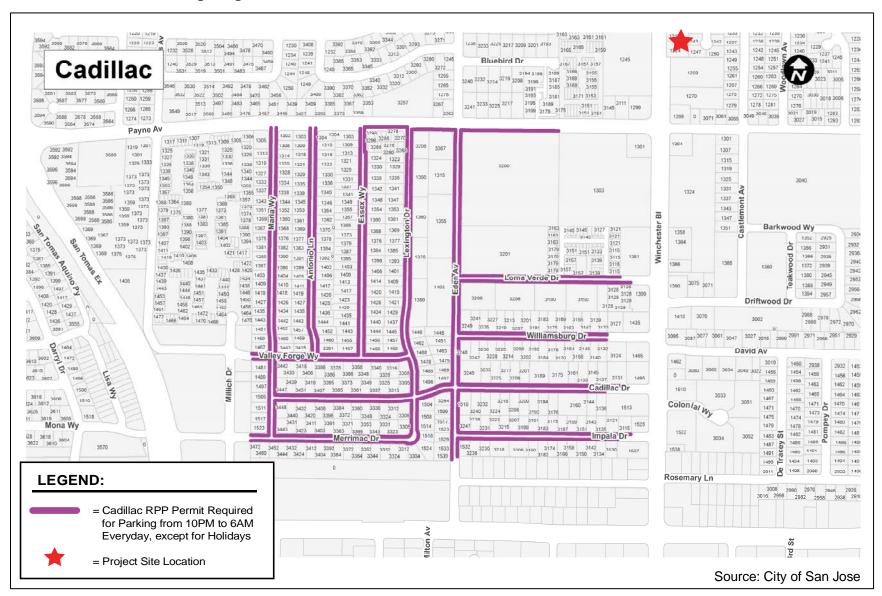
Existing sidewalks along Winchester Boulevard provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Pedestrian traffic primarily would consist of patrons and employees of the proposed project walking to and from surrounding retail establishments, as well as bus stops on Winchester Boulevard and Hamilton Avenue. Crosswalks with pedestrian signal heads are located at the signalized intersection of Winchester Boulevard and Payne Avenue. All of the roadways in the vicinity of the project site have sidewalks on both sides of the street, except a short segment on the east side of Winchester Boulevard along the frontages of the project site and one adjacent property to the north. The project will install a 20-foot sidewalk along its frontage on Winchester Boulevard. However, in order to close the sidewalk gap on the east side of Winchester Boulevard, it is recommended that the City staff work with the owner of the adjacent property to the north to install a sidewalk per City design standards.

The bikeways within the vicinity of the project site would remain unchanged under project conditions. Currently, no bike facilities exist on Winchester Boulevard between Payne Avenue and Moorpark Avenue that would provide connections to other bicycle facilities in the project vicinity. The San Jose Bike Plan 2020 and Envision 2040 General Plan, as described below, identify planned improvements to the bicycle network within the City and provide policies and goals that are intended to promote and encourage the use of multi-modal travel options and reduce the identified project impacts to the roadway system. The planned improvements to the bicycle network will provide the project site with improved connections to surrounding pedestrian/bike and transit facilities and a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies.

The project site is served directly by VTA local bus line 60, which operates along Winchester Boulevard. The southbound and northbound bus stops for line 60 are located at the intersection of Winchester Boulevard and Payne Avenue. It can be assumed that some patrons and employees of the proposed hotel would utilize the existing transit services. Applying an estimated three percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately two new transit riders during the AM peak hour and three new transit riders during the PM peak hour. Assuming the existing transit service would remain unchanged with line 60 providing service with 15-20-minute headways during the peak commute periods at bus stops along Winchester Boulevard, the estimated number of new transit riders using the bus stops located near the project site would equate to no more than three new riders per bus during the peak hours. VTA operations reports indicate that the 60-bus line as well as several other bus lines in the project area serve less than ideal ridership. Therefore, the new riders due to the proposed project could be accommodated by the current



Figure 19
Cadillac Residential Parking Program





available capacity of the bus service in the study area and improvement of the existing transit service would not be necessary with the project.

Public Transit/Pedestrian/Bike Improvements

The proposed project site is located within the Winchester Boulevard Urban Village Boundary and fronts Winchester Boulevard, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below:

- Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The planned improvements discussed below are intended to provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements are beyond the means of the proposed project given that they may require right-of-way from adjacent properties. The project could be required to make a fair-share contribution towards the cost of the improvements since the identified improvements would be of benefit to the project.

Bicycle and Pedestrian Facility Improvements

The Envision 2040 General Plan identifies the following goals in regard to bicycling and pedestrians:

- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Winchester Boulevard, between Payne Avenue and Moorpark Avenue
- Cypress Avenue, between Williams Road and Moorpark Avenue



Class III bike routes are planned for:

- Payne Avenue, between Winchester Boulevard and Greenbriar Avenue
- Greenbriar Avenue, between Payne Avenue and Westfield Avenue
- Westfield Avenue, between Greenbriar Avenue and Daniel Way

Transit Facility Improvements

The Envision 2040 General Plan identifies the following goals in regard to public transit:

- Pursue development of BRT, bus, shuttle, and fixed guideway services on designated streets and connections to major destinations.
- Ensure that roadways designated as Grand Boulevards adequately accommodate transit vehicle circulation and transit stops. Prioritize bus mobility along Stevens Creek Boulevard.

Winchester Boulevard between Moorpark Avenue and Impala Drive has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. Given that the project fronts Winchester Boulevard, the project shall be required to implement the following Grand Boulevard design principles:

- Provide a minimum 15 feet sidewalk width along its frontage on Winchester Boulevard
- Minimize driveway cuts to minimize transit delay
- Provide enhanced shelters for transit services

In addition, as a Grand Boulevard it is envisioned that Winchester Boulevard could potentially be included in the VTA Bus Rapid Transit (BRT) System. However, there are no plans at this time for a BRT line on Winchester Boulevard.

Freeway Segment Evaluation

The City is still required to conform to the requirements of the Valley Transit Authority (VTA) which establishes a uniform program for evaluating the transportation impacts of land use decisions on the designated CMP Roadway System. The VTA's Congestion Management Program (CMP) has yet to adopt and implement guidelines and standards for the evaluation of the CMP roadway system using VMT. Therefore, the effects of the proposed project on freeway segments in the vicinity of the project area following the current methodologies as outlined in the *VTA Transportation Impact Analysis Guidelines*, was completed. However, this analysis is presented for informational purposes only.

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent or higher to any freeway segments in the area, freeway analysis for the CMP was not required. The percentage of traffic projected to be added by the project to freeway segments in the project area is summarized in Table 7.



Table 7
Freeway Segment Capacity

							Capacity		Project Trips				
					Mixed-Flow Lane		HO	/ Lane	Mixed-Flow Lane		HOV	/ Lane	
				Peak	# of	Capacity	# of	Capacity		% of		% of	
#	Freew ay	Segment	Direction	Hour	Lanes	(vph)	Lanes	(vph)	Volume	Capacity	Volume	Capacity	
1	SR 17	from San Tomas Expressway/Camden Avenue to Hamilton Avenue	NB	AM	3	6,900			4	0.06			
			NB	PM	3	6,900			4	0.06			
2	SR 17	from Hamilton Avenue to I-280	NB	AM	3	6,900			6	0.09			
			NB	PM	3	6,900			9	0.13			
3	I-880	from I-280 to Stevens Creek Boulevard	NB	AM	3	6,900			5	0.07			
			NB	PM	3	6,900			8	0.12			
4	I-280	from Saratoga Avenue to Winchester Boulevard	EB	AM	3	6,900	1	1,650	4	0.06	0	0.00	
			EB	PM	3	6,900	1	1,650	3	0.04	1	0.06	
5	I-280	from Winchester Boulevard to I-880	EB	AM	3	6,900	1	1,650	0	0.00	0	0.00	
			EB	PM	3	6,900	1	1,650	0	0.00	0	0.00	
6	I-280	from I-880 to Meridian Avenue	EB	AM	3	6,900	1	1,650	4	0.06	1	0.06	
			EB	PM	3	6,900	1	1,650	5	0.07	3	0.18	
7	I-280	from Meridian Avenue to I-880	WB	AM	3	6,900	1	1,650	5	0.07	2	0.12	
_			WB	PM	3	6,900	1	1,650	6	0.09	1	0.06	
8	I-280	from I-880 to Winchester Boulevard	WB	AM	3	6,900	1	1,650	0	0.00	0	0.00	
			WB	PM	3	6,900	1	1,650	0	0.00	0	0.00	
9	I-280	from Winchester Boulevard to Saratoga Avenue	WB	AM	3	6,900	1	1,650	2	0.03	1	0.06	
			WB	PM	3	6,900	1	1,650	3	0.04	1	0.06	
10	I-880	from Stevens Creek Boulevard to I-280	SB	AM	3	6,900			7	0.10			
	OD 47		SB	PM	3	6,900			7	0.10			
11	SR 17	from I-280 to Hamilton Avenue	SB	AM	3	6,900			11	0.16			
40	OD 47		SB	PM	3	6,900	-		11	0.16			
12	SR 17	from Hamilton Avenue to San Tomas Expressway/Camden Avenue	SB	AM	3	6,900			3	0.04			
			SB	PM	3	6,900	-		4	0.06			



5. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the Cities of San Jose and Campbell, the Congestion Management Program (CMP) of Santa Clara County, and by the California Environmental Quality Act (CEQA). The study included the analysis of AM and PM peak hour traffic conditions for four signalized intersections and one unsignalized intersection. Project impacts on other transportation facilities, such as bicycle facilities and transit service, were determined on the basis of engineering judgment.

CEQA VMT Analysis

CEQA Transportation Analysis Exemption Criteria

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

Since the characteristics of the proposed hotel would have similar trip generating characteristics to retail space, the proposed hotel was converted into an equivalent amount of retail space based on trip generation estimates derived utilizing trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, *10th Edition* (2017). Based on the hotel rooms to retail space conversion, the proposed hotel project is expected to generate traffic equivalent to approximately 38,600 square feet of retail space.

Per the City of San Jose VMT screening criteria, retail projects of 100,000 square feet or less are considered local-serving. Therefore, the proposed hotel does not require a detailed CEQA VMT analysis.

Cumulative (GP Consistency) Evaluation

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The project site is located within the Winchester Boulevard Urban Village. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed use settings that provide both housing and jobs, thus



supporting the policies and goals of the General Plan. The project is consistent with the General Plan and Winchester Boulevard Urban Village goals and policies for the following reasons:

- The project frontage along Winchester Boulevard will be consistent with planned streetscape design features of Grand Boulevards and the Winchester Boulevard Urban Village Plan.
- The project frontage along Winchester Boulevard will be designed to accommodate the planned Winchester Boulevard Complete Street improvements including protected bicycle lanes, wider sidewalks, and other pedestrian safety features.
- The project site is adjacent to bus stops and bicycle lanes on Winchester Boulevard.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as 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 Analysis

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric.

The LTA includes the analysis of AM and PM peak-hour traffic conditions for four signalized and one unsignalized intersections, following the standards and methodology set forth by the Cities of San Jose and Campbell.

Trip Generation

After applying the ITE trip rates, and appropriate trip reductions, it is estimated that the project would generate an additional 1,455 daily vehicle trips, with 64 trips (37 inbound and 27 outbound) occurring during the AM peak hour and 75 trips (37 inbound and 38 outbound) occurring during the PM peak hour.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the Cities of San Jose and Campbell, and CMP intersection operations standard of LOS D and E, respectively, under background conditions, background plus project, and cumulative plus project conditions during both the AM and PM peak hours.

I-280/Winchester Boulevard Interchange Area Transportation Development Policy

The TDP provides partial funding, via a traffic impact fee imposed on proposed development, for the implementation of a new westbound off-ramp from I-280 to Winchester Boulevard to reduce traffic congestion at the I-880/Stevens Creek and Stevens Creek Boulevard corridors. The traffic fee is based on the estimated trips to be added to the new westbound off-ramp from I-280 to Winchester Boulevard during the PM peak hour by each individual development. It is estimated that the proposed project will result in the addition of four PM peak hour trips to the planned I-280 to Winchester Boulevard ramp.

Site Access and On-Site Circulation

Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.



Recommended Site Access and On-Site Circulation Improvements

<u>Winchester Complete Street Improvements.</u> The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks.
- In order to close the sidewalk gap on the east side of Winchester Boulevard, it is recommended
 that the City staff work with the owner of the adjacent property to the north to install a sidewalk
 per City design standards.

Adhere to City of San Jose Design Standards and Guidelines. The design of the project site, including but not limited to driveways, sidewalks, corner radii, street width, parking dimensions, and signage, should adhere to City of San Jose design standards and guidelines. Specific site access and on-site circulation recommended improvements are summarized below:

- In addition to providing a 20-foot sidewalk along the project frontage, the site driveway design must ensure the safe travel of pedestrians and bicyclists along Winchester Boulevard.

 Appropriate visible and/or audible warning signals should be provided at the garage entrance to alert pedestrians and bicyclists of vehicles exiting the parking garage.
- The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to final design.
- It is recommended that the parking spaces located at the end of the dead-end aisle be dedicated for employee use.
- In lieu of providing off-street loading spaces, it is recommended that the project applicant work
 with City staff to determine the feasibility of providing a public loading zone on Winchester
 Boulevard along the project frontage.
- The City may not be supportive of the proposed loading zone along Winchester Boulevard and may require that the loading area be moved on-site. The project should work with the City to determine the feasibility of the proposed passenger loading zone on Winchester Boulevard.
- The site should provide time restricted parking spaces on-site for guest check-in and a valet drop-off/pick-up area that can accommodate the storing of at least two vehicles.

Parking Supply

Vehicular Parking

The City's parking requirements for hotels are as follows: one parking space per room and one parking space per employee. The project would have 119 rooms and a maximum of 10 employees on-site. Based on the City's parking code requirements, the project would need to provide a total of 129 off-street parking spaces. The project is located in the Winchester Boulevard Urban Village. The Urban Village Overlay allows for a 20 percent reduction in parking with the implementation of a Transportation Demand Management (TDM) plan. With the 20 percent reduction, the required parking would be reduced to 104 parking spaces. The project proposes a total of 67 parking spaces, which is a 52 percent reduction from the City's standard parking requirements.

In accordance with Sections 20.70.330 and 20.90.220 of the San Jose Code of Ordinances, which allows up to a 50% parking reduction, the additional 32 percent reduction could be allowed with the



implementation and maintenance of a TDM plan. A separate TDM plan for the proposed project that meets the requirements set forth in the City's Zoning Code will be prepared by Hexagon. The project will be required to submit and have approved by the City its TDM program.

Bicycle Parking

According to the City's Bicycle Parking Standards, the project is required to provide 13 bicycle parking spaces. The project site plan indicates that two bicycle storage areas will be located within the basement level of the parking garage. The storage areas are shown to provide space for a total of 27 bicycles. Therefore, the proposed bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking.

Pedestrian, Bicycle, and Transit Analysis

Pedestrian Facilities

Existing sidewalks along Winchester Boulevard provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Crosswalks with pedestrian signal heads are located at the signalized intersection of Winchester Boulevard and Payne Avenue. All of the roadways in the vicinity of the project site have sidewalks on both sides of the street, except a short segment on the east side of Winchester Boulevard along the frontages of the project site and one adjacent property to the north. The project will install a 20-foot sidewalk along its frontage on Winchester Boulevard. However, in order to close the sidewalk gap on the east side of Winchester Boulevard, it is recommended that the City staff work with the owner of the adjacent property to the north to install a sidewalk per City design standards.

Bicycle Facilities

The bikeways within the vicinity of the project site would remain unchanged under project conditions. Currently, no bike facilities exist on Winchester Boulevard between Payne Avenue and Moorpark Avenue that would provide connections to other bicycle facilities in the project vicinity.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Winchester Boulevard, between Payne Avenue and Moorpark Avenue
- Cypress Avenue, between Williams Road and Moorpark Avenue

Class III bike routes are planned for:

- Payne Avenue, between Winchester Boulevard and Greenbriar Avenue
- Greenbriar Avenue, between Payne Avenue and Westfield Avenue
- Westfield Avenue, between Greenbriar Avenue and Daniel Way

Transit Services

The project site is adequately served by the existing VTA transit services. The nearest bus stop to the project site are located at the Winchester Boulevard/Payne Avenue intersection approximately 400 feet from the project site and are served by Route 60. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.



As a Grand Boulevard it is envisioned that Winchester Boulevard could potentially be included in the VTA Bus Rapid Transit (BRT) System. However, there are no plans at this time for a BRT line on Winchester Boulevard.



1212 South Winchester Hotel Development TA Technical Appendices

Appendix ASan Jose VMT Evaluation Tool Output Sheet

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name: Winchester Hotel Tool Version: 2/29/2019
Location: 1212-1224 Winchester Boulevard, San Jose, CA Date: 12/16/2019

Parcel: 27917020 Parcel Type: Urban Low Transit
Proposed Parking Spaces Vehicles: 78 Bicycles: 0

LAND USE:

Residential: Percent of All Residential Units Single Family 0 DU Extremely Low Income (< 30% MFI) 0 % Affordable Very Low Income (> 30% MFI, < 50% MFI) 0 % Affordable Multi Family 0 DU Subtotal Low Income (> 50% MFI, < 80% MFI) 0 DU 0 % Affordable Office: 0 KSF Retail: 36.6 KSF Industrial: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Residential Density	
Existing Density (DU/Residential Acres in half-mile buffer)	11
With Project Density (DU/Residential Acres in half-mile buffer)	11
Increase Development Diversity	
Existing Activity Mix Index	0.48
With Project Activity Mix Index	0.49
Integrate Affordable and Below Market Rate	
Extremely Low Income BMR units	0 %
Very Low Income BMR units	0 %
Low Income BMR units	0 %
Increase Employment Density	
Existing Density (Jobs/Commercial Acres in half-mile buffer)	32
With Project Density (Jobs/Commercial Acres in half-mile buffer)	33

Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

Tier 4 - TDM Programs

Appendix B Traffic Counts

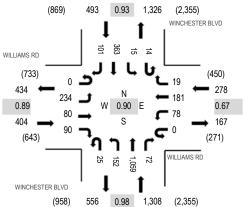


Location: 1 WINCHESTER BLVD & WILLIAMS RD AM

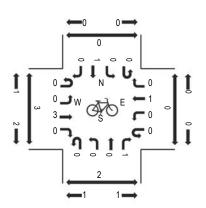
Date: Tuesday, November 19, 2019 Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

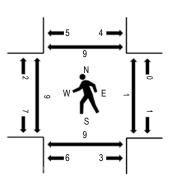




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	\	VILLIA	MS RD		V	/ILLIAN	/IS RD		WIN	CHEST	ER BL	۷D	WIN	CHEST	ΓER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	25	9	8	0	3	15	2	8	20	187	4	2	4	48	22	357	2,030	0	0	1	1
7:15 AM	0	31	8	14	0	13	28	3	6	34	216	12	2	2	61	22	452	2,301	0	0	1	1
7:30 AM	0	34	30	17	0	24	43	12	7	32	215	18	2	6	74	20	534	2,439	6	0	1	4
7:45 AM	0	43	42	20	0	29	90	6	5	44	235	41	3	5	99	25	687	2,483	3	0	0	4
8:00 AM	0	50	9	31	0	31	47	10	8	44	267	13	2	3	93	20	628	2,287	4	0	2	2
8:15 AM	0	58	17	20	0	9	22	3	4	39	277	8	4	4	96	29	590		1	1	2	2
8:30 AM	0	83	12	19	0	9	22	0	8	25	280	10	5	3	75	27	578		1	0	5	1
8:45 AM	0	42	5	16	0	13	12	4	4	28	250	6	2	0	86	23	491		1	0	1	1

		East	bound			West	oound			Northl	oound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	6
Lights	0	228	80	90	0	78	180	19	25	147	1,032	71	11	14	353	93	2,421
Mediums	0	6	0	0	0	0	1	0	0	5	27	1	2	1	10	3	56
Total	0	234	80	90	0	78	181	19	25	152	1,059	72	14	15	363	101	2,483

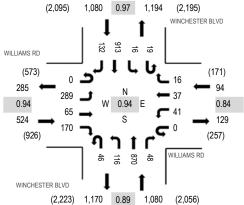


Location: 1 WINCHESTER BLVD & WILLIAMS RD PM

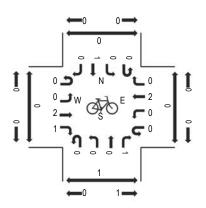
Date: Tuesday, November 19, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

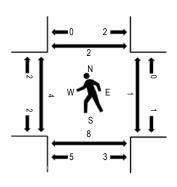
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	V	VILLIA	MS RD		W	/ILLIAN	IS RD		WIN	CHEST	ER BL	٧D	WIN	CHEST	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestriar	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru I	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	44	12	38	0	1	7	0	11	20	179	12	2	1	214	41	582	2,470	3	2	3	0
4:15 PM	0	41	17	28	0	9	7	1	6	20	235	8	4	1	206	34	617	2,554	1	0	1	3
4:30 PM	0	60	19	34	0	6	10	4	8	31	174	12	7	5	187	31	588	2,624	0	0	9	5
4:45 PM	0	42	23	44	0	15	14	3	17	34	197	12	8	6	229	39	683	2,771	4	4	0	4
5:00 PM	0	66	15	42	0	11	11	6	9	27	197	11	6	3	229	33	666	2,778	3	1	3	1
5:15 PM	0	68	16	42	0	9	14	2	5	29	216	15	5	5	238	23	687		0	0	2	1
5:30 PM	0	74	21	41	0	12	4	6	15	34	240	13	5	5	226	39	735		1	0	0	0
5:45 PM	0	81	13	45	0	9	8	2	17	26	217	9	3	3	220	37	690		0	0	3	0

		East	bound			West	oound			North	oound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	285	65	169	0	41	36	16	46	115	862	47	19	16	905	130	2,752
Mediums	0	4	0	1	0	0	1	0	0	1	8	1	0	0	8	2	26
Total	0	289	65	170	0	41	37	16	46	116	870	48	19	16	913	132	2,778

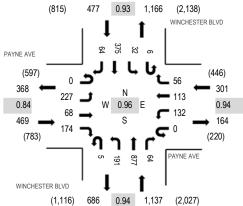


Location: 4 WINCHESTER BLVD & PAYNE AVE AM

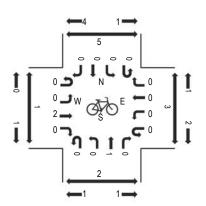
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Peak 15-Minutes: 08:00 AM - 08:15 AM

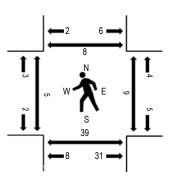




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

		PAYNE	E AVE		F	PAYNE	AVE		WIN	CHEST	ER BL	۷D	WIN	CHEST	ΓER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	destriar	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	24	4	26	0	8	14	10	0	17	132	1	3	3	45	12	299	1,851	1	4	4	0
7:15 AM	0	41	6	28	0	8	16	13	1	38	168	3	0	4	61	14	401	2,171	2	0	3	1
7:30 AM	0	54	10	48	0	34	28	8	1	41	194	13	0	5	87	20	543	2,384	0	2	5	2
7:45 AM	0	71	20	48	0	35	27	18	2	40	222	13	0	2	97	13	608	2,374	2	2	7	4
8:00 AM	0	58	23	37	0	29	32	17	2	46	229	18	4	19	89	16	619	2,220	2	4	15	1
8:15 AM	0	44	15	41	0	34	26	13	0	64	232	20	2	6	102	15	614		1	1	12	1
8:30 AM	0	51	9	45	0	13	20	13	0	34	255	6	4	2	59	22	533		3	3	6	0
8:45 AM	0	40	10	30	0	10	8	12	6	19	204	6	2	2	90	15	454		6	1	1	2

		East	bound			Westk	ound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lights	0	226	67	173	0	132	112	55	5	188	856	63	6	31	365	63	2,342
Mediums	0	1	1	1	0	0	1	1	0	3	21	1	0	1	10	0	41
Total	0	227	68	174	0	132	113	56	5	191	877	64	6	32	375	64	2,384

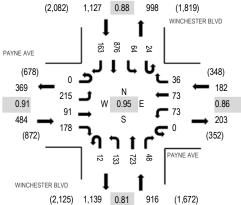


Location: 4 WINCHESTER BLVD & PAYNE AVE PM

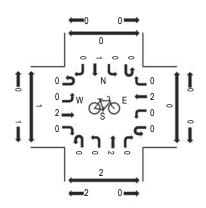
Date: Tuesday, November 19, 2019
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

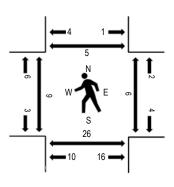
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

		PAYN	E AVE		F	PAYNE	AVE		WIN	CHEST	ER BL	۷D	WIN	CHEST	ΓER BL	VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	destriar	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	23	16	37	0	21	16	12	2	20	133	5	5	8	186	51	535	2,265	1	1	6	1
4:15 PM	0	51	16	48	0	12	9	10	3	29	172	9	4	11	188	28	590	2,411	2	6	5	2
4:30 PM	0	40	18	33	0	14	14	17	2	33	145	11	5	13	193	28	566	2,458	6	2	1	4
4:45 PM	0	40	23	43	0	18	13	10	6	32	145	9	9	10	180	36	574	2,608	7	2	6	1
5:00 PM	0	44	25	40	0	19	16	9	4	31	162	9	9	19	246	48	681	2,709	6	3	7	0
5:15 PM	0	47	26	57	0	18	16	4	2	26	175	7	5	14	199	41	637		2	1	4	2
5:30 PM	0	57	19	36	0	18	22	13	2	41	221	18	6	13	217	33	716		1	2	9	2
5:45 PM	0	67	21	45	0	18	19	10	4	35	165	14	4	18	214	41	675		0	0	6	1

		East	bound			West	oound			North	oound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	213	91	178	0	73	73	36	11	133	712	47	24	64	866	161	2,682
Mediums	0	2	0	0	0	0	0	0	1	0	11	1	0	0	10	2	27
Total	0	215	91	178	0	73	73	36	12	133	723	48	24	64	876	163	2,709

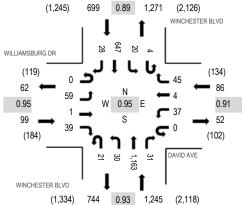


Location: 5 WINCHESTER BLVD & DAVID AVE AM

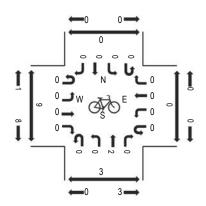
Date: Tuesday, November 19, 2019 **Peak Hour:** 07:45 AM - 08:45 AM

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

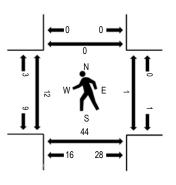
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	WIL	LIAMS	BURG	DR		DAVID	AVE		WIN	CHEST	ER BL	VD	WIN	CHEST	ΓER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	8	0	10	0	4	1	7	7	6	152	8	1	6	106	5	321	1,697	4	5	7	0
7:15 AM	0	10	0	10	0	5	0	4	8	5	191	12	2	3	100	2	352	1,916	3	4	4	0
7:30 AM	0	15	0	10	0	13	1	9	10	7	229	4	1	2	167	11	479	2,127	5	3	4	0
7:45 AM	0	13	1	12	0	13	0	10	6	7	263	13	4	5	188	10	545	2,129	6	1	7	0
8:00 AM	0	17	0	10	0	10	0	17	1	10	291	9	0	5	163	7	540	1,984	0	0	15	0
8:15 AM	0	18	0	7	0	10	0	15	7	7	316	6	0	7	165	5	563		3	0	16	0
8:30 AM	0	11	0	10	0	4	4	3	7	6	293	3	0	3	131	6	481		3	0	6	0
8:45 AM	0	14	0	8	0	2	0	2	6	11	210	7	0	8	124	8	400		5	0	2	0

		East	bound			Westk	oound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	58	1	38	0	37	4	45	21	30	1,135	31	4	20	635	28	2,087
Mediums	0	1	0	1	0	0	0	0	0	0	28	0	0	0	12	0	42
Total	0	59	1	39	0	37	4	45	21	30	1,163	31	4	20	647	28	2,129

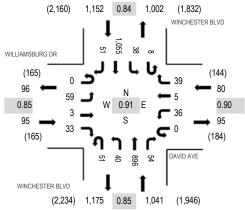


Location: 5 WINCHESTER BLVD & DAVID AVE PM

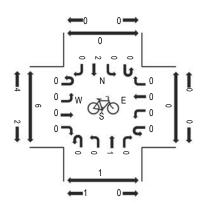
Date: Tuesday, November 19, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

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

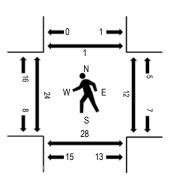
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	WIL	LIAMS	BURG	DR		DAVID	AVE		WIN	CHEST	ER BL	VD	WIN	CHES.	TER BL	VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	7	2	10	0	7	1	4	14	7	177	10	1	10	258	7	515	2,047	5	6	8	0
4:15 PM	0	8	1	11	0	10	0	3	6	10	227	23	0	7	226	10	542	2,184	5	6	13	0
4:30 PM	0	6	2	6	0	14	0	5	14	8	202	7	0	6	239	8	517	2,218	5	4	11	0
4:45 PM	0	9	0	8	0	8	1	11	11	8	170	11	0	10	217	9	473	2,309	12	5	11	0
5:00 PM	0	9	0	13	0	14	1	9	14	10	222	17	1	7	321	14	652	2,368	4	3	5	1
5:15 PM	0	19	0	9	0	10	1	12	13	9	214	14	3	16	246	10	576		4	4	4	0
5:30 PM	0	19	1	7	0	5	2	10	15	12	268	10	1	4	241	13	608		13	3	11	0
5:45 PM	0	12	2	4	0	7	1	8	9	9	192	13	3	11	247	14	532		3	2	8	0

		East	bound			Westk	oound			Northb	ound			South	nbound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	59	3	33	0	36	5	38	51	40	888	54	8	37	1,045	51	2,348
Mediums	0	0	0	0	0	0	0	1	0	0	7	0	0	1	10	0	19
Total	0	59	3	33	0	36	5	39	51	40	896	54	8	38	1,055	51	2,368



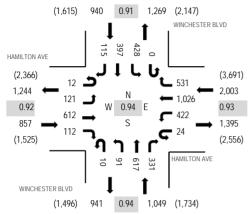
Location: 4 WINCHESTER BLVD & HAMILTON AVE AM

Date and Start Time: Tuesday, April 24, 2018

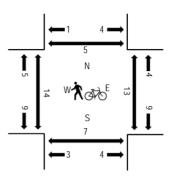
Peak Hour: 07:45 AM - 08:45 AM

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

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

	H	HAMILTON AVE				AMILTO	N AVE		WIN	CHEST	ER BL	/D	WIN	CHEST	ΓER BL	VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	estrair	n Crossir	ıgs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	1	12	113	15	5	34	196	96	0	10	72	55	0	78	34	14	735	3,978	3	0	1	1
7:15 AM	0	16	125	13	5	56	288	122	1	15	86	60	0	104	50	19	960	4,508	1	1	4	3
7:30 AM	1	26	127	7	0	84	293	106	1	21	99	65	0	99	96	27	1,052	4,831	4	4	4	1
7:45 AM	0	29	142	27	5	108	264	122	0	19	161	88	0	114	117	35	1,231	4,849	3	4	1	0
8:00 AM	5	34	161	36	4	118	255	152	1	31	128	72	0	106	130	32	1,265	4,587	3	3	3	1
8:15 AM	1	32	161	29	5	119	293	142	7	21	154	96	0	103	91	29	1,283		2	3	1	3
8:30 AM	6	26	148	20	10	77	214	115	2	20	174	75	0	105	59	19	1,070		2	2	2	1
8:45 AM	4	17	170	21	7	79	209	108	2	10	118	70	0	78	62	14	969		2	1	3	0

		East	bound			West	bound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	2	0	0	1	5	2	0	1	0	2	0	2	1	0	16
Lights	12	120	597	108	24	410	1,005	524	10	87	602	325	0	418	387	113	4,742
Mediums	0	1	13	4	0	11	16	5	0	3	15	4	0	8	9	2	91
Total	12	121	612	112	24	422	1,026	531	10	91	617	331	0	428	397	115	4,849

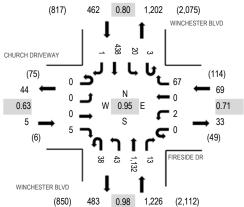


Location: 3 WINCHESTER BLVD & FIRESIDE DR AM

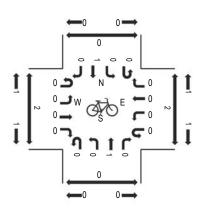
Date: Tuesday, November 19, 2019 Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

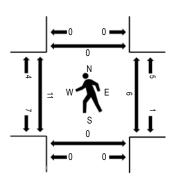
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

		CHU	RCH [RIVEV	VAY	F	IRESID	E DR		WIN	CHEST	ER BL	VD	WIN	CHEST	ΓER BL	VD						
	Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	n Crossii	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
_	7:00 AM	0	0	0	0	0	0	0	12	3	4	146	0	0	1	57	0	223	1,355	1	2	0	0
	7:15 AM	0	0	0	0	0	0	0	13	5	4	211	1	0	3	80	0	317	1,594	0	0	0	0
	7:30 AM	0	0	0	1	0	0	0	14	6	6	235	4	0	1	100	0	367	1,715	1	1	0	0
	7:45 AM	0	0	0	2	0	0	0	14	6	12	283	9	1	5	116	0	448	1,762	3	3	0	0
	8:00 AM	0	0	0	1	0	1	0	19	7	6	278	1	2	10	136	1	462	1,694	5	0	0	0
	8:15 AM	0	0	0	0	0	1	0	25	12	15	282	1	0	3	99	0	438		2	2	0	0
	8:30 AM	0	0	0	2	0	0	0	9	13	10	289	2	0	2	87	0	414		1	1	0	0
	8:45 AM	0	0	0	0	0	0	0	6	g	15	234	3	2	3	106	2	380		1	0	0	0

		East	bound			Westh	oound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Lights	0	0	0	4	0	2	0	67	38	42	1,105	11	3	20	429	1	1,722
Mediums	0	0	0	1	0	0	0	0	0	1	24	2	0	0	9	0	37
Total	0	0	0	5	0	2	0	67	38	43	1,132	13	3	20	438	1	1,762

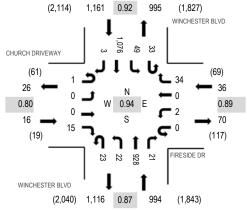


Location: 3 WINCHESTER BLVD & FIRESIDE DR PM

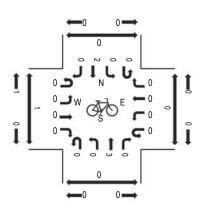
Date: Tuesday, November 19, 2019
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

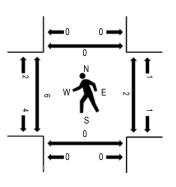
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	CHU	RCH [RIVEV	VAY	F	IRESID	E DR		WIN	CHEST	ER BL	VD	WIN	CHEST	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestriar	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	0	0	1	0	0	0	11	6	10	164	0	6	10	231	0	439	1,838	1	0	0	0
4:15 PM	0	0	0	1	0	0	0	6	12	7	224	2	3	10	209	0	474	1,953	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	6	7	8	203	1	6	10	221	1	464	1,993	9	0	0	0
4:45 PM	0	0	1	0	0	0	0	9	6	8	189	2	5	11	229	1	461	2,118	5	3	0	0
5:00 PM	0	0	0	4	0	1	0	8	11	4	209	3	11	15	288	0	554	2,207	1	1	0	0
5:15 PM	0	0	0	3	0	0	0	11	8	6	215	5	9	12	245	0	514		3	1	0	0
5:30 PM	0	0	0	5	0	0	0	10	1	4	273	7	3	7	278	1	589		2	0	0	0
5:45 PM	1	0	0	3	0	1	0	5	3	8	231	6	10	15	265	2	550		0	0	0	0

		East	bound			West	oound			North	oound			South	nbound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	1	0	0	15	0	2	0	33	23	22	916	21	33	49	1,064	3	2,182
Mediums	0	0	0	0	0	0	0	1	0	0	12	0	0	0	12	0	25
Total	1	0	0	15	0	2	0	34	23	22	928	21	33	49	1,076	3	2,207

Existing Reassignment Due to Winchester Boulevard Improvement



Location: 1 WINCHESTER BLVD & COLONIAL WAY AM

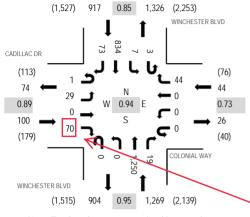
Date and Start Time: Tuesday, April 24, 2018

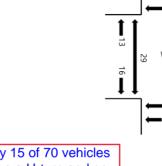
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles in Crosswalk





Note: Total study counts contained in parentheses.

Only 15 of 70 vehicles make a U-turn and go NB on Winchester

Traffic Counts

		CADILL	AC DF	?	CC	LONIA	AL WAY		WIN	CHEST	ER BL	٧D	WIN	CHES	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	destrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	6	0	12	0	0	0	7	0	0	195	1	0	1	99	14	335	1,792	8	1	0	1
7:15 AM	0	7	0	20	0	0	0	6	0	0	223	2	0	2	135	13	408	2,076	4	3	1	0
7:30 AM	0	10	0	10	0	0	0	8	0	0	226	1	1	0	183	4	443	2,259	10	5	1	2
7:45 AM	0	11	0	19	0	0	0	8	0	0	288	5	0	4	246	25	606	2,330	5	1	0	1
8:00 AM	0	6	0	24	0	0	0	16	0	0	323	6	3	1	224	16	619	2,129	10	1	0	1
8:15 AM	0	4	0	17	0	0	0	9	0	0	332	3	0	1	211	14	591		8	3	0	0
8:30 AM	1	8	0	10	0	0	0	11	0	0	307	5	0	1	153	18	514		4	3	0	1
8:45 AM	0	10	0	4	0	0	0	11	0	0	217	5	0	2	148	8	405		7	2	0	0

		East	bound			West	bound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	1	28	0	68	0	0	0	44	0	0	1,226	19	3	7	817	71	2,284
Mediums	0	1	0	2	0	0	0	0	0	0	23	0	0	0	17	2	45
Total	1	29	0	70	0	0	0	44	0	0	1,250	19	3	7	834	73	2,330



Location: 1 WINCHESTER BLVD & COLONIAL WAY PM

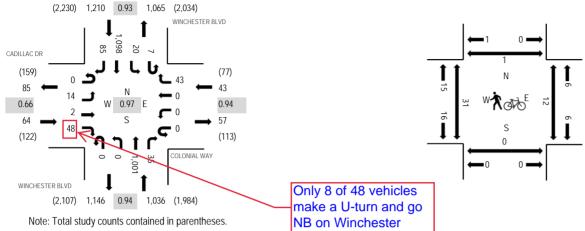
Date and Start Time: Tuesday, April 24, 2018

Peak Hour: 04:45 PM - 05:45 PM

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

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

		CADILL	AC DR	2	CC	DLONIA	L WAY		WIN	CHEST	ER BL	/D	WIN	CHES	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	2	1	6	0	0	0	4	0	0	244	7	2	2	255	17	540	2,156	6	3	0	0
4:15 PM	0	7	0	5	0	0	0	9	0	0	211	14	2	6	216	25	495	2,222	13	4	0	0
4:30 PM	0	6	1	18	0	0	0	12	0	0	240	9	0	8	218	17	529	2,302	8	1	0	0
4:45 PM	0	5	1	14	0	0	0	12	0	0	223	11	1	3	307	15	592	2,353	7	3	0	0
5:00 PM	0	2	0	6	0	0	0	11	0	0	269	4	3	4	284	23	606	2,257	9	4	0	0
5:15 PM	0	0	0	11	0	0	0	10	0	0	264	12	3	7	248	20	575		0	2	0	0
5:30 PM	0	7	1	17	0	0	0	10	0	0	245	8	0	6	259	27	580		12	1	0	1
5:45 PM	0	2	0	10	0	0	0	9	0	0	218	5	1	3	233	15	496		10	0	0	0

		East	bound			Westk	oound			North	oound			South	nbound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	14	2	48	0	0	0	42	0	0	994	34	7	20	1,087	85	2,333
Mediums	0	0	0	0	0	0	0	1	0	0	7	1	0	0	10	0	19
Total	0	14	2	48	0	0	0	43	0	0	1,001	35	7	20	1,098	85	2,353

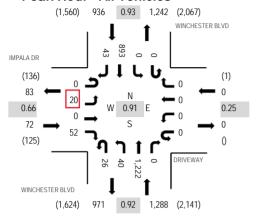


Location: 2 WINCHESTER BLVD & DRIVEWAY AM **Date and Start Time:** Tuesday, April 24, 2018

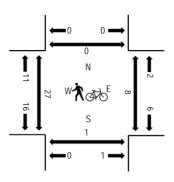
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

		IMPAL	A DR		[DRIVE	WAY		WIN	CHEST	ER BL	۷D	WIN	CHEST	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	4	0	3	0	0	0	1	3	7	150	0	0	0	113	3	284	1,679	7	3	0	0
7:15 AM	0	4	0	10	0	0	0	0	5	8	222	0	0	0	145	5	399	2,023	4	1	0	0
7:30 AM	0	7	0	10	0	0	0	0	5	8	218	0	0	0	190	6	444	2,221	7	5	0	0
7:45 AM	0	10	0	19	0	0	0	0	10	5	251	0	0	0	242	15	552	2,296	6	3	0	0
8:00 AM	0	5	0	12	0	0	0	0	7	8	334	0	0	0	255	7	628	2,148	6	2	0	0
8:15 AM	0	3	0	7	0	0	0	0	5	13	309	0	0	0	248	12	597		7	3	1	0
8:30 AM	0	2	0	14	0	0	0	0	4	14	328	0	0	0	148	9	519		7	0	0	0
8:45 AM	0	6	0	9	0	0	0	0	9	5	213	0	0	0	151	11	404		4	1	1	0

		East	bound			West	bound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4
Lights	0	20	0	52	0	0	0	0	26	39	1,200	0	0	0	875	41	2,253
Mediums	0	0	0	0	0	0	0	0	0	1	21	0	0	0	15	2	39
Total	0	20	0	52	0	0	0	0	26	40	1,222	0	0	0	893	43	2,296

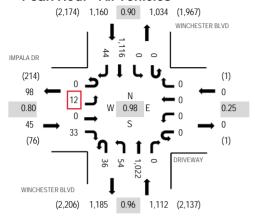


Location: 2 WINCHESTER BLVD & DRIVEWAY PM **Date and Start Time:** Tuesday, April 24, 2018

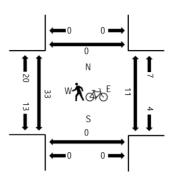
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

		IMPAL	A DR		1	DRIVE	WAY		WIN	CHEST	ER BL	VD	WIN	CHEST	ΓER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	0	0	6	0	0	0	0	9	18	228	0	0	0	272	16	549	2,128	3	3	0	0
4:15 PM	0	2	0	3	0	0	0	1	4	15	210	0	1	1	203	9	449	2,167	10	1	0	0
4:30 PM	0	1	0	8	0	0	0	0	8	20	259	0	0	0	230	11	537	2,307	6	4	0	0
4:45 PM	0	3	0	8	0	0	0	0	6	19	234	0	0	0	304	19	593	2,317	7	4	0	0
5:00 PM	0	2	0	12	0	0	0	0	14	15	256	0	0	0	283	6	588	2,260	12	0	0	0
5:15 PM	0	3	0	7	0	0	0	0	8	9	262	0	0	0	290	10	589		5	5	0	0
5:30 PM	0	4	0	6	0	0	0	0	8	11	270	0	0	0	239	9	547		5	2	0	0
5:45 PM	0	2	0	9	0	0	0	0	8	17	229	0	0	0	261	10	536		17	0	1	0

		East	bound			Westh	oound			North	bound			Sout	hbound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	12	0	33	0	0	0	0	36	54	1,014	0	0	0	1,103	44	2,296
Mediums	0	0	0	0	0	0	0	0	0	0	8	0	0	0	12	0	20
Total	0	12	0	33	0	0	0	0	36	54	1,022	0	0	0	1,116	44	2,317



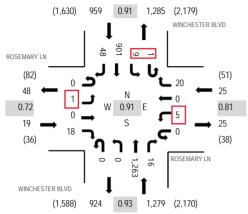
Location: 3 WINCHESTER BLVD & ROSEMARY LN AM

Date and Start Time: Tuesday, April 24, 2018

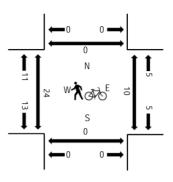
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

	R	OSEM.	ARY LI	V	RC	SEMA	RY LN		WIN	CHEST	ER BL	/D	WIN	CHEST	ΓER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru R	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	1	0	0	3	0	6	0	1	0	0	169	2	0	1	111	3	297	1,748	3	0	0	0
7:15 AM	0	0	0	5	0	3	0	5	0	0	243	2	0	0	157	8	423	2,078	7	1	0	0
7:30 AM	0	0	0	5	0	1	0	2	0	0	226	4	0	2	209	15	464	2,237	4	0	0	1
7:45 AM	0	0	0	5	0	2	0	2	0	0	271	5	0	1	254	24	564	2,282	4	2	0	0
8:00 AM	0	0	0	8	0	0	0	7	0	0	343	1	0	3	252	13	627	2,139	7	1	0	0
8:15 AM	0	1	0	3	0	1	0	8	0	0	327	2	0	3	234	3	582		3	3	0	0
8:30 AM	0	0	0	2	0	2	0	3	0	0	322	8	1	2	161	8	509		6	1	0	0
8:45 AM	0	0	0	3	0	4	0	4	0	0	244	1	0	1	157	7	421		2	1	0	0

		East	bound			Westh	oound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	0	0	18	0	5	0	20	0	0	1,239	16	1	9	880	48	2,236
Mediums	0	1	0	0	0	0	0	0	0	0	23	0	0	0	19	0	43
Total	0	1	0	18	0	5	0	20	0	0	1,263	16	1	9	901	48	2,282



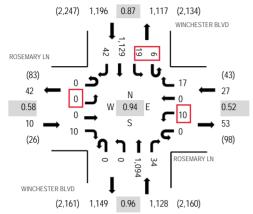
Location: 3 WINCHESTER BLVD & ROSEMARY LN PM

Date and Start Time: Tuesday, April 24, 2018

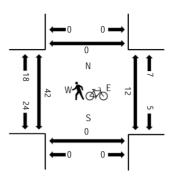
Peak Hour: 04:45 PM - 05:45 PM

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

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk

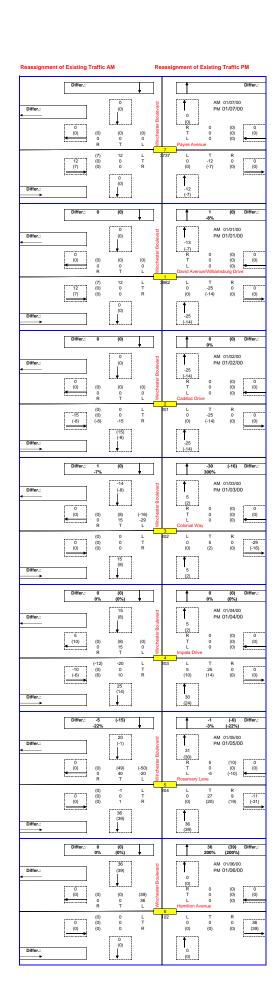


Note: Total study counts contained in parentheses.

Traffic Counts

	R	OSEM	ARY LI	V	RO)SEMA	RY LN		WIN	CHEST	ER BL	/D	WIN	CHES	TER BL	VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	bound			Rolling	Ped	destrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru R	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	0	0	5	0	0	0	3	0	0	245	8	0	4	270	11	546	2,155	3	3	0	1
4:15 PM	0	0	0	2	0	2	0	4	0	0	241	10	0	4	197	9	469	2,238	6	0	0	0
4:30 PM	0	0	0	3	0	0	0	1	0	0	272	5	1	2	259	7	550	2,356	2	6	0	0
4:45 PM	0	0	0	2	0	1	0	3	0	0	269	8	2	3	296	6	590	2,361	10	4	0	0
5:00 PM	0	0	0	1	0	5	0	9	0	0	263	6	3	7	319	16	629	2,321	12	1	0	0
5:15 PM	0	0	0	4	0	2	0	4	0	0	289	6	0	6	268	8	587		3	5	0	0
5:30 PM	0	0	0	3	0	2	0	1	0	0	273	14	1	3	246	12	555		10	2	0	0
5:45 PM	0	1	0	5	0	2	0	4	0	0	245	6	0	6	267	14	550		16	0	0	0

		East	bound			Westh	oound			North	bound			Sout	hbound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	10	0	9	0	17	0	0	1,086	34	6	18	1,117	42	2,339
Mediums	0	0	0	0	0	1	0	0	0	0	8	0	0	1	12	0	22
Total	0	0	0	10	0	10	0	17	0	0	1,094	34	6	19	1,129	42	2,361



Appendix C Approved Trips Inventory

AM PROJECT TRIPS

Intersection of	:	Payne	Αv	&	S	Winchester	Bl
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Traffix Node Number: 3737

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
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	16	0	0	3	1	3	0	0	0	0	2
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	0	10	0	0	35	0	0	0	0	0	0	0
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE SANTANA WEST	0	62	0	1	7	2	13	0	0	0	0	6
PDC97-036 RET (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	1	0	0	0	0	0	0	0	0	0	0

TOTAL: 0 89 0 1 45 3 16 0 0 0 8

	LEFT	THRU	RIGHT
NORTH	1	45	3
EAST	0	0	8
SOUTH	0	89	0
WEST	16	0	0

PM PROJECT TRIPS

Intersection of	:	Payne	Αv	&	S	Winchester	Βl

Traffix Node Number: 3737

114111111144 14411144 1 3737												
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
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	9	0	2	15	3	2	0	0	0	0	1
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	0	40	0	1	23	1	1	0	0	0	0	1
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE SANTANA WEST	0	11	0	6	55	11	3	0	0	0	0	1
PDC97-036 RET (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	3	0	0	3	1	1	0	0	0	0	0

TOTAL: 0 63 0 9 96 16 7 0 0 0 3

	LEFT	THRU	RIGHT
NORTH	9	96	16
EAST	0	0	3
SOUTH	0	63	0
WEST	7	0	0

AM PROJECT TRIPS

Intersection of	:	Williams	Rd	&	S	Winchester Bl	
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Traffix Node Number: 3836

M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
0	21	0	0	4	1	3	0	0	0	0	2
10	0	0	50	20	5	65	9	16	0	4	0
0	80	0	1	10	2	13	0	0	0	0	6
0	1	0	0	1	0	0	0	0	0	0	0
	NBL 0	NBL NBT 0 21 10 0 0 80	NBL NBT NBR 0 21 0 10 0 0 0 80 0	NBL NBT NBR SBL 0 21 0 0 10 0 0 50	NBL NBT NBR SBL SBT 0 21 0 0 4	NBL NBT NBR SBL SBT SBR 0 21 0 0 4 1 10 0 0 50 20 5 0 80 0 1 10 2	NBL NBT NBR SBL SBT SBR EBL 0 21 0 0 4 1 3 10 0 0 50 20 5 65 0 80 0 1 10 2 13	NBL NBT NBR SBL SBT SBR EBL EBT 0 21 0 0 4 1 3 0 10 0 0 50 20 5 65 9 0 80 0 1 10 2 13 0	NBL NBT NBR SBL SBT SBR EBL EBT EBR 0 21 0 0 4 1 3 0 0 10 0 0 50 20 5 65 9 16 0 80 0 1 10 2 13 0 0	NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL 10 21 0 0 4 1 3 0 0 0 10 0 0 50 20 5 65 9 16 0 0 80 0 1 10 2 13 0 0 0	NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT 10 0 21 0 4 1 3 0 0 0 0 10 0 0 50 20 5 65 9 16 0 4 0 80 0 1 10 2 13 0 0 0 0

TOTAL:	10	102	0	51	35	8	81	9	16	0	4	8
	मज.ग	ידי ידי	RII R	тснт								

	LEFT	THRU	RIGHT
NORTH	51	35	8
EAST	0	4	8
SOUTH	10	102	0
WEST	81	9	16

PM PROJECT TRIPS

Intersection	of	: 1	Williams	Rd	&	S	Winchester	Bl
Traffix Node	Numl	oe:	r : 3836					

Trailix Node Number : 3836												
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
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	12	0	2	20	3	2	0	0	0	0	1
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	41	0	0	26	10	19	38	6	14	0	17	0
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE SANTANA WEST	0	14	0	6	72	11	3	0	0	0	0	1
PDC97-036 RET (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	4	0	0	4	1	1	0	0	0	0	0

TOTAL: 41 30 0 34 106 34 44 6 14 0 17 2

	LEFT	THRU	RIGHT
NORTH	34	106	34
EAST	0	17	2
SOUTH	41	30	0
WEST	44	6	14

City of Campbell Approved and Pending Projects (Provided by the City of Campbell on December 3, 2019)

#	Project Name	Location	Project Description
App	proved Projects		
1	95 East Hamilton Avenue	95 East Hamilton Avenue	5,800 s.f. office building
2	Creekside Center	675/705 Creekside Way	172,000 s.f. of office space (office use is under construction;
			hotel use is already occupied)
3	Pruneyard Expansion	1875/1901 South Bascom Avenue	100,000 s.f. office building and 23,000 sf of retail space
			(Phase 2 - Building 'R5' (5,000 s.f. has been completed. Most of the center is occupied.
4	Opa Expansion	276 East Campbell Avenue	10,819 s.f. of commercial and office
5	Springbridge	1625 West Campbell Avenue	commerical day care center capacity increase from 60 to 100 children
6	Cresleigh Homes	540/558/566 East Campell Ave and 24/34 Dillon Avenue	6,512 s.f. of ground level commercial space and 59 condos.
7	Trojan Storage	750 East McGlincy Lane	156,000 s.f. self-storage facility
8	Chick-fil-A	2060 South Bascom Avenue	5,000 s.f. of fast-food with driveway-through window
Per	ding Projects		
9	Elephant Bar	499 E Hamilton Ave	8,250 s.f. of restaurant space
10	Franciscan	601 Almarida Drive	Addition of 60 units to an existing apartment community

Appendix DVolume Summary

Intersection Number: 1
Traffix Node Number: 3836

Intersection Name: Winchester Boulevard and Williams Road

					Мс	vemen	ts						
_	Nor	th Appr	oach	Eas	t Appro	oach	Sou	th Appr	oach	Wes	t Appı	roach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	101	363	29	19	181	78	72	1059	177	90	80	234	2483
San Jose Approved Trips													
ATI	8	35	51	8	4	0	0	102	10	16	9	81	324
Valley Fair Expansion	2	10	0	0	0	0	0	16	0	0	0	3	31
Campbell Approved Trips	0	13	0	0	0	0	0	7	2	3	0	0	25
Total Approved Trips	10	58	51	8	4	0	0	125	12	19	9	84	380
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	111	421	80	27	185	78	72	1184	189	109	89	318	2863
Project Trips	0	11	0	0	0	0	0	10	4	0	0	0	25
Background Plus Project Conditions	111	432	80	27	185	78	72	1194	193	109	89	318	2888
San Jose Pending Trips													
1073 Winchester Mixed-Use	0	7	0	0	0	1	0	7	8	5	0	0	28
1495 Winchester Mixed-Use	0	4	0	0	0	0	0	3	0	1	0	0	8
Campbell Pending Trips	0	6	0	0	0	0	0	8	2	2	0	0	18
Total Pending Trips	0	17	0	0	0	1	0	18	10	8	0	0	54
Cumulative Plus Project Conditions	111	449	80	27	185	79	72	1212	203	117	89	318	2942

Intersection Number: 2
Traffix Node Number: 3737

Intersection Name: Winchester Boulevard and Payne Avenue

					М	ovement	:S						
_		th Appr			t Appr			th Appr	oach			oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	64	375	38	56	113	132	64	877	196	174	68	227	2384
San Jose Approved Trips													
ATI	3	45	1	8	0	0	0	89	0	0	0	16	162
Valley Fair Expansion	2	8	0	0	0	0	0	14	0	0	0	2	26
Campbell Approved Trips	0	16	0	0	0	0	0	9	2	4	0	0	31
Total Approved Trips	5	69	1	8	0	0	0	112	2	4	0	18	219
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	-12	0	0	0	12	0
Background Conditions	69	444	39	64	113	132	64	977	198	178	68	257	2603
Project Trips	0	13	11	0	0	0	0	20	0	0	0	6	50
Background Plus Project Conditions	69	457	50	64	113	132	64	997	198	178	68	263	2653
San Jose Pending Trips													
1073 Winchester Mixed-Use	3	5	0	1	0	0	0	7	0	0	0	0	16
1495 Winchester Mixed-Use	0	5	0	0	0	0	0	2	0	1	0	1	9
Campbell Pending Trips	0	8	0	0	0	0	0	10	2	2	0	0	22
Total Pending Trips	3	18	0	1	0	0	0	19	2	3	0	1	47
Cumulative Plus Project Conditions	72	475	50	65	113	132	64	1016	200	181	68	264	2700

Intersection Number: 3
Traffix Node Number: 3882

Intersection Name: Winchester Boulevard and David Avenue/Williamsburg Drive

					М	ovemen	ts						
_	No	rth Appr	oach	East	t Appr	oach	Sou	th Appr	oach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	28	647	24	45	4	37	31	1163	51	39	1	59	2129
San Jose Approved Trips													
ATI	0	45	0	0	0	0	0	89	0	0	0	0	134
Valley Fair Expansion	0	8	0	0	0	0	0	14	0	0	0	0	22
Campbell Approved Trips	0	20	0	0	0	0	0	11	0	0	0	0	31
Total Approved Trips	0	73	0	0	0	0	0	114	0	0	0	0	187
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	-25	0	0	0	12	-13
Background Conditions	28	720	24	45	4	37	31	1252	51	39	1	71	2303
Project Trips	0	13	0	0	0	0	0	20	0	0	0	0	33
Background Plus Project Conditions	28	733	24	45	4	37	31	1272	51	39	1	71	2336
San Jose Pending Trips													
1073 Winchester Mixed-Use	0	5	0	0	0	0	0	7	0	0	0	0	12
1495 Winchester Mixed-Use	0	6	0	0	0	0	0	2	11	0	0	1	20
Campbell Pending Trips	0	10	0	0	0	0	0	12	0	0	0	0	22
Total Pending Trips	0	21	0	0	0	0	0	21	11	0	0	1	54
Cumulative Plus Project Conditions	28	754	24	45	4	37	31	1293	62	39	1	72	2390

Intersection Number: 4
Traffix Node Number: 102

Intersection Name: Winchester Boulevard and Hamilton Avenue

Peak Hour: AM
Count Date: 4/24/18

-					Мс	vemen	nts						
		th Appr			t Appro	oach		th Appi			t Appr		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	115	397	428	531	1026	446	331	617	101	112	612	133	4849
San Jose Approved Trips													
ATI	9	27	9	18	0	0	0	53	0	0	0	18	134
Valley Fair Expansion	2	2	4	6	0	0	0	4	0	0	0	4	22
Campbell Approved Trips	2	4	14	5	9	11	13	4	0	1	26	2	91
Total Approved Trips	13	33	27	29	9	11	13	61	0	1	26	24	247
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	36	0	0	0	0	0	0	0	0	0	36
Background Conditions	128	430	491	560	1035	457	344	678	101	113	638	157	5132
Project Trips	1	1	11	17	0	0	0	2	0	0	0	2	34
Background Plus Project Conditions	129	431	502	577	1035	457	344	680	101	113	638	159	5166
San Jose Pending Trips													
1073 Winchester Mixed-Use	1	1	4	6	0	0	0	1	0	0	0	0	13
1495 Winchester Mixed-Use	2	2	9	9	0	0	0	2	0	0	0	0	24
Campbell Pending Trips	0	0	10	12	12	12	10	0	0	0	10	0	66
Total Pending Trips	3	3	23	27	12	12	10	3	0	0	10	0	103
Cumulative Plus Project Conditions	132	434	525	604	1047	469	354	683	101	113	648	159	5269

Intersection Number: 5
Traffix Node Number: 9001

Intersection Name: Winchester Boulevard and Fireside Drive

					M	ovement	ts						
	No	rth Appr	oach	Eas	t Appr	oach	Sou	th Appr	oach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	1	438	23	67	0	0	13	1132	81	5	0	0	1760
San Jose Approved Trips													
ATI	0	49	0	0	0	0	0	113	0	0	0	0	162
Valley Fair Expansion	0	10	0	0	0	0	0	16	0	0	0	0	26
Campbell Approved Trips	0	16	0	0	0	0	0	9	0	0	0	0	25
Total Approved Trips	0	75	0	0	0	0	0	138	0	0	0	0	213
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	1	513	23	67	0	0	13	1270	81	5	0	0	1973
Project Trips	0	11	0	0	0	0	0	14	13	0	0	0	38
Background Plus Project Conditions	1	524	23	67	0	0	13	1284	94	5	0	0	2011
San Jose Pending Trips 1073 Winchester Mixed-Use	0	8	0	0	0	0	0	8	0	0	0	0	16
1495 Winchester Mixed-Use	0	5	0	0	0	0	0	3	0	0	0	0	8
Campbell Pending Trips	0	8	0	0	0	0	0	10	0	0	0	0	18
Total Pending Trips	0	21	0	0	0	0	0	21	0	0	0	0	42
Cumulative Plus Project Conditions	1	545	23	67	0	0	13	1305	94	5	0	0	2053

Intersection Number: 1
Traffix Node Number: 3836

Intersection Name: Winchester Boulevard and Williams Road

					М	ovemen	ts						
_	Noi	th Appro	oach	Eas	t Appr	oach	Sou	th App	roach	Wes	t Appı	roach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	132	913	35	16	37	41	48	870	162	170	65	289	2778
San Jose Approved Trips													
ATI	34	106	34	2	17	0	0	30	41	14	6	44	328
Valley Fair Expansion	9	50	0	0	0	0	0	46	0	0	0	8	113
Campbell Approved Trips	0	15	0	0	0	0	0	15	4	4	0	0	38
Total Approved Trips	43	171	34	2	17	0	0	91	45	18	6	52	479
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	175	1084	69	18	54	41	48	961	207	188	71	341	3257
Project Trips	0	11	0	0	0	0	0	14	6	0	0	0	31
Background Plus Project Conditions	175	1095	69	18	54	41	48	975	213	188	71	341	3288
San Jose Pending Trips													
1073 Winchester Mixed-Use	0	6	0	0	0	0	1	11	7	4	0	0	29
1495 Winchester Mixed-Use	0	3	0	0	0	0	0	4	0	2	0	0	9
Campbell Pending Trips	0	9	0	0	0	0	0	6	1	2	0	0	18
Total Pending Trips	0	18	0	0	0	0	1	21	8	8	0	0	56
Cumulative Plus Project Conditions	175	1113	69	18	54	41	49	996	221	196	71	341	3344

Intersection Number: 2
Traffix Node Number: 3737

Intersection Name: Winchester Boulevard and Payne Avenue

					Me	ovemen	ts						
_	Noi	th Appr	oach	Eas	t Appr	oach	Sou	th Appı	oach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	163	876	88	36	73	73	48	723	145	178	91	215	2709
San Jose Approved Trips													
ATI	16	96	9	3	0	0	0	63	0	0	0	7	194
Valley Fair Expansion	8	42	0	0	0	0	0	39	0	0	0	7	96
Campbell Approved Trips	0	19	0	0	0	0	0	19	5	5	0	0	48
Total Approved Trips	24	157	9	3	0	0	0	121	5	5	0	14	338
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	-7	0	0	0	7	0
Background Conditions	187	1033	97	39	73	73	48	837	150	183	91	236	3047
Project Trips	0	19	11	0	0	0	0	20	0	0	0	6	56
Background Plus Project Conditions	187	1052	108	39	73	73	48	857	150	183	91	242	3103
San Jose Pending Trips													
1073 Winchester Mixed-Use	4	8	1	0	0	0	0	6	0	0	0	0	19
1495 Winchester Mixed-Use	0	5	0	0	0	0	0	3	0	1	0	1	10
Campbell Pending Trips	0	11	0	0	0	0	0	7	2	3	0	0	23
Total Pending Trips	4	24	1	0	0	0	0	16	2	4	0	1	52
Cumulative Plus Project Conditions	191	1076	109	39	73	73	48	873	152	187	91	243	3155

Intersection Number: 3
Traffix Node Number: 3882

Intersection Name: Winchester Boulevard and David Avenue/Williamsburg Drive

					М	ovement	ts						
_	No	rth Appro	oach	East	Appr	oach	Sou	th Appr	oach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	51	1055	46	39	5	36	54	896	91	33	3	59	2368
San Jose Approved Trips													
ATI	0	96	0	0	0	0	0	63	0	0	0	0	159
Valley Fair Expansion	0	42	0	0	0	0	0	39	0	0	0	0	81
Campbell Approved Trips	0	24	0	0	0	0	0	24	0	0	0	0	48
Total Approved Trips	0	162	0	0	0	0	0	126	0	0	0	0	288
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	-14	0	0	0	7	-7
Background Conditions	51	1217	46	39	5	36	54	1008	91	33	3	66	2649
Project Trips	0	19	0	0	0	0	0	20	0	0	0	0	39
Background Plus Project Conditions	51	1236	46	39	5	36	54	1028	91	33	3	66	2688
San Jose Pending Trips													
1073 Winchester Mixed-Use	0	8	0	0	0	0	0	6	0	0	0	0	14
1495 Winchester Mixed-Use	0	7	0	0	0	0	0	2	10	0	0	1	20
Campbell Pending Trips	0	14	0	0	0	0	0	9	0	0	0	0	23
Total Pending Trips	0	29	0	0	0	0	0	17	10	0	0	1	57
Cumulative Plus Project Conditions	51	1265	46	39	5	36	54	1045	101	33	3	67	2745

Intersection Number: 4
Traffix Node Number: 102

Intersection Name: Winchester Boulevard and Hamilton Avenue

Peak Hour: PM Count Date: 12/13/18

					М	ovemen	ts						
-	Nor	th Appr	oach	Eas	t Appr	oach	Sout	th Appı	roach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	ŤĤ	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	178	646	432	481	959	393	301	490	162	176	961	173	5352
San Jose Approved Trips													
ATI	19	58	19	13	0	0	0	37	0	0	0	13	159
Valley Fair Expansion	13	13	16	15	0	0	0	12	0	0	0	12	81
Campbell Approved Trips	2	4	18	17	26	20	11	5	2	1	27	2	135
Total Approved Trips	34	75	53	45	26	20	11	54	2	1	27	27	375
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	39	0	0	0	0	0	0	0	0	0	39
Background Conditions	212	721	524	526	985	413	312	544	164	177	988	200	5766
Project Trips	2	2	15	17	0	0	0	2	0	0	0	2	40
Background Plus Project Conditions	214	723	539	543	985	413	312	546	164	177	988	202	5806
San Jose Pending Trips													
1073 Winchester Mixed-Use	2	1	6	5	0	0	0	1	0	0	0	0	15
1495 Winchester Mixed-Use	4	2	13	7	0	0	0	2	0	0	0	1	29
Campbell Pending Trips	0	0	14	9	9	9	14	0	0	0	14	0	69
Total Pending Trips	6	3	33	21	9	9	14	3	0	0	14	1	113
Cumulative Plus Project Conditions	220	726	572	564	994	422	326	549	164	177	1002	203	5919

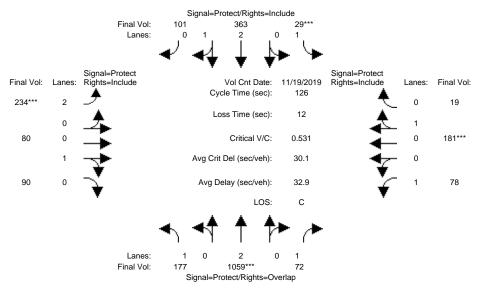
Intersection Number: 5
Traffix Node Number: 9001

Intersection Name: Winchester Boulevard and Fireside Drive

					M	ovemen	ts						
	No	rth Appro	oach	Eas	t Appr	oach	Sou	th Appr	oach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	ŤH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	3	1076	82	34	0	0	21	928	45	15	0	0	2204
San Jose Approved Trips													
ATI	0	121	0	0	0	0	0	73	0	0	0	0	194
Valley Fair Expansion	0	50	0	0	0	0	0	46	0	0	0	0	96
Campbell Approved Trips	0	19	0	0	0	0	0	19	0	0	0	0	38
Total Approved Trips	0	190	0	0	0	0	0	138	0	0	0	0	328
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	3	1266	82	34	0	0	21	1066	45	15	0	0	2532
Project Trips	0	11	0	0	0	0	0	19	19	0	0	0	49
Background Plus Project Conditions	3	1277	82	34	0	0	21	1085	64	15	0	0	2581
San Jose Pending Trips													
1073 Winchester Mixed-Use	0	13	0	0	0	0	0	6	0	0	0	0	19
1495 Winchester Mixed-Use	0	5	0	0	0	0	0	4	0	0	0	0	9
Campbell Pending Trips	0	11	0	0	0	0	0	7	0	0	0	0	18
Total Pending Trips	0	29	0	0	0	0	0	17	0	0	0	0	46
Cumulative Plus Project Conditions	3	1306	82	34	0	0	21	1102	64	15	0	0	2627

Appendix EIntersection Level of Service Calculations

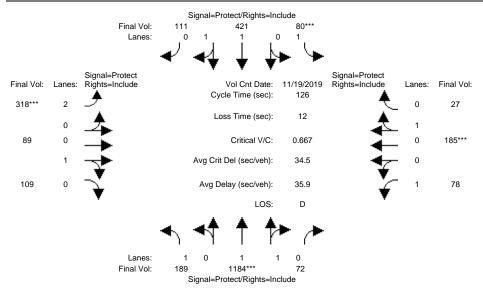
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)



Approach:	No	rth Boi	und	Sou	uth Bo	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T -				- R		- T			- T	
 Min. Green:		10		 7				10		7		10
Y+R:		4.0			4.0			4.0		-		
1+K•												
Volume Module										1		1
Base Vol:		1059	72	29	363	101	234	80	90	78	181	19
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			72	29	363	101	234	80	90	78	181	19
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:	177	1059	72	29	363	101	234	80	90	78	181	19
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:	177	1059	72	29	363	101	234	80	90	78	181	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	177	1059	72	29	363	101	234	80	90	78	181	19
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
FinalVolume:			72		363	101	234		90	78		19
Saturation Fl												
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.92		0.99	0.95		0.95	0.95		0.95	0.95
Lanes:			1.00	1.00		0.68		0.47	0.53		0.91	0.09
Final Sat.:			1750		4379	1219	3150	847	953		1629	171
Capacity Anal	-			0 00	0 00	0 00	0 0 17	0 00	0 00	0 0 1	0 11	0 11
Vol/Sat:		0.28	0.04	U.U∠ ****	0.08	0.08	U.U/ ****	0.09	0.09	0.04	0.11	0.11
Crit Moves:			00 1		20 1	20 1		26.0	26.0	1 - 0		25 6
	39.2			7.0		32.1		26.9	26.9		25.6 0.55	25.6 0.55
Volume/Cap:			0.06 8.7		0.33	0.33		0.44	0.44 43.8		46.7	46.7
Delay/Veh: User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			8.7		38.3	38.3		43.8	43.8		46.7	46.7
LOS by Move:			0.7 A	50.9 E	30.3 D	30.3 D	52.5 D	43.0 D	43.0 D	51.4 D	40.7 D	40.7 D
HCM2kAvgQ:			1	1	5		6		6	3	_	8
Note: Queue 1				_					0	3	J	O
1.00c. Queue 1	CPOL	ccu ib	C11C 111	aoct	O1 C6	YED PCI	_uiic	•				

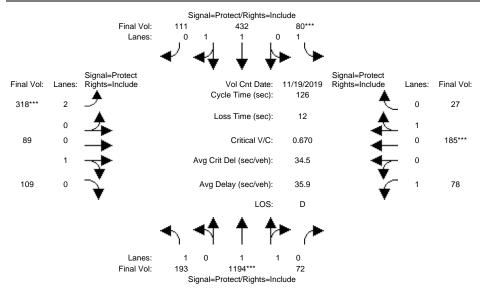
City of San Jose

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



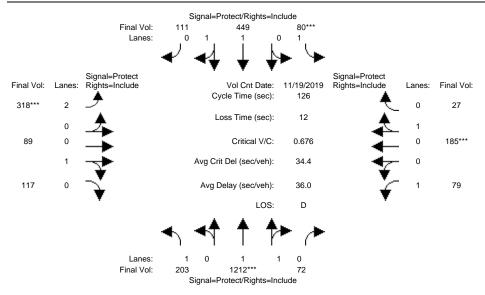
Approach: Movement: L	orth Bo - T										
	7 10			10			10		. 7		
	0 4.0				4.0			4.0		4.0	
Volume Module: >	> Count	Date:	19 No	ov 201	9 <<			·	·		·
Base Vol: 17	7 1059	72	29	363	101	234	80	90	78	181	19
Growth Adj: 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse: 17		72	29	363	101	234	80	90	78	181	19
Added Vol:	0 0	0	0	0	0	0	0	0	0	0	0
ATI: 1	2 125	0	51	58	10	84	9	19	0	4	8
Initial Fut: 18	9 1184	72	80	421	111	318	89	109	78	185	27
User Adj: 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj: 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume: 18	9 1184	72	80	421	111	318	89	109	78	185	27
Reduct Vol:		0	0	0	0	0	0	0	0	0	0
Reduced Vol: 18	9 1184	72	80	421	111	318	89	109	78	185	27
PCE Adj: 1.0		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj: 1.0		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume: 18	9 1184	72	80	421	111	318	89	109	78	185	27
Saturation Flow			ı		1	1		1	1		
Sat/Lane: 190	0 1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment: 0.9	2 0.98	0.95	0.92	0.98	0.95	0.83	0.95	0.95	0.92	0.95	0.95
Lanes: 1.0	0 1.88	0.12	1.00	1.57	0.43	2.00	0.45	0.55	1.00	0.87	0.13
Final Sat.: 175		212	1750	2927	772	3150	809	991	1750	1571	229
Capacity Analysi			1		'	1		'	'		'
Vol/Sat: 0.1	1 0.34	0.34	0.05	0.14	0.14	0.10	0.11	0.11	0.04	0.12	0.12
Crit Moves:	****		****			****				***	
Green Time: 31.		64.1	8.6	41.5	41.5	19.1	27.4	27.4	13.9	22.2	22.2
Volume/Cap: 0.4	4 0.67				0.44	0.67	0.51	0.51	0.41	0.67	0.67
Delay/Veh: 40.		24.0	70.8		33.3		44.4	44.4	53.6	53.8	53.8
User DelAdj: 1.0		1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh: 40.			70.8		33.3		44.4	44.4		53.8	53.8
LOS by Move:	D C	C				D	D	D	D		D
HCM2kAvgQ:	7 19		3			8	7	7	3	9	9
Note: Queue repo		the n	umber	of ca	rs per	lane	•				

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



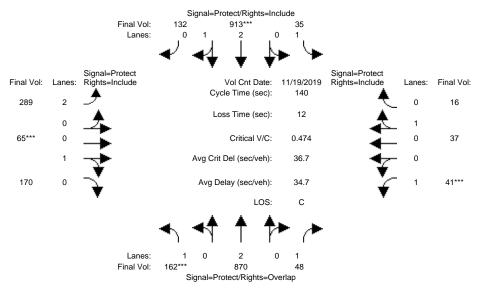
Approach: Movement:		Bound T – R									
		10 10					10		. 7		
	1.0 4				4.0			4.0		4.0	
Volume Module:	>> Co	unt Date	: 19 No	ov 201	9 <<			·	·		·
Base Vol:	L77 10	59 72	29	363	101	234	80	90	78	181	19
Growth Adj: 1	.00 1.	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse: 1	L77 10	59 72		363	101	234	80	90	78	181	19
Added Vol:	4	10 0	0	11	0	0	0	0	0	0	0
ATI:	12 1	25 0	51	58	10	84	9	19	0	4	8
Initial Fut: 1	L93 11	94 72	80	432	111	318	89	109	78	185	27
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:	L93 11	94 72	80	432	111	318	89	109	78	185	27
Reduct Vol:			0	0	0	0	0	0	0	0	0
Reduced Vol: 2	L93 11			432	111	318	89	109	78	185	27
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			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume: 1	L93 11	94 72	80	432	111	318	89	109	78	185	27
Saturation Flow			1 1		1	1		1	1		ı
Sat/Lane: 19	900 19	00 1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment: 0	.92 0.	98 0.95	0.92	0.98	0.95	0.83	0.95	0.95	0.92	0.95	0.95
Lanes: 1	.00 1.	88 0.12	1.00	1.58	0.42	2.00	0.45	0.55	1.00	0.87	0.13
Final Sat.: 1			1750	2943	756	3150	809	991	1750	1571	229
Capacity Analys			1 1		'	1		'	'		'
Vol/Sat: 0	.11 0.	34 0.34	0.05	0.15	0.15	0.10	0.11	0.11	0.04	0.12	0.12
Crit Moves:	* *	* *	****			****				****	
Green Time: 33		.3 64.3	8.6	41.6	41.6	19.0	27.3	27.3	13.8	22.1	22.1
Volume/Cap: 0	44 0.	67 0.67	0.67	0.44	0.44	0.67	0.51	0.51	0.41	0.67	0.67
Delay/Veh: 40				33.4	33.4		44.5	44.5	53.7	54.0	54.0
User DelAdj: 1				1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh: 40					33.4		44.5	44.5		54.0	54.0
LOS by Move:	D					D		D	D		D
HCM2kAvgQ:	7	19 19				8	7	7	3	9	9
Note: Queue rep		is the	number	of ca	rs per	lane					

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



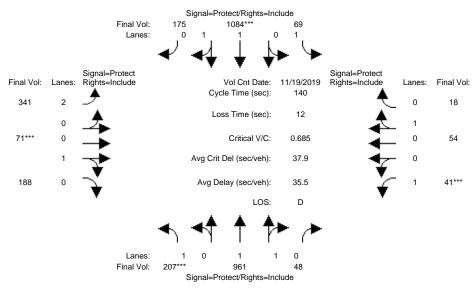
Approach: North Bo Movement: L - T	- R L	- T -	R	L -	- Т	- R	L -	- T	- R
Min. Green: 7 10		10			10			10	
Y+R: 4.0 4.0		4.0		4.0	4.0	4.0		4.0	
Volume Module: >> Count									
Base Vol: 189 1184	72 80		111	318	89	109	78	185	27
Growth Adj: 1.00 1.00			1.00	1.00		1.00		1.00	1.00
Initial Bse: 189 1184	72 80	421	111	318	89	109	78	185	27
Added Vol: 4 10	0 0	11	0	0	0	0	0	0	0
ATI: 10 18	0 0	17	0	0	0	8	1	0	0
Initial Fut: 203 1212	72 80	449	111	318	89	117	79	185	27
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: 203 1212	72 80	449	111	318	89	117	79	185	27
Reduct Vol: 0 0	0 0	0	0	0	0	0	0	0	0
Reduced Vol: 203 1212	72 80	449	111	318	89	117	79	185	27
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: 203 1212	72 80	449	111	318	89	117	79	185	27
Saturation Flow Module:	1 1		' '			!	'		'
Sat/Lane: 1900 1900	1900 1900	1900 1	1900	1900	1900	1900	1900	1900	1900
Adjustment: 0.92 0.98		0.98 (0.95	0.83		0.95	0.92	0.95	0.95
Lanes: 1.00 1.88		1.59 (0.41	2.00	0.43	0.57	1.00	0.87	0.13
Final Sat.: 1750 3492		2966	733	3150	778	1022		1571	229
Capacity Analysis Modul	1 1		1 1			ı	1		1
Vol/Sat: 0.12 0.35		0.15 (0.15	0.10	0.11	0.11	0.05	0.12	0.12
Crit Moves: ****	***			****				***	
Green Time: 31.8 64.7	64.7 8.5	41.5	41.5	18.8	27.5	27.5	13.3	22.0	22.0
Volume/Cap: 0.46 0.68			0.46	0.68		0.53		0.68	0.68
Delay/Veh: 40.6 23.8			33.7	54.6		44.8		54.5	54.5
User DelAdj: 1.00 1.00			1.00	1.00		1.00		1.00	1.00
3			33.7	54.6		44.8		54.5	54.5
LOS by Move: D C	C E		. C	D D	D D	D D	D D	D D	D D
HCM2kAvqQ: 7 19	19 3	-	8	8	8	8	4	9	9
Note: Queue reported is						3	-		

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



Approach:	North 1	Bound	Sot	uth Bo	und	Ea	ast Bo	und	We	est Bo	und
		- R			- R		- T			- T	
 Min. Green:	7 1			10			10		7		10
	.0 4.			4.0			4.0		•		
Volume Module:									1		1
	.62 87		35	913	132	289	65	170	41	37	16
Growth Adj: 1.				1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse: 1			35	913	132	289	65	170	41	37	16
Added Vol:	0	0 0	0	0	0	0	0	0	0	0	0
	0	0 0	0	0	0	0	0	0	0	0	0
Initial Fut: 1	62 87	0 48	35	913	132	289	65	170	41	37	16
User Adj: 1.	00 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj: 1.	00 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume: 1	62 87	0 48	35	913	132	289	65	170	41	37	16
Reduct Vol:	0	0 0	0	0	0	0	0	0	0	0	0
Reduced Vol: 1	62 87	0 48	35	913	132	289	65	170	41	37	16
PCE Adj: 1.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj: 1.			1.00		1.00		1.00	1.00		1.00	1.00
FinalVolume: 1				913	132	289		170	41	37	16
Saturation Flow											
	00 190			1900	1900		1900	1900		1900	1900
Adjustment: 0.				0.99	0.95		0.95	0.95		0.95	0.95
Lanes: 1.					0.39		0.28	0.72		0.70	0.30
Final Sat.: 17				1072	707	3150	498	1302		1257	543
Capacity Analys Vol/Sat: 0.	09 0.2		0 02	0.19	0.19	0 00	0.13	0.13	0 02	0.03	0.03
	**	3 0.03	0.02	****	0.19	0.09	****	0.13	****	0.03	0.03
CIIC MOVED		7 74.7	14 8	55.1	55.1	25 6	38.6	38.6		19.9	19.9
Volume/Cap: 0.				0.47	0.47		0.47	0.47		0.21	0.21
Delay/Veh: 51				31.8	31.8		43.0	43.0		53.4	53.4
User DelAdj: 1.				1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh: 51				31.8	31.8		43.0	43.0		53.4	53.4
LOS by Move:		C B	57.C	C	C	D	D	D	E	D D	D
HCM2kAvgQ:			1		11	7	9		2		2
Note: Queue rep			umber	of ca	rs per	lane					

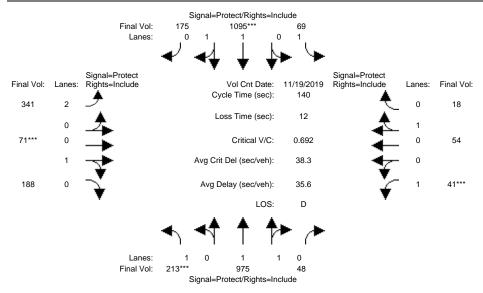
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)



Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R
Min. Green: 7 10 10 7 10 10 7 10 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
Y+R: 4.0
Volume Module: >> Count Date: 19 Nov 2019 << Base Vol: 162 870 48 35 913 132 289 65 170 41 37 16 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Base Vol: 162 870 48 35 913 132 289 65 170 41 37 16 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 162 870 48 35 913 132 289 65 170 41 37 16 Added Vol: 0 0 0 0 0 0 0 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0
ATI: 45 91 0 34 171 43 52 6 18 0 17 2
Initial Fut: 207 961 48 69 1084 175 341 71 188 41 54 18
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Volume: 207 961 48 69 1084 175 341 71 188 41 54 18
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 207 961 48 69 1084 175 341 71 188 41 54 18
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
FinalVolume: 207 961 48 69 1084 175 341 71 188 41 54 18
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 0.97 0.95 0.92 0.98 0.95 0.83 0.95 0.95 0.92 0.95 0.95
Lanes: 1.00 1.90 0.10 1.00 1.71 0.29 2.00 0.27 0.73 1.00 0.75 0.25
Final Sat.: 1750 3524 176 1750 3185 514 3150 493 1307 1750 1350 450
Capacity Analysis Module: Vol/Sat: 0.12 0.27 0.27 0.04 0.34 0.34 0.11 0.14 0.14 0.02 0.04 0.04
Vol/Sat: 0.12 0.27 0.27 0.04 0.34 0.34 0.11 0.14 0.14 0.02 0.04 0.04 Crit Moves: **** **** ****
Green Time: 23.8 77.8 77.8 14.3 68.3 68.3 21.6 28.9 28.9 7.0 14.3 14.3
Volume/Cap: 0.70 0.49 0.49 0.39 0.70 0.70 0.70 0.70 0.70 0.47 0.39 0.39
Delay/Veh: 61.8 19.2 19.2 60.2 29.0 29.0 60.7 57.2 57.2 68.6 60.2 60.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 61.8 19.2 19.2 60.2 29.0 29.0 60.7 57.2 57.2 68.6 60.2 60.2
LOS by Move: E B B E C C E E E E E
HCM2kAvgQ: 10 13 13 3 21 21 10 12 12 2 3 3
Note: Queue reported is the number of cars per lane.

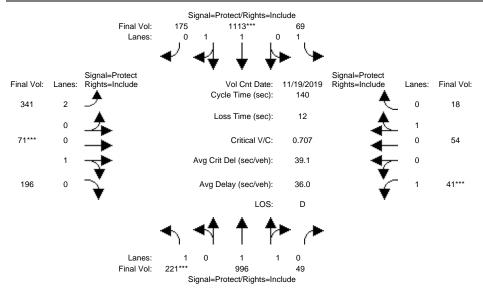
City of San Jose

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



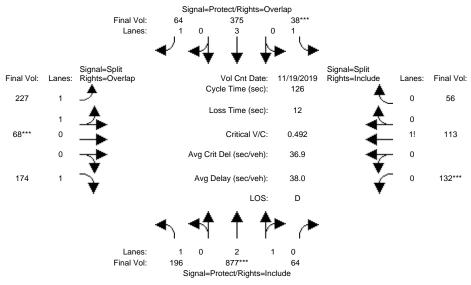
Approach: Movement:						und – R						
		10			10			10		. 7		
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module									'			
Base Vol:	162	870	48	35	913	132	289	65	170	41	37	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	870	48	35	913	132	289	65	170	41	37	16
Added Vol:	6	14	0	0	11	0	0	0	0	0	0	0
ATI:	45	91	0	34	171	43	52	6	18	0	17	2
Initial Fut:	213	975	48	69	1095	175	341	71	188	41	54	18
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:	213	975	48	69	1095	175	341	71	188	41	54	18
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	975	48	69	1095	175	341	71	188	41	54	18
PCE Adj:			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
FinalVolume:	213	975	48	69	1095	175	341	71	188	41	54	18
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.83	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	1.90	0.10	1.00	1.72	0.28	2.00	0.27	0.73	1.00	0.75	0.25
Final Sat.:			174			510		493	1307		1350	450
Capacity Anal	lysis	Module	e:									
Vol/Sat:		0.28	0.28	0.04		0.34	0.11		0.14		0.04	0.04
Crit Moves:	****				***			****		****		
Green Time:	24.2	78.3	78.3	14.2	68.2	68.2	21.4	28.6	28.6	7.0	14.1	14.1
Volume/Cap:	0.70	0.49	0.49	0.39	0.70	0.70	0.71	0.70	0.70	0.47	0.40	0.40
Delay/Veh:	61.9	19.0	19.0	60.3	29.3	29.3	61.1	57.9	57.9	68.6	60.3	60.3
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:			19.0	60.3	29.3	29.3	61.1	57.9	57.9	68.6	60.3	60.3
LOS by Move:			В		_	C	E		E	Ε	E	E
HCM2kAvgQ:			13	3		22	10	12	12	2	3	3
Note: Queue	report	ted is	the n	umber	of ca	rs per	lane					

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



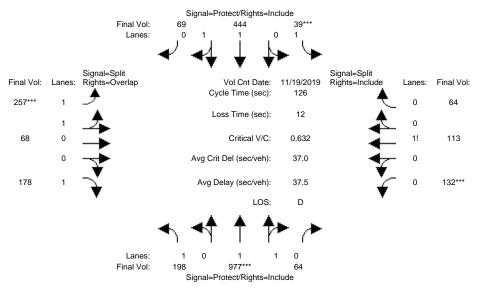
Approach: I	North Bo - T										
	7 10			10			10		. 7		
	0 4.0				4.0	4.0	4.0	4.0	4.0	4.0	
Volume Module:	>> Count	Date:	19 No	ov 201	9 <<			·	•		·
Base Vol: 2	7 961	48	69	1084	175	341	71	188	41	54	18
Growth Adj: 1.	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse: 2		48	69	1084	175	341	71	188	41	54	18
Added Vol:	6 14	0	0	11	0	0	0	0	0	0	0
ATI:	8 21	1	0	18	0	0	0	8	0	0	0
Initial Fut: 2	21 996	49	69	1113	175	341	71	196	41	54	18
User Adj: 1.	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj: 1.	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume: 2	21 996	49	69	1113	175	341	71	196	41	54	18
Reduct Vol:		0	0	0	0	0	0	0	0	0	0
Reduced Vol: 2		49	69	1113	175	341	71	196	41	54	18
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: 2	21 996	49	69	1113	175			196	41	54	18
Saturation Flow			1		'	1		'	'		'
Sat/Lane: 19	0 1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment: 0.	0.97	0.95	0.92	0.98	0.95	0.83	0.95	0.95	0.92	0.95	0.95
Lanes: 1.	0 1.90	0.10	1.00	1.72	0.28	2.00	0.27	0.73	1.00	0.75	0.25
Final Sat.: 17		173	1750	3197	503	3150	479	1321	1750	1350	450
Capacity Analys								'			
Vol/Sat: 0.	3 0.28	0.28	0.04	0.35	0.35	0.11	0.15	0.15	0.02	0.04	0.04
Crit Moves: **	*			***			****		***		
Green Time: 24	5 78.3	78.3	13.9	67.6	67.6	21.6	28.8	28.8	7.0	14.2	14.2
Volume/Cap: 0.	72 0.50	0.50	0.40	0.72	0.72	0.70	0.72	0.72	0.47	0.39	0.39
Delay/Veh: 62	6 19.1	19.1	60.7	30.1	30.1	60.8	58.6	58.6	68.6	60.2	60.2
User DelAdj: 1.		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh: 62		19.1	60.7		30.1		58.6	58.6		60.2	60.2
LOS by Move:		В	Е		С	E	E	E	E	E	E
=	.1 14	14	3		22	10	12		2	3	3
Note: Queue rep	orted is	the n	umber	of ca	rs per	lane					

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



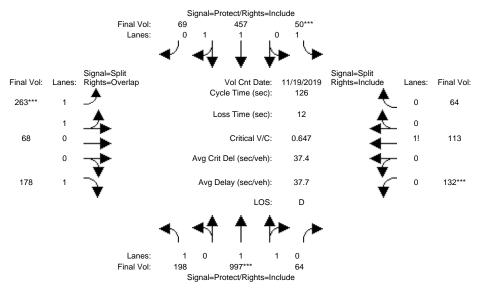
Approach:	No	rth Bo	und	Sou	uth Bo	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		 7				 10			10	10
Y+R:		4.0			4.0			4.0				
1+K•												
Volume Module										1		
Base Vol:	196	877	64	38	375	64	227	68	174	132	113	56
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		877	64	38	375	64	227	68	174	132	113	56
	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0			0	0	0	0		0	0	0	0
Initial Fut:	196		64	38		64	227		174	132	113	56
User Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
PHF Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	196	877	64	38	375	64	227	68	174	132	113	56
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	196	877	64	38	375	64	227	68	174	132	113	56
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:	196	877	64	38	375	64	227	68	174	132	113	56
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95	0.92		0.92		0.95	0.92		0.92	0.92
Lanes:			0.21		3.00	1.00		0.45	1.00		0.37	0.19
Final Sat.:			381		5700	1750		818	1750	767		326
	1											
Capacity Ana	-											
Vol/Sat:		0.17	0.17		0.07	0.04	0.08	0.08	0.10		0.17	0.17
Crit Moves:				****				****		****		
	29.0		42.5		20.5	41.5		21.0	50.0		43.5	43.5
Volume/Cap:			0.50		0.40	0.11		0.50	0.25		0.50	0.50
Delay/Veh:			33.5	60.0		29.5		48.4	25.7		33.3	33.3
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				60.0		29.5	48.4 D	48.4	25.7		33.3	33.3
LOS by Move:		C 9	C 9	E 2	D 5	C 2	D 6	_	C 5	C 10		C 10
									5	10	10	10
Note: Queue	repor	tea is	the n	umper	OI Ca	ars per	⊥ane	•				

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



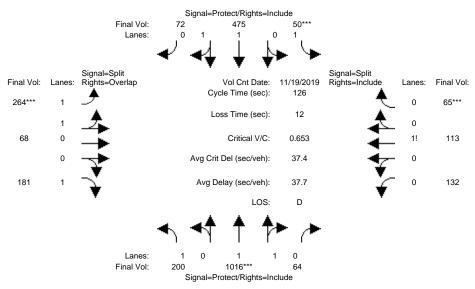
Approach:	No	rth Bo	und	Soi	uth Bo	ound	Ea	ast Bo	und	₩e	est Bo	und
Movement:		- T				- R		- T			- T	
		10		7				10			10	10
Y+R: 		4.0			4.0			4.0	4.0		4.0	
Volume Modul												
Base Vol:	e. <i>>></i> 196	877	64	19 N	375	64	227	68	174	132	113	56
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		877	64	38	375	64	227	68	174	132	113	56
Added Vol:			0	0		0	0	0	0	132	0	0
ATI:		100		1		5	30		4	0	0	8
Initial Fut:			64	39		69	257		178	132	113	64
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:		977	64	39	444	69	257	68	178	132	113	64
	0		0	0		0	0		0	0	0	0
Reduced Vol:			64	39		69	257	68	178	132	113	64
PCE Adj:			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
FinalVolume:	198	977	64	39	444	69	257	68	178	132	113	64
Saturation F	low M	odule:		•						•		
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	0.95	0.93	0.95	0.92	0.92	0.92	0.92
		1.87	0.13		1.72	0.28		0.41	1.00	0.43		0.21
Final Sat.:			227		3202	498		743	1750		640	362
Capacity Ana	-											
Vol/Sat:		0.28	0.28	0.02	0.14	0.14	0.09	0.09	0.10	0.18	0.18	0.18
Crit Moves:		****	5 40		24.0	24.0		1	45.6			24.4
Green Time:				7.0		34.0		17.8	45.6		34.4	34.4
Volume/Cap:			0.65		0.51	0.51		0.65	0.28	0.65		0.65
Delay/Veh:			28.9		39.4	39.4		54.1	28.8	43.5		43.5
User DelAdj: AdjDel/Veh:			1.00		1.00	1.00 39.4		1.00 54.1	1.00 28.8	1.00		1.00 43.5
LOS by Move:			28.9 C	60.Z E			54.1 D		28.8 C	43.5 D	43.5 D	43.5 D
HCM2kAvgQ:			16	£ 2			ע 7		5			12
Note: Queue						-	•		5	12	12	12
Note: Queue .	rebor	rea is	the fi	uiiber	OT G	rrs ber	тапе	•				

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



Approach:	No	rth Bo	und	Soi	ıth B	ound	Εa	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		7				10			10	
Y+R:		4.0			4.0			4.0				
Volume Module							I		I	I		I
Base Vol:	196	877	64	38	375		227	68	174	132	113	56
Growth Adj:	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		877	64	38	375		227	68	174	132	113	56
Added Vol:	0	20	0	11	13	0	6	0	0	0	0	0
ATI:	2	100	0	1	69	5	30	0	4	0	0	8
Initial Fut:	198	997	64	50			263	68	178	132	113	64
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:	198	997	64	50	457	69	263	68	178	132	113	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	198	997	64	50	457	69	263	68	178	132	113	64
PCE Adj:			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:					457		263		178		113	64
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900				1900	1900		1900	1900
Adjustment:			0.95	0.92				0.95	0.92		0.92	0.92
Lanes:			0.12	1.00				0.41	1.00		0.36	0.21
Final Sat.:			223	1750			2821		1750	748		362
	1											
Capacity Ana												
Vol/Sat:		0.29	0.29		0.14	0.14		0.09	0.10		0.18	0.18
Crit Moves:				****			****			****		
	27.5			7.0				17.9	45.5		33.9	33.9
Volume/Cap:			0.66	0.51				0.66	0.28		0.66	0.66
Delay/Veh:			28.9	62.5				54.2	28.9		44.2	44.2
User DelAdj:			1.00	1.00				1.00	1.00		1.00	1.00
AdjDel/Veh:			28.9	62.5				54.2	28.9		44.2	44.2
LOS by Move:			C	E 3	D	_	D	D	C 5	D		D 10
HCM2kAvgQ:					9		8		5	12	12	12
Note: Queue	repor	tea is	the n	umber	OI C	ars per	ıane	•				

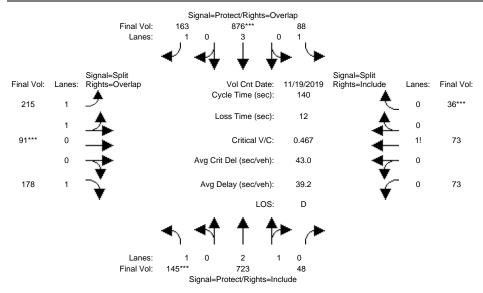
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Cumulative+Project (AM)



Approach:	No	rth Bo	und	Soi	ıth B	Bound	Εa	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		 7				10			10	
Y+R:		4.0	4.0		4.0			4.0				
1+K•												
Volume Module										1		1
Base Vol:	198	977	64	39	444		257	68	178	132	113	64
Growth Adj:			1.00	1.00				1.00	1.00		1.00	1.00
Initial Bse:		977	64	39	444		257	68	178	132	113	64
	0		0	11	13		6	0	0	0	0	0
ATI:		19	0	0	18		1		3	0	0	1
Initial Fut:	200	1016	64	50	475		264	68	181	132	113	65
User Adj:		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:	200	1016	64	50	475	72	264	68	181	132	113	65
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200		64	50	475	72	264	68	181	132	113	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:			64		475		264		181		113	65
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95	0.92				0.95	0.92		0.92	0.92
Lanes:			0.12	1.00				0.40	1.00		0.36	0.21
Final Sat.:			219	1750			2823		1750	745		367
	1											
Capacity Ana	-											
Vol/Sat:		0.29	0.29	0.03	0.15	0.15		0.09	0.10	0.18	0.18	0.18
Crit Moves:				****			****					****
	27.3			7.0				17.8	45.0		33.7	33.7
Volume/Cap:			0.66	0.51				0.66	0.29		0.66	0.66
Delay/Veh:			28.9	62.5				54.6	29.3		44.6	44.6
User DelAdj:			1.00	1.00				1.00	1.00		1.00	1.00
AdjDel/Veh:			28.9	62.5				54.6	29.3		44.6	44.6
LOS by Move:			C	E 3	D	_	D	D	C 5	D		D
HCM2kAvgQ:			17		9		8		5	12	12	12
Note: Queue	repor	tea is	the n	umber	OI C	ars per	ıane	•				

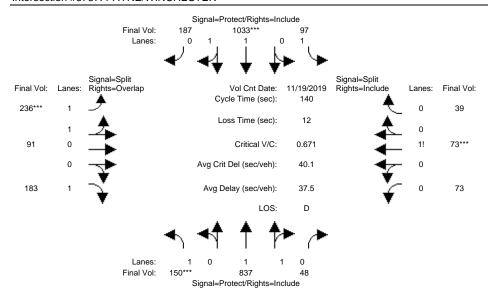
City of San Jose

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



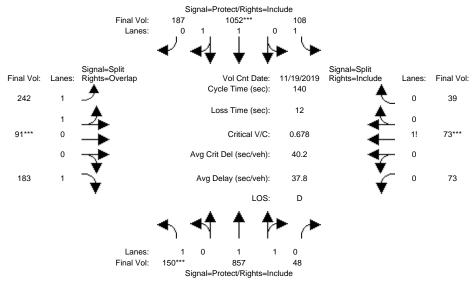
Movement:	North Bound L - T - R			L -	- T	- R	L ·	- T	- R	L -	- T	- R
		10			10			10			10	
Y+R:		4.0				4.0			4.0		4.0	
Volume Module		723	Date:	19 NG	876	9 << 163	015	0.1	170	7.2	72	2.0
Base Vol:	145				1.00		215	91 1.00	178 1.00	73	73 1.00	36
Growth Adj:			1.00 48	88	876	1.00	215	91	178	73	73	1.00 36
Initial Bse: Added Vol:	145	723 0	48	0	8 / 6	163 0	212	91	1/8	0	7.3	
Added Vol.	0			0			0		0	0	0	0
Initial Fut:				88	0 876	163	215	91	178	73	73	0 36
User Adj:					1.00	1.00		1.00	1.00		1.00	
			1.00		1.00			1.00			1.00	1.00
PHF Adj:		723	1.00 48		876	1.00 163		91	1.00 178	73	73	1.00 36
PHF Volume:				88			215					
Reduct Vol:			0	0	_	0	0	0	0	0	0	0
Reduced Vol:			48	88	876	163	215	91	178	73	73	36
PCE Adj:			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
FinalVolume:						163	215		178	73		36
Saturation F.			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.95	0.92		0.92		0.95	0.92		0.92	0.92
		2.81	0.19		3.00	1.00		0.59	1.00		0.40	0.20
Final Sat.:			349		5700	1750		1056	1750	702		346
	l .		I									
Capacity Ana	-			0 05	0 15	0 00	0 00	0 00	0 10	0 10	0 10	0 10
Vol/Sat:	0.08 ***	0.14	0.14	0.05	0.15	0.09	0.09	0.09	0.10	0.10	0.10	0.10
Crit Moves:		F0 0	F0 0	100		50 00	05 0		F0 F	21 0	21 0	
Green Time:			52.0	19.0		72.0		25.9	50.7		31.2	31.2
Volume/Cap:			0.37	0.37		0.18		0.47	0.28		0.47	0.47
Delay/Veh:			35.8		37.4	18.3		51.4	31.9		48.1	48.1
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			35.8	56.1		18.3		51.4	31.9		48.1	48.1
LOS by Move:	D	D	D	E		В	D	D	C	D	D	D
HCM2kAvgQ:			9	4			7		6	8	8	8
Note: Queue	report	ted is	the n	umber	of ca	rs per	lane	•				

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



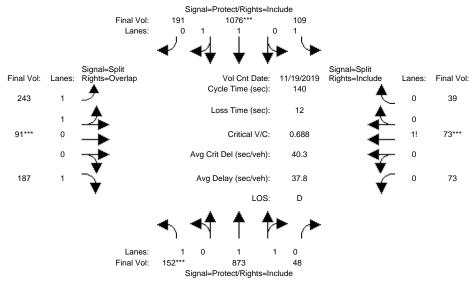
Approach:	No	rth Bo	und	Soi	uth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:						- R			- R		- T	
Min. Green:		10			10			10			10	10
Y+R:	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0
Volume Module												
Base Vol:	145	723	48	88	876	163	215	91	178	73	73	36
Growth Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		723	48	88	876	163	215	91	178	73	73	36
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	5		0	9		24	21	0	5	0	0	3
Initial Fut:			48		1033	187	236	91	183	73	73	39
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		1.00	1.00		1.00	1.00
	150	837	48		1033	187	236	91	183	73	73	39
	1.50	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		837	48		1033	187	236	91	183	73	73	39
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
FinalVolume:			48		1033	187	236	91	183	73	73	39
Saturation F	Į.											
Saturation F. Sat/Lane:		1900	1900	1900	1000	1900	1000	1900	1900	1000	1900	1900
Adjustment:			0.95	0.92		0.95		0.95	0.92		0.92	0.92
Lanes:		1.89	0.11		1.68	0.32		0.55	1.00		0.39	0.21
Final Sat.:			201		3132	567	2562		1750	691		369
Capacity Anal	1			I		I	I		I	I		I
Vol/Sat:	_			0.06	0.33	0.33	0.09	0.09	0.10	0.11	0.11	0.11
	****				***		****				***	
	17.9	70.4	70.4	16.3	68.8	68.8	19.2	19.2	37.1	22.1	22.1	22.1
Volume/Cap:	0.67	0.48	0.48	0.48	0.67	0.67	0.67	0.67	0.39	0.67	0.67	0.67
Delay/Veh:	65.9	28.5	28.5		28.0	28.0		61.0	42.8		61.8	61.8
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
_	65.9		28.5		28.0	28.0		61.0	42.8		61.8	61.8
LOS by Move:		С	С	E	С	С	E	E	D	E	E	E
HCM2kAvgQ:	7		15	5	20	20	8	8	7	9	9	9
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane					
	_					_						

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



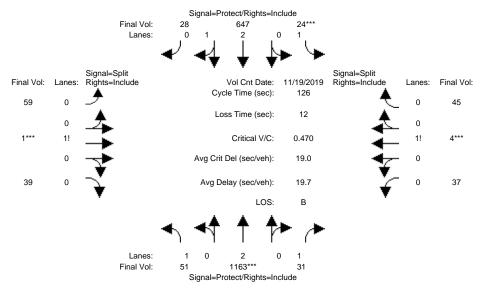
Approach:	No	rth Boı	und	Soi	uth Bo	und	Εa	ast Bo	und	We	est Bo	und
Movement:		- T -				- R		- T			- T	
 Min. Green:		10			10			 10			10	
Y+R:		4.0			4.0			4.0				
1+K•												
Volume Module										1		
Base Vol:	145	723	48	88	876	163	215	91	178	73	73	36
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			48	88	876	163	215	91	178	73	73	36
	0		0				6	0	0	0	0	0
ATI:		114		9	157	24	21		5	0	0	3
Initial Fut:			48		1052	187	242	91	183	73	73	39
User Adj:			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:	150	857	48	108	1052	187	242	91	183	73	73	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150		48	108	1052	187	242	91	183	73	73	39
PCE Adj:			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:				108		187	242			73		39
Saturation F	low Mo	odule:										
Sat/Lane:		1900		1900		1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		0.95	0.92		0.92	0.92
Lanes:			0.11			0.31		0.54	1.00		0.39	0.21
Final Sat.:						558	2580			691		369
	1											
Capacity Anal	_			0 06					0 10	0 11	0 11	0 11
Vol/Sat:	0.09	0.24	0.24	0.06		0.33	0.09	0.09	0.10	0.11	0.11	0.11
CIIC MOVED.		60.3	60.3	17 -			10 4		27 1	01 0		01 0
Green Time:		69.3			69.1	69.1		19.4	37.1		21.8	21.8
Volume/Cap:			0.49		0.68	0.68		0.68	0.40		0.68	0.68 62.5
Delay/Veh: User DelAdj:			29.4		28.0	28.0 1.00		61.2	42.8		62.5	1.00
AdiDel/Veh:					28.0	28.0		61.2	42.8		62.5	62.5
LOS by Move:			29.4 C	58.9 E		∠8.0 C	01.Ζ Ε		42.8 D	0∠.5 E	0∠.5 Ε	0⊿.5 E
HCM2kAvgQ:			15	5		21	ъ 8		ם 7		_	<u>ғ</u>
Note: Queue								_	,	9	ð	ð
note. Queue 1	rebor	Lea IS	cire III	unner	OI Ca	ra her	Tane	•				

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



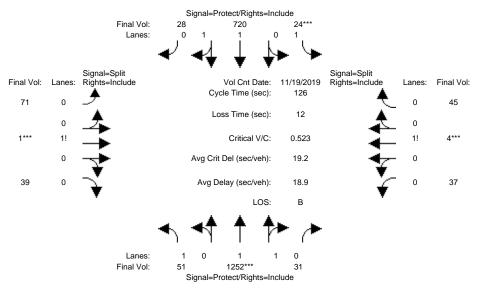
Approach:	No	rth Boı	und	Soi	ıth Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:		- T -				- R		- T			- T	
 Min. Green:	7	10	10		10			10			10	
Y+R:		4.0			4.0			4.0				
Volume Module							1		ı	1		1
Base Vol:	150	837	48		1033	187	236	91	183	73	73	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	150	837	48	97	1033	187	236	91	183	73	73	39
Added Vol:	0	20	0	11	19	0	6	0	0	0	0	0
ATI:	2	16	0	1	24	4	1	0	4	0	0	0
Initial Fut:	152	873	48	109	1076	191	243	91	187	73	73	39
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:	152	873	48	109	1076	191	243	91	187	73	73	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152		48	109	1076	191	243	91	187	73	73	39
PCE Adj:			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:				109		191	243		187			39
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.95	0.92		0.95		0.95	0.92		0.92	0.92
Lanes:			0.11			0.31		0.54	1.00		0.39	0.21
Final Sat.:			193			558	2583			691		369
Capacity Anal	_											
Vol/Sat:		0.25	0.25	0.06		0.34	0.09		0.11	0.11	0.11	0.11
CIIC MOVED.	****							****			****	
Green Time:		69.9			69.7	69.7		19.1	36.8		21.5	21.5
Volume/Cap:			0.50	0.50		0.69		0.69	0.41		0.69	0.69
Delay/Veh:			29.2		28.0	28.0		61.7	43.2		63.4	63.4
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			29.2	59.0		28.0		61.7	43.2		63.4	63.4
LOS by Move:			C	Ε	_	C	E	E	D	E		E
HCM2kAvgQ:			15	, 5		21	8	-	7	9	9	9
Note: Queue	repor	ted is	the n	umber	oi ca	rs per	_ane					

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



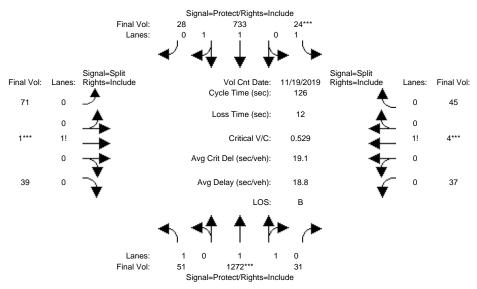
Approach:	No	rth Bo	und	Soi	uth Bo	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		7				10			10	
Y+R:		4.0			4.0			4.0				
1+K•												
Volume Module												
Base Vol:		1163	31	24	647	28	59	1	39	37	4	45
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			31	24	647	28	59	1	39	37	4	45
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:		0		0		0	0	0	0	0	0	0
Initial Fut:			31	24			59		39	37	-	45
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:			31	24	647	28	59	1	39	37	4	45
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			31	24	647		59	1	39	37	4	45
PCE Adj:			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
FinalVolume:					647		59	1	39	37	4	45
Saturation F				ı		Į.	1		1	1		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	2.87	0.13	0.60	0.01	0.39	0.43	0.05	0.52
Final Sat.:	1750	3800	1750	1750	5367	232	1043	18	689	753	81	916
	1											
Capacity Anal	lysis	Module	e:									
Vol/Sat:	0.03	0.31	0.02	0.01	0.12	0.12	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:		****		****				****			***	
Green Time:	27.3	79.5	79.5	7.0	59.2	59.2	14.7	14.7	14.7	12.8	12.8	12.8
Volume/Cap:	0.13	0.48	0.03	0.25	0.26	0.26	0.48	0.48	0.48	0.48	0.48	0.48
Delay/Veh:	40.0	12.5	8.7	58.3	20.2	20.2	53.9	53.9	53.9	55.6	55.6	55.6
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:			8.7	58.3	20.2	20.2	53.9	53.9	53.9	55.6	55.6	55.6
LOS by Move:			A	E	C	C	D	D	D	E	E	E
HCM2kAvgQ:			0	1	5		4		4	4	4	4
Note: Queue	report	ted is	the n	umber	of ca	ars per	lane	•				

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



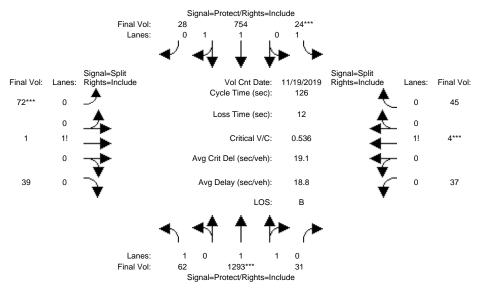
Approach:	No	rth Bo	und	Soi	uth Bo	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		 7				10			10	
Y+R:		4.0			4.0			4.0				
1+K•												
Volume Module												
Base Vol:		1163	31	24	647	28	59	1	39	37	4	45
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			31	24	647	28	59	1	39	37	4	45
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0			0		0	12	0	0	0	0	0
Initial Fut:			31	24		28	71	1	39	37	-	45
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:			31	24	720	28	71	1	39	37	4	45
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			31	24	720	28	71	1	39	37	4	45
PCE Adj:			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
FinalVolume:					720	28	71	1	39	37		45
Saturation F				ı		Į.	1		1	1		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.64	0.01	0.35	0.43	0.05	0.52
Final Sat.:	1750	3611	89	1750	3561	138	1119	16	615	753	81	916
	1											
Capacity Ana	lysis	Module	e:									
Vol/Sat:	0.03	0.35	0.35		0.20	0.20	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:		****		****				****			****	
Green Time:	18.9	80.8	80.8	7.0	68.9	68.9	14.8	14.8	14.8	11.4	11.4	11.4
Volume/Cap:	0.19	0.54	0.54	0.25	0.37	0.37	0.54	0.54	0.54	0.54	0.54	0.54
Delay/Veh:	47.2	12.7	12.7	58.3	16.4	16.4	55.3	55.3	55.3	58.5	58.5	58.5
User DelAdj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:			12.7	58.3	16.4	16.4	55.3	55.3	55.3	58.5	58.5	58.5
LOS by Move:			В	E	В		E		E	E	E	E
HCM2kAvgQ:	2	13	13	1	8	8	5	5	5	4	4	4
Note: Queue	report	ted is	the n	umber	of ca	ars per	lane	•				

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



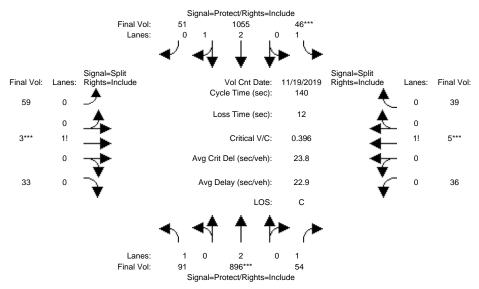
Approach:	No	rth Bo	und	Sot	ıth B	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
Min Croon:		10		 7				10			 10	
		4.0			4.0			4.0				
Y+R:												
Volume Module Base Vol:		1163	31	19 No	3∨ ∠0 647		Γ0	1	39	37	4	4 =
Growth Adi:			1.00		1.00		59	1.00	1.00		1.00	45
Initial Bse:			31	24	647		59	1.00	39	37	4	1.00 45
Added Vol:	0		0	0	13		0	0	0	0	0	0
ATI:	0						12	0	0	0	0	0
Initial Fut:			31	24			71	1	39	37		45
User Adj:		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
PHF Volume:			31	24	733		71	1	39	37	4	45
	0		0	0	0	-	0	0	0	0	0	0
Reduced Vol:			31	24	733		71	1	39	37		45
PCE Adj:			1.00	1.00				1.00	1.00		1.00	1.00
MLF Adj:				1.00				1.00	1.00		1.00	1.00
FinalVolume:					733		71	1	39	37		45
Saturation F												
Sat/Lane:		1900	1900	1900				1900	1900		1900	1900
Adjustment:			0.95	0.92				0.92	0.92		0.92	0.92
Lanes:			0.05	1.00				0.01	0.35		0.05	0.52
Final Sat.:			88		3564		1119		615	753		916
	1											
Capacity Ana												
	0.03		0.35		0.21	0.21	0.06		0.06	0.05	0.05	0.05
Crit Moves:		****		****				****			****	
		81.1				69.4		14.6	14.6		11.3	11.3
Volume/Cap:	0.20	0.55	0.55	0.25	0.37	0.37	0.55	0.55	0.55	0.55	0.55	0.55
Delay/Veh:			12.6		16.1			55.7	55.7		58.9	58.9
User DelAdj:			1.00	1.00				1.00	1.00		1.00	1.00
AdjDel/Veh:			12.6	58.3	16.1	16.1	55.7	55.7	55.7	58.9	58.9	58.9
LOS by Move:			В	E	В		E	E	E	E	E	E
HCM2kAvgQ:			14	1	8		5		5	4	4	4
Note: Queue	report	ted is	the n	umber	of c	ars per	lane	•				

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



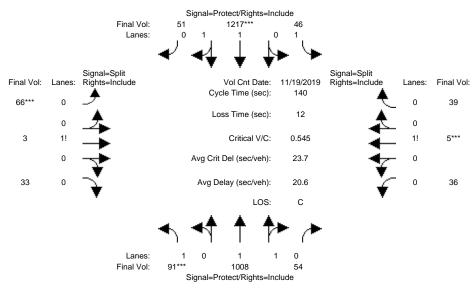
Approach:	No	rth Bo	und	Soi	uth Bo	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		7				10			10	
Y+R:		4.0	4.0		4.0			4.0				
Volume Module							I		I	I		I
Base Vol:		1252	31	24	720	28	71	1	39	37	4	45
Growth Adj:			1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		1252	31	24	720	28	71	1	39	37	4	45
Added Vol:	0	20	0	0	13	0	0	0	0	0	0	0
ATI:	11		0	0	21	0	1	0	0	0	0	0
Initial Fut:	62	1293	31	24		28	72	1	39	37	4	45
User Adj:			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:	62	1293	31	24	754	28	72	1	39	37	4	45
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			31	24	754	28	72	1	39	37	4	45
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:	62	1293	31	24	754	28	72	1	39	37	4	45
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00		0.05	1.00	1.93			0.01	0.35		0.05	0.52
Final Sat.:			87		3567		1125	16	609	753	81	916
	1											
Capacity Ana												
	0.04		0.36		0.21	0.21		0.06	0.06	0.05	0.05	0.05
Crit Moves:				****			****				****	
		81.3		7.0		69.9		14.5	14.5		11.2	11.2
Volume/Cap:			0.55	0.25		0.38		0.55	0.55		0.55	0.55
Delay/Veh:			12.6	58.3		15.9		56.0	56.0		59.4	59.4
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			12.6	58.3	15.9	15.9	56.0	56.0	56.0	59.4	59.4	59.4
LOS by Move:			В	E	В		E	E	E	Ε	E	E
HCM2kAvgQ:			14	1	8	•		5	5	4	4	4
Note: Queue	report	ted is	the n	umber	of ca	ars per	lane	•				

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



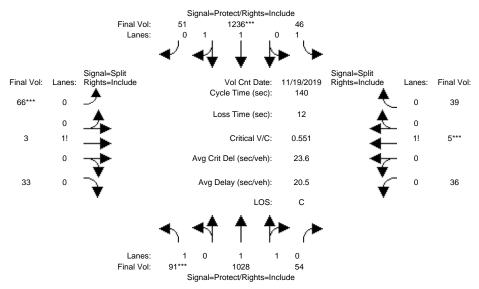
Approach:	No	rth Bo	und	Soi	ıth B	ound	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
 Min. Green:		10		7				10			10	
Y+R:		4.0			4.0			4.0				
1+K•												
Volume Module										1		1
Base Vol:	91	896	54		1055		59	3	33	36	5	39
Growth Adj:			1.00	1.00				1.00	1.00		1.00	1.00
Initial Bse:			54		1055		59	3	33	36	5	39
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
Initial Fut:	91	896	54	46	1055	51	59	3	33	36	5	39
User Adj:			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:	91	896	54	46	1055	51	59	3	33	36	5	39
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:				46	1055	51	59	3	33	36	5	39
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:	91	896	54	46	1055	51	59	3	33	36	5	39
Saturation F	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98		0.92	0.92	0.92	0.92	0.92	0.92
Lanes:			1.00	1.00				0.03	0.35		0.06	0.49
Final Sat.:			1750	1750				55	608	788		853
	1											
Capacity Ana												
Vol/Sat:		0.24	0.03	0.03	0.20	0.20	0.05	0.05	0.05	0.05	0.05	0.05
Crit Moves:				****				****			****	
		83.4		9.3				19.2	19.2		16.2	16.2
Volume/Cap:			0.05	0.40				0.40	0.40		0.40	0.40
Delay/Veh:			11.8	64.9				56.2	56.2		58.7	58.7
User DelAdj:			1.00	1.00				1.00	1.00		1.00	1.00
AdjDel/Veh:				64.9				56.2	56.2		58.7	58.7
LOS by Move:				E	В		E	_	E	Ε	E	E
HCM2kAvgQ:			1	. 2	9		4		4	4	4	4
Note: Queue	repor	ted is	the n	umber	of c	ars per	Lane	•				

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



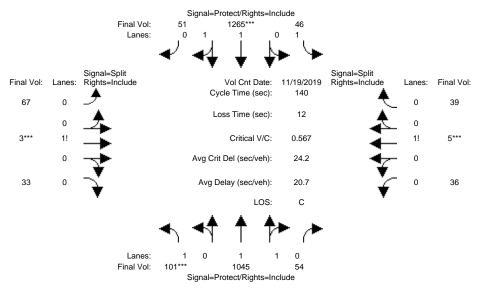
Approach:	No	rth Bo	und	Sot	uth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
Min Croon:		10			10			 10			 10	
		4.0			4.0			4.0				
Y+R:												
Volume Module												
Base Vol:	91	896	54		1055	51	59	3	33	36	5	39
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			54		1055	51	59	3	33	36	5	39
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	0			0		0	7		0	0	0	0
Initial Fut:			54		1217	51	66		33	36	-	39
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adi:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:			54		1217	51	66	3	33	36	5	39
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			54		1217	51	66	3	33	36		39
PCE Adi:			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
FinalVolume:				46		51	66	3	33	36		39
Saturation Fl				I		ı	ı		Į	1		1
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95	0.92	0.97	0.95		0.92	0.92	0.92	0.92	0.92
Lanes:			0.10	1.00		0.08		0.03	0.32		0.06	0.49
Final Sat.:			188	1750	3551	149	1132	51	566	788	109	853
Capacity Anal	lysis	Module	e:	•								
Vol/Sat:	0.05	0.29	0.29	0.03	0.34	0.34	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:	****				****		****				****	
Green Time:	13.3	86.3	86.3	15.0	88.0	88.0	15.0	15.0	15.0	11.7	11.7	11.7
Volume/Cap:	0.55	0.47	0.47	0.24	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Delay/Veh:	64.2	14.6	14.6	58.0	15.0	15.0	62.6	62.6	62.6	65.8	65.8	65.8
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:	64.2	14.6	14.6	58.0	15.0	15.0	62.6	62.6	62.6	65.8	65.8	65.8
LOS by Move:			В	E	В	В	E		E	E	E	E
HCM2kAvgQ:	4	12	12	2	15	15	5	5	5	4	4	4
Note: Queue	report	ted is	the n	umber	of ca	rs per	lane					

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



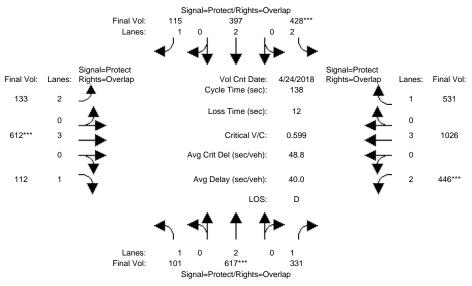
Approach:	No	rth Boi	und	Soi	ıth Bo	und	Εa	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
Min Croon:		10			10			 10			10	
		4.0			4.0			4.0				
Y+R:												
Volume Module												
Base Vol:	91	896	54		1055	51	50	3	33	36	5	39
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			54		1055	51	59	3	33	36	5	39
Added Vol:		20	0	0	19	0	0	0	0	0	0	0
ATI:		112		0		0	7		0	0	0	0
Initial Fut:				46		51	66		33	36	-	39
User Adj:			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
PHF Volume:			54		1236	51	66	3	33	36	5	39
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:				46	-	51	66	3	33	36		39
PCE Adi:			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
FinalVolume:				46		51	66	3	33	36	5	39
Saturation F				I		I	I		ļ	I		I
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95	0.92		0.95		0.92	0.92		0.92	0.92
Lanes:			0.10	1.00		0.08		0.03	0.32		0.06	0.49
Final Sat.:			185			147	1132	51	566	788		853
Capacity Anal	lysis	Module	e:	'		'	'		'	'		'
Vol/Sat:	0.05	0.29	0.29	0.03	0.35	0.35	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:	****				****		****				***	
Green Time:	13.2	86.7	86.7	14.8	88.4	88.4	14.8	14.8	14.8	11.6	11.6	11.6
Volume/Cap:	0.55	0.47	0.47	0.25	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Delay/Veh:	64.5	14.5	14.5	58.2	14.9	14.9	63.0	63.0	63.0	66.2	66.2	66.2
User DelAdj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.5	14.5	14.5	58.2	14.9	14.9	63.0	63.0	63.0	66.2	66.2	66.2
LOS by Move:	E	В	В	E	В	В	E	E	E	E	E	E
HCM2kAvgQ:	4	12	12	2	15	15	5	5	5	4	4	4
Note: Queue			the n	umber	of ca	rs per	lane					

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



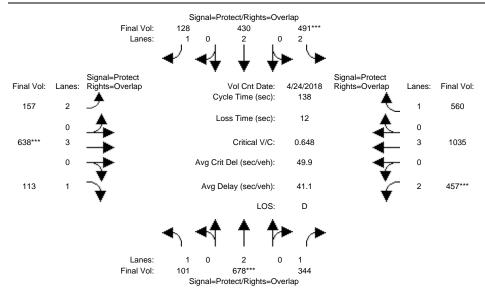
Approach:	No	rth Bo	und	Sot	ıth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R		- T			- T	
Min Croon:		10			10			10			10	
		4.0			4.0			4.0				
Y+R:												
Volume Module												
Base Vol:		1008	54		1217	51	66	3	33	36	5	39
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			54		1217	51	66	3	33	36	5	39
Added Vol:	0		0	0	19	0	0	0	0	0	0	0
ATI:	10			0		0	1		0	0	0	0
Initial Fut:				46		51	67		33	36	-	39
User Adj:			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
PHF Volume:			54		1265	51	67	3	33	36	5	39
Reduct Vol:				0	0	0	0	0	0	0	0	0
Reduced Vol:				46	-	51	67	3	33	36		39
PCE Adi:			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
FinalVolume:				46			67		33	36		39
Saturation Fl						1				1		
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95	0.92		0.95		0.92	0.92		0.92	0.92
Lanes:			0.10	1.00		0.08		0.03	0.32		0.06	0.49
Final Sat.:			182			143		51	561	788		853
Capacity Anal	lysis	Module	e: '	ı		!	1		į	1		ļ
Vol/Sat:	_			0.03	0.36	0.36	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:	****				***			****			***	
Green Time:	14.3	87.4	87.4	14.7	87.9	87.9	14.5	14.5	14.5	11.3	11.3	11.3
Volume/Cap:	0.57	0.48	0.48	0.25	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Delay/Veh:	64.1	14.2	14.2	58.3	15.4	15.4	63.9	63.9	63.9	67.3	67.3	67.3
User DelAdj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.1	14.2	14.2	58.3	15.4	15.4	63.9	63.9	63.9	67.3	67.3	67.3
LOS by Move:	E		В	E	В	В	E	E	E	E	E	E
HCM2kAvgQ:			12	2	16	16	5	5	5	4	4	4
Note: Queue			the n	umber	of ca	rs per	lane					

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



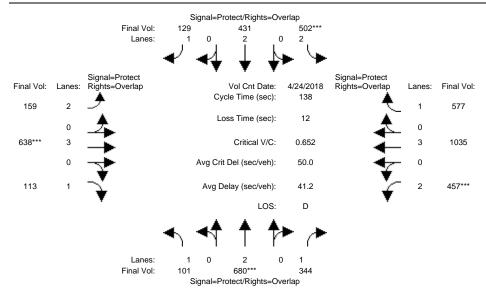
Street Name:			Winch	ester		,	Hamilton East Bound West Bound					
		rth Bo	und_	Soi	uth_Bo	und_	_ Ea	ast Bo	und_	_ W 6	est Bo	und_
Movement:	L	- T	- R	ь -	- T	- R	Ъ.	- T	- R	Ъ.	- T	- R
Min. Green:		10	10	7	10	10	7	10	10	7		
Y+R:		4.0	4.0			4.0		4.0		4.0	4.0	4.0
Volume Module												'
Base Vol:		617	331	428	397	115	133	612	112	446	1026	531
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:	101	617	331	428	397	115	133	612	112	446	1026	531
Added Vol:			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:	101	617	331	428	397	115	133	612	112	446	1026	531
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:	101	617	331	428	397	115	133	612	112	446	1026	531
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	101	617	331	428	397	115	133	612	112	446	1026	531
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:	101	617	331	428	397	115	133	612	112	446	1026	531
Saturation F	low M	odule:					•					
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1750	3800	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750
Capacity Ana	lysis	Modul	e:							•		
Vol/Sat:	0.06	0.16	0.19	0.14	0.10	0.07	0.04	0.11	0.06	0.14	0.18	0.30
Crit Moves:		****		****				****		****		
Green Time:	24.4	37.4	70.0	31.3	44.2	56.8	12.6	24.7	49.2	32.6	44.7	76.0
Volume/Cap:	0.33	0.60	0.37	0.60	0.33	0.16	0.46	0.60	0.18	0.60	0.56	0.55
Delay/Veh:	50.2	44.8	20.9	49.2	35.7	25.6	60.7	53.1	30.7	48.2	38.8	20.7
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:	50.2	44.8	20.9	49.2	35.7	25.6	60.7	53.1	30.7	48.2	38.8	20.7
LOS by Move:	D	D	C	D	D	C	E	D	С	D	D	C
HCM2kAvgQ:	4	12	9	10	6	3	4	9	3	10	12	15
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



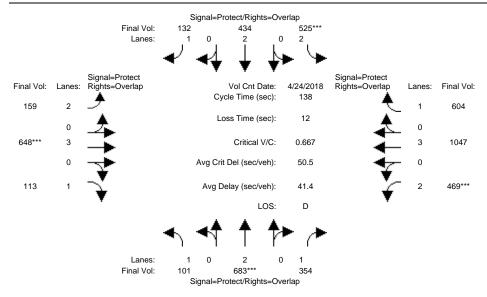
Street Name:							Hamilton						
						und					est Bo		
Movement:	L	- T	- R	L -	- T	- R	L -	- T	- R	L -	- T	- R	
Min. Green:		10		7					10	7		10	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0		4.0	
Madul													
Volume Module				_	-		1 2 2	C10	110	110	1000	F 2 1	
	101		331	428	397	115	133		112		1026	531	
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:			331	428	397	115	133	612	112		1026	531	
Added Vol:				0		0	0	-	0	0	0	0	
ATI:	0			63		13	24		1	11	9	29	
Initial Fut:				491		128	157		113		1035	560	
User Adj:			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	
PHF Volume:	101	678	344	491	430	128	157	638	113	457	1035	560	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	101	678	344	491	430	128	157	638	113	457	1035	560	
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:	101	678	344	491	430	128	157	638	113	457	1035	560	
Saturation F	iow M	odule:		•			•		•			•	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	
Final Sat.:	1750	3800	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750	
Capacity Anal				'								'	
	_	0.18	0.20	0.16	0.11	0.07	0.05	0.11	0.06	0.15	0.18	0.32	
Crit Moves:		****		***				****		****			
Green Time:		38.0	68.9	33.2	47.2	59.1	12.0	23.9	47.9	30.9	42.8	76.0	
Volume/Cap:			0.39		0.33	0.17		0.65	0.19		0.59	0.58	
Delay/Veh:			21.8		33.9	24.4		54.7	31.6		40.6	21.4	
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:			21.8	49.1		24.4		54.7	31.6		40.6	21.4	
LOS by Move:				1).1 D		Z 1 . 1 C	03.0 E		71.0 C	50.7 D	10.0 D	Z1.4 C	
HCM2kAvgQ:	4	13	10	11	6		5	_	4	11	12	17	
Note: Queue									-1		12	Ι/	
More. Queue 1	rebor	rea is	cire II	uniber	OT CO	rrs her	Tane	•					

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



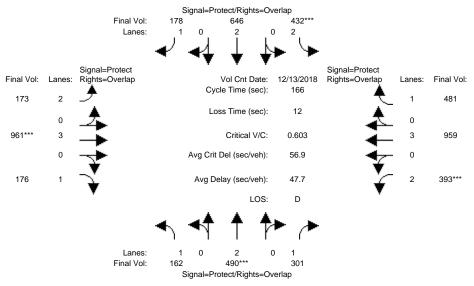
Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R Min. Green: 7 10 10 10 7 10 10 7 10 10 7 10 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 10 7 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10
Min. Green: 7 10 10 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
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 24 Apr 2018 <<
Rage Vol: 101 617 331 428 397 115 133 612 112 446 1026 531
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 101 617 331 428 397 115 133 612 112 446 1026 531
Added Vol: 0 2 0 11 1 1 2 0 0 0 17
ATI: 0 61 13 63 33 13 24 26 1 11 9 29
Initial Fut: 101 680 344 502 431 129 159 638 113 457 1035 577
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Volume: 101 680 344 502 431 129 159 638 113 457 1035 577
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 101 680 344 502 431 129 159 638 113 457 1035 577
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
FinalVolume: 101 680 344 502 431 129 159 638 113 457 1035 577
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 1.00 0.92 0.83 1.00 0.92 0.83 1.00 0.92 0.83 1.00 0.92
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00
Final Sat.: 1750 3800 1750 3150 3800 1750 3150 5700 1750 3150 5700 1750
Capacity Analysis Module:
Vol/Sat: 0.06 0.18 0.20 0.16 0.11 0.07 0.05 0.11 0.06 0.15 0.18 0.33
Crit Moves: **** **** ****
Green Time: 24.1 37.9 68.6 33.7 47.5 59.3 11.9 23.7 47.8 30.7 42.5 76.2
Volume/Cap: 0.33 0.65 0.40 0.65 0.33 0.17 0.59 0.65 0.19 0.65 0.59 0.60
Delay/Veh: 50.5 45.7 22.0 48.9 33.7 24.3 64.0 54.9 31.6 51.0 40.9 21.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 50.5 45.7 22.0 48.9 33.7 24.3 64.0 54.9 31.6 51.0 40.9 21.6
LOS by Move: D D C D C E D C D D C
HCM2kAvgQ: 4 13 10 11 6 3 5 9 4 11 12 17
Note: Queue reported is the number of cars per lane.

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



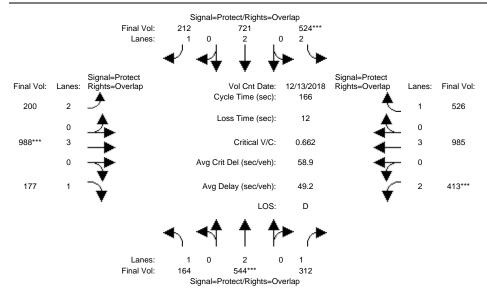
Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R Min. Green: 7 10 10 10 10 10 10 10 10 10 10 10 10 10
Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10
Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10 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
Y+R: 4.0
Volume Module: >> Count Date: 24 Apr 2018 < Served Served <t< td=""></t<>
Base Vol: 101 678 344 491 430 128 157 638 113 457 1035 560 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 101 678 344 491 430 128 157 638 113 457 1035 560 Added Vol: 0 2 0 11 1 1 1 2 0 0 0 0 0 17 ATI: 0 3 10 23 3 3 0 10 0 10 0 12 12 27 Initial Fut: 101 683 354 525 434 132 159 648 113 469 1047 604 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Added Vol: 0 2 0 11 1 1 1 2 0 0 0 0 0 1 1 2 2 7 ATI: 0 3 10 23 3 3 0 10 0 10 0 12 12 27 Initial Fut: 101 683 354 525 434 132 159 648 113 469 1047 604 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
ATI: 0 3 10 23 3 3 0 10 0 12 12 27 Initial Fut: 101 683 354 525 434 132 159 648 113 469 1047 604 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Fut: 101 683 354 525 434 132 159 648 113 469 1047 604 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Volume: 101 683 354 525 434 132 159 648 113 469 1047 604 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 101 683 354 525 434 132 159 648 113 469 1047 604
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
FinalVolume: 101 683 354 525 434 132 159 648 113 469 1047 604
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 1.00 0.92 0.83 1.00 0.92 0.83 1.00 0.92 0.83 1.00 0.92
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00
Final Sat.: 1750 3800 1750 3150 3800 1750 3150 5700 1750 3150 5700 1750
Capacity Analysis Module:
Vol/Sat: 0.06 0.18 0.20 0.17 0.11 0.08 0.05 0.11 0.06 0.15 0.18 0.35
Crit Moves: **** **** ****
Green Time: 24.1 37.2 68.0 34.5 47.6 59.4 11.8 23.5 47.6 30.8 42.6 77.1
Volume/Cap: 0.33 0.67 0.41 0.67 0.33 0.18 0.59 0.67 0.19 0.67 0.60 0.62
Delay/Veh: 50.6 46.6 22.6 48.8 33.6 24.3 64.3 55.4 31.8 51.4 41.0 21.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 50.6 46.6 22.6 48.8 33.6 24.3 64.3 55.4 31.8 51.4 41.0 21.8
LOS by Move: D D C D C E E C D D C
HCM2kAvgQ: 4 14 10 12 6 4 5 10 4 11 12 18
Note: Queue reported is the number of cars per lane.

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



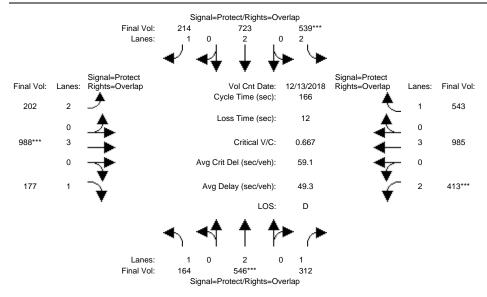
Street Name:			Winch	ester		-			Hamilton ound West Bound			
		rth Bo	und	Soi	ıth Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:	L	– T	- R	. L -	- T	- R	L -	- T	- R	L -	- T	- R
 Min. Green:		10	10	7	10	10	7	10		7		
Y+R:		4.0	4.0		4.0	4.0		4.0			4.0	
Volume Module				•								ı
Base Vol:	162		301	432		178	173		176	393	959	481
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:	162	490	301	432	646	178	173	961	176	393	959	481
Added Vol:			0	0	0	0	0	0	0	0	0	0
ATI:		0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	162		301	432	646	178	173	961	176	393	959	481
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		1.00	1.00		1.00	1.00
PHF Volume:			301	432	646	178	173	961	176	393	959	481
Reduct Vol:			0	0		0	0		0	0		0
Reduced Vol:				432	646	178	173		176	393	959	481
	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
FinalVolume:			301		646	178	173		176	393		481
Saturation F				1		1	1			1		ı
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:				0.83		0.92		1.00	0.92		1.00	0.92
_		2.00	1.00		2.00	1.00		3.00	1.00		3.00	1.00
Final Sat.:			1750		3800	1750		5700	1750		5700	1750
Capacity Ana				1		1	1			1		ı
Vol/Sat:				0.14	0.17	0.10	0.05	0.17	0.10	0.12	0.17	0.27
Crit Moves:		****		***				****		****		
Green Time:		35.5	69.8	37.8	47.4	67.3	19.9	46.4	72.2	34.3	60.9	98.6
Volume/Cap:			0.41		0.60	0.25		0.60	0.23		0.46	0.46
Delay/Veh:			34.0		51.9	32.9		52.5	29.6		40.2	19.2
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdiDel/Veh:			34.0	58.9		32.9		52.5	29.6		40.2	19.2
LOS by Move:			C C	50.5 E		C		D	23.0 C	E E	D	В
_		12	11	12	14		5		6			14
Note: Queue									Ü	_0		
	- 21- 21		3110 11		- Ju			-				

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



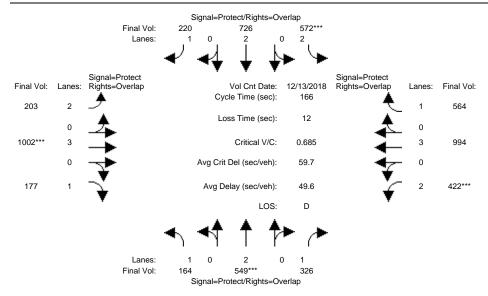
Street Name:							Hamilton					
Approach:	No:	rth Bo	und	So	uth Bo	und	Εa	ast Bo	und	We	est Bo	und
Movement:												
 Min. Green:		10			10				10			
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module	e: >>	Count	Date:	13 De	ec 201	8 << 4	:45 PI	M to 5	:45 PM			
Base Vol:	162	490	301	432	646	178	173	961	176	393	959	481
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:				432	646	178	173		176	393	959	481
Added Vol:	0	0		0	0	0	0		0	0	0	0
ATI:	2	54	11	92	75	34	27	27	1	20	26	45
Initial Fut:	164	544	312	524	721	212	200	988	177	413	985	526
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:	164	544	312	524	721	212	200	988	177	413	985	526
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	544	312	524	721	212	200	988	177	413	985	526
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:	164	544	312	524	721	212	200	988	177	413	985	526
Saturation F				1		'	1		'	ı		'
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:				3150	3800	1750	3150	5700	1750		5700	1750
Capacity Anal									'			
Vol/Sat:	_			0.17	0.19	0.12	0.06	0.17	0.10	0.13	0.17	0.30
Crit Moves:		****		***				****		****		
Green Time:		35.9	68.8	41.7	52.0	72.5	20.5	43.5	69.1	32.9	55.8	97.6
Volume/Cap:			0.43	0.66	0.61	0.28	0.51	0.66	0.24		0.51	0.51
Delay/Veh:			35.0	57.9		30.2		55.8	31.6		44.4	20.6
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				57.9		30.2		55.8	31.6		44.4	20.6
LOS by Move:	E	E		E		C		E		E		C
HCM2kAvgQ:	9	13	12	14			6	_	6			16
Note: Queue												
Noce, gacae i	СРОТ	cca ib	CIIC II	aniber	OI Ca	LD PCI	Tanc	•				

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



Street Name:							Hamilton						
Approach:	No	rth Bo	und	So	uth Bo	und	Εa	ast Bo	und	We	est Bo	und	
Movement:													
Min. Green:		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	
Volume Module													
	162		301	432		178	173		176		959	481	
Growth Adj:			1.00			1.00		1.00	1.00		1.00	1.00	
Initial Bse:				432		178	173		176	393		481	
Added Vol:				15			1/3		0	393		17	
		2 54	11	92	∠ 75		27		1	-			
ATI:										20		45	
Initial Fut:			312			214	202			413		543	
User Adj:			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	
PHF Volume:	164	546	312	539	723	214	202	988	177	413	985	543	
Reduct Vol:				0			0		0	0		0	
Reduced Vol:			312	539		214	202			413		543	
PCE Adj:			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:				539		214	202		177	413	985	543	
Saturation F	low M	odule:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	
Final Sat.:	1750	3800	1750	3150	3800	1750	3150	5700	1750	3150	5700	1750	
Capacity Anal	lysis	Modul	e:			·			·			·	
Vol/Sat:	0.09	0.14	0.18	0.17	0.19	0.12	0.06	0.17	0.10	0.13	0.17	0.31	
Crit Moves:		****		****				****		****			
Green Time:			68.3	42.6	52.5	72.9	20.5	43.1	68.9	32.6	55.2	97.8	
Volume/Cap:	0.60	0.67	0.43	0.67	0.60	0.28	0.52	0.67	0.24	0.67	0.52	0.53	
Delay/Veh:			35.4	57.5		29.9		56.2	31.7		44.9	20.8	
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:				57.5		29.9		56.2	31.7		44.9	20.8	
LOS by Move:				E		C		E	C			C	
HCM2kAvgQ:	9	13	12	14			6	_	6			17	
Note: Queue									9		-3		
1,000 Queuc 1	- CPOT	ccu ib	C11C 11	unio C I	or ca	TO PCT	Tanc	•					

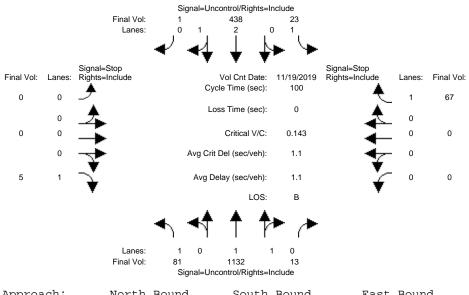
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Cumulative+Project (PM)



Approach: North Bound South Bound East Bound West Bound Movement: $L - T - R$
Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10
Min. Green: 7 10 10 7 10 10 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
Y+R: 4.0 1.00
Volume Module: Count Date: 13 Dec 2018 4:45 PM to 5:45 PM Base Vol: 164 544 312 524 721 212 200 988 177 413 985 526 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Base Vol: 164 544 312 524 721 212 200 988 177 413 985 526 Growth Adj: 1.00 1.
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 164 544 312 524 721 212 200 988 177 413 985 526 Added Vol: 0 2 0 15 2 2 2 0 0 0 0 0 17 ATI: 0 3 14 33 3 6 1 14 0 99 9 21 Initial Fut: 164 549 326 572 726 220 203 1002 177 422 994 564 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Added Vol: 0 2 0 15 2 2 2 0 0 0 0 0 0 17 ATI: 0 3 14 33 3 6 1 14 0 9 9 21 Initial Fut: 164 549 326 572 726 220 203 1002 177 422 994 564 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
ATI: 0 3 14 33 3 6 1 14 0 9 9 21 Initial Fut: 164 549 326 572 726 220 203 1002 177 422 994 564 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Fut: 164 549 326 572 726 220 203 1002 177 422 994 564 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Volume: 164 549 326 572 726 220 203 1002 177 422 994 564 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
FinalVolume: 164 549 326 572 726 220 203 1002 177 422 994 564
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 1.00 0.92 0.83 1.00 0.92 0.83 1.00 0.92 0.83 1.00 0.92
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00
Final Sat.: 1750 3800 1750 3150 3800 1750 3150 5700 1750 3150 5700 1750
Capacity Analysis Module:
Vol/Sat: 0.09 0.14 0.19 0.18 0.19 0.13 0.06 0.18 0.10 0.13 0.17 0.32
Crit Moves: **** **** ****
Green Time: 26.0 35.0 67.4 44.0 53.0 73.2 20.2 42.6 68.6 32.4 54.8 98.8
Volume/Cap: 0.60 0.69 0.46 0.69 0.60 0.28 0.53 0.69 0.24 0.69 0.53 0.54
Delay/Veh: 68.8 62.9 36.4 57.2 48.4 29.9 69.8 57.0 32.0 65.3 45.4 20.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 68.8 62.9 36.4 57.2 48.4 29.9 69.8 57.0 32.0 65.3 45.4 20.7
LOS by Move: E E D E D C E E C E D C
HCM2kAvgQ: 9 14 13 15 15 7 6 16 6 11 13 17
Note: Queue reported is the number of cars per lane.

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

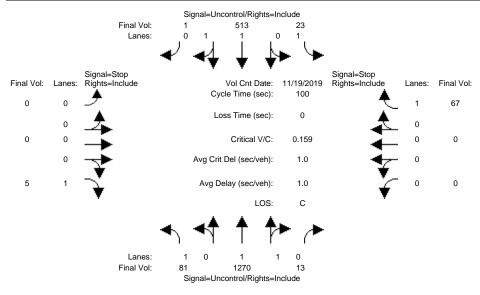
Intersection #9001: Winchester Boulevard and Fireside Drive



Approach:	No	rth Bo	ound	Sot	ath Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L ·	- T	- R	L ·	- T	- R	L ·	- T	- R	L -	- T	- R
Volume Module	e: >>	Count	Date:	19 No	ov 201	19 <<						
Base Vol:	81	1132	13	23	438	1	0	0	5	0	0	67
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:	81	1132	13	23	438	1	0	0	5	0	0	67
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:	81	1132	13	23	438	1	0	0	5	0	0	67
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
	81	1132	13	23	438	1	0	0	5	0	0	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:				23		_	0	0	_	0	0	
Critical Gap	Modu.	le:										
Critical Gp:	4.1	XXXX	XXXXX	4.1	xxxx	XXXXX	XXXXX	XXXX	6.9	xxxxx	XXXX	6.9
FollowUpTim:												
Capacity Mod	ule:											
Cnflict Vol:								XXXX	147	XXXX	XXXX	573
Potent Cap.:	1132	xxxx	XXXXX	618	xxxx	XXXXX	XXXX	XXXX	880	XXXX	XXXX	468
Move Cap.:	1132	xxxx	XXXXX	618	xxxx	XXXXX	XXXX	XXXX	880	XXXX	XXXX	
Volume/Cap:						XXXX		XXXX			XXXX	
	1											
Level Of Serv	vice 1	Module	∋ :									
2Way95thQ:										XXXX	XXXX	0.5
Control Del:						XXXXX				xxxxx		14.0
LOS by Move:						*		*	A		*	В
Movement:	LT ·	- LTR	- RT	LT ·	- LTR	- RT	LT ·	- LTR	- RT	LT ·	- LTR	- RT
Shared Cap.:	xxxx	xxxx	XXXXX	XXXX	xxxx	XXXXX	XXXX	XXXX	xxxxx	XXXX	XXXX	XXXXX
SharedQueue:	xxxxx	XXXX	XXXXX	xxxxx	xxxx	XXXXX	XXXXX	XXXX	xxxxx	xxxxx	XXXX	XXXXX
Shrd ConDel:												
Shared LOS:	*	*					*	*	*	*	*	*
ApproachDel:	X	xxxxx		X				9.1			14.0	
ApproachLOS:		*			*			A			В	
Note: Queue	repor	ted is	s the n	number	of ca	ars per	r lane					

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

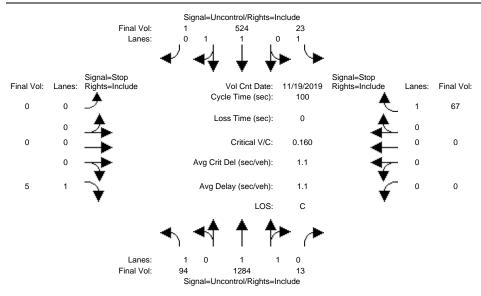
Intersection #9001: Winchester Boulevard and Fireside Drive



	est Bound
Movement: $L - T - R L - T - R L - T - R L$	
Volume Module: >> Count Date: 19 Nov 2019 <<	
Base Vol: 81 1132 13 23 438 1 0 0 5 0	0 67
	1.00 1.00
Initial Bse: 81 1132 13 23 438 1 0 0 5 0	0 67
Added Vol: 0 0 0 0 0 0 0 0 0	0 0
ATI: 0 138 0 0 75 0 0 0 0 0	0 0
Initial Fut: 81 1270 13 23 513 1 0 0 5 0	0 67
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00
PHF Volume: 81 1270 13 23 513 1 0 0 5 0	0 67
Reduct Vol: 0 0 0 0 0 0 0 0 0	0 0
FinalVolume: 81 1270 13 23 513 1 0 0 5 0	0 67
Critical Gap Module:	
Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx	xxxx 6.9
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx 3.3 xxxxx	xxxx 3.3
Capacity Module:	
Cnflict Vol: 514 xxxx xxxxx 1283 xxxx xxxxx xxxx xxxx 257 xxxx	xxxx 642
Potent Cap.: 1062 xxxx xxxxx 548 xxxx xxxxx xxxx xxxx 748 xxxx	xxxx 422
Move Cap.: 1062 xxxx xxxxx 548 xxxx xxxxx xxxx xxxx 748 xxxx	xxxx 422
Volume/Cap: 0.08 xxxx xxxx 0.04 xxxx xxxx xxxx xxxx 0.01 xxxx	xxxx 0.16
Level Of Service Module:	
2Way95thQ: 0.2 xxxx xxxxx 0.1 xxxx xxxxx xxxx xxxx 0.0 xxxx	xxxx 0.6
Control Del: 8.7 xxxx xxxxx 11.9 xxxx xxxxx xxxxx xxxx 9.8 xxxxx	xxxx 15.1
LOS by Move: A * * B * * * A *	* C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT -	- LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxx xxxx	xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx	xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx	xxxx xxxxx
Shared LOS: * * * * * * * * * * *	* *
ApproachDel: xxxxxx xxxxx 9.8	15.1
ApproachLOS: * * A	С
Note: Queue reported is the number of cars per lane.	

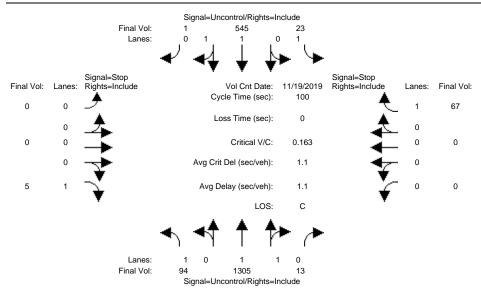
Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Background+Project (AM)

Intersection #9001: Winchester Boulevard and Fireside Drive



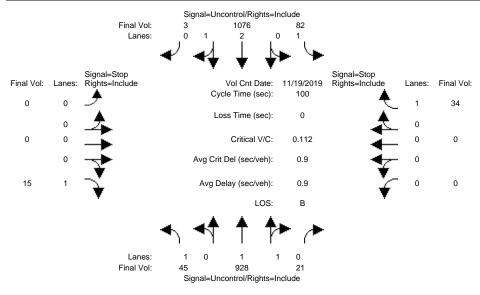
Approach:	No	rth Bo	ound	Sot	uth Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L ·	- T	- R	L ·	- T	- R	L ·	- T	- R	L ·	- T	- R
Volume Module	e: >>	Count	Date:	19 No	ov 201	19 <<						
Base Vol:	81	1132	13	23	438	1	0	0	5	0	0	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	81	1132	13	23	438	1	0	0	5	0	0	67
Added Vol:	13	14	0	0	11	0	0	0	0	0	0	0
ATI:	0	138	0	0	75	0	0	0	0	0	0	0
Initial Fut:	94	1284	13	23	524	1	0	0	5	0	0	67
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
	94	1284	13	23	524	1	0	0	5	0	0	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	94	1284	13	23	524	1	0	0	5	0	0	67
Critical Gap	Modu.	le:										
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	XXXX	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	XXXX	3.3
Capacity Mod	ule:											
Cnflict Vol:	525	xxxx	xxxxx	1297	xxxx	xxxxx	XXXX	xxxx	263	XXXX	XXXX	649
Potent Cap.:	1052	xxxx	XXXXX	541	xxxx	xxxxx	XXXX	XXXX	742	XXXX	XXXX	418
Move Cap.:	1052	xxxx	XXXXX	541	xxxx	xxxxx	XXXX	XXXX	742	XXXX	XXXX	418
Volume/Cap:	0.09	xxxx	XXXX	0.04	xxxx	XXXX	XXXX	XXXX	0.01	XXXX	XXXX	0.16
Level Of Serv	vice 1	Module	≘:									
2Way95thQ:	0.3	xxxx	xxxxx							XXXX	XXXX	0.6
Control Del:						xxxxx		XXXX	9.9	xxxxx	XXXX	15.3
LOS by Move:						*		*	A		*	C
Movement:	LT ·	- LTR	- RT	LT ·	- LTR	- RT	LT ·	- LTR	- RT	LT ·	- LTR	- RT
Shared Cap.:	xxxx	xxxx	XXXXX	XXXX	xxxx	xxxxx	XXXX	XXXX	xxxxx	XXXX	XXXX	XXXXX
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	XXXX	XXXXX
Shrd ConDel:	xxxxx	xxxx				xxxxx	xxxxx	XXXX	xxxxx	xxxxx	XXXX	XXXXX
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	X	xxxxx		X	xxxxx			9.9			15.3	
ApproachLOS:		*			*			A			С	
Note: Queue	repor	ted is	s the r	number	of ca	ars per	r lane	•				

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



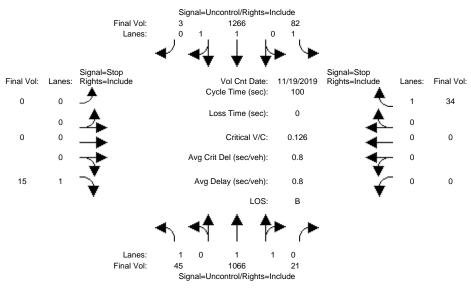
Approach: North Bound South Bound East Bound West	
Movement: L - T - R L - T - R L - T - T	
Volume Module: >> Count Date: 19 Nov 2019 <<	
	0 67
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
Initial Bse: 81 1270 13 23 513 1 0 0 5 0	0 67
Added Vol: 13 14 0 0 11 0 0 0 0	0 0
ATI: 0 21 0 0 21 0 0 0 0	0 0
Initial Fut: 94 1305 13 23 545 1 0 0 5 0	0 67
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 1.00
PHF Volume: 94 1305 13 23 545 1 0 0 5 0	0 67
Reduct Vol: 0 0 0 0 0 0 0 0 0	0 0
FinalVolume: 94 1305 13 23 545 1 0 0 5 0	0 67
Critical Gap Module:	
Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx	x 6.9
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx 3.3 xxxxx xxx	x 3.3
Capacity Module:	
Cnflict Vol: 546 xxxx xxxxx 1318 xxxx xxxxx xxxx xxxx 273 xxxx xxx	x 659
Potent Cap.: 1033 xxxx xxxxx 531 xxxx xxxxx xxxx xxxx 731 xxxx xxx	x 411
Move Cap.: 1033 xxxx xxxxx 531 xxxx xxxxx xxxx xxxx 731 xxxx xxx	x 411
Volume/Cap: 0.09 xxxx xxxx 0.04 xxxx xxxx xxxx xxxx 0.01 xxxx xxx	x 0.16
Level Of Service Module:	·
2Way95thQ: 0.3 xxxx xxxxx 0.1 xxxx xxxxx xxxx xxxx 0.0 xxxx xxx	x 0.6
Control Del: 8.8 xxxx xxxxx 12.1 xxxx xxxxx xxxx xxxx 10.0 xxxxx xxx	x 15.5
LOS by Move: A * * B * * * A *	* C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LT	R - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx	x xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx	x xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxx	x xxxxx
Shared LOS: * * * * * * * * * *	* *
ApproachDel: xxxxxx xxxxx 10.0 15.	5
ApproachLOS: * * A	C
Note: Queue reported is the number of cars per lane.	

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



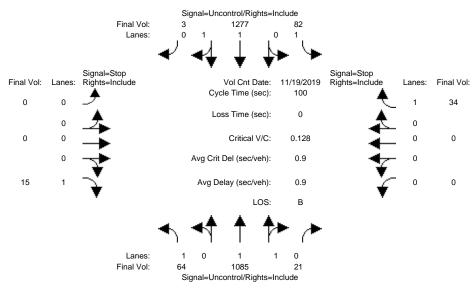
			ound									
Movement:												
Volume Module	e: >>			19 No	ov 201	19 <<						
Base Vol:	45	928	21		1076	3		0		0	0	34
Growth Adj:			1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:		928	21	82	1076	3	0	0	15	0	0	34
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	928	21	82	1076	3	0	0	15	0	0	34
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
	45	928	21	82	1076	3	0	0	15	0	0	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	45	928	21	82	1076	3	0	0	15	0	0	34
Critical Gap	Modu	le:										
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	2.2	xxxx	XXXXX	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Modu	ıle:											
Cnflict Vol:	1079	xxxx	xxxxx	949	xxxx	xxxxx	xxxx	xxxx	360	XXXX	xxxx	475
Potent Cap.:	654	xxxx	XXXXX	732	xxxx	xxxxx	XXXX	xxxx	642	XXXX	xxxx	542
Move Cap.:	654	xxxx	xxxxx	732	xxxx	xxxxx	xxxx	xxxx	642	xxxx	xxxx	542
Volume/Cap:	0.07	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	0.06
Level Of Serv	vice D	Module	e:	•								·
2Way95thQ:	0.2	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	0.1	xxxx	xxxx	0.2
Control Del:	10.9	xxxx	xxxxx	10.5	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	12.1
LOS by Move:	В	*	*	В	*	*	*	*	В	*	*	В
Movement:				LT ·	- LTR	- RT	LT ·	- LTR	- RT	LT -	- LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	X	xxxxx		X	xxxxx			10.7			12.1	
ApproachLOS:		*			*			В			В	
Note: Queue 1	repor	ted is	s the r	number	of ca	ars per	r lane					

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



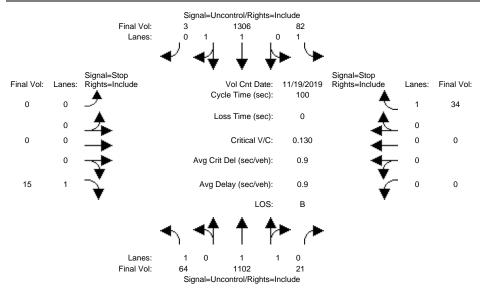
Approach: North Bo	- R L	- T - R	L - T	- R L	- T	- R
Volume Module: >> Count	1 1					
Base Vol: 45 928		1076 3	0 0	15	0 0	34
Growth Adi: 1.00 1.00		1.00 1.00			0 1.00	1.00
Initial Bse: 45 928		1076 1.00		15	0 0	34
Added Vol: 0 0	0 0			0	0 0	0
ATI: 0 138		190 0		0	0 0	0
Initial Fut: 45 1066		1266 3		15	0 0	34
		1.00 1.00			0 1.00	1.00
PHF Adj: 1.00 1.00		1.00 1.00			0 1.00	1.00
PHF Volume: 45 1066		1266 3		15	0 0	34
Reduct Vol: 0 0	0 0			0	0 0	0
FinalVolume: 45 1066	21 82		0 0		0 0	34
					-	
Critical Gap Module:	1 1		1 1	1.1		1
Critical Gp: 4.1 xxxx	xxxxx 4.1	xxxx xxxxx	xxxxx xxxx	6.9 xxxx	x xxxx	6.9
FollowUpTim: 2.2 xxxx						
Capacity Module:						
Cnflict Vol: 1269 xxxx	xxxxx 1087	xxxx xxxxx	xxxx xxxx	635 xxx	x xxxx	544
Potent Cap.: 554 xxxx	xxxxx 649	xxxx xxxxx	xxxx xxxx	426 xxx	x xxxx	489
Move Cap.: 554 xxxx	xxxxx 649	xxxx xxxxx	xxxx xxxx	426 xxx	x xxxx	489
Volume/Cap: 0.08 xxxx	xxxx 0.13	xxxx xxxx	xxxx xxxx	0.04 xxx	x xxxx	0.07
Level Of Service Module	: :					
2Way95thQ: 0.3 xxxx	xxxxx 0.4	xxxx xxxxx	xxxx xxxx	0.1 xxx	xxxx x	0.2
Control Del: 12.1 xxxx		xxxx xxxxx	xxxx xxxx	13.8 xxxx	x xxxx	12.9
LOS by Move: B *	* B	* *	* *	В	* *	В
Movement: LT - LTR	- RT LT	- LTR - RT	LT - LTR	- RT LT	- LTR	- RT
Shared Cap.: xxxx xxxx	xxxxx xxxx	xxxx xxxxx	xxxx xxxx	XXXXX XXX	x xxxx	XXXXX
SharedQueue:xxxxx xxxx	xxxxx xxxxx	xxxx xxxxx	xxxx xxxx	XXXXX XXXX	x xxxx	XXXXX
Shrd ConDel:xxxxx xxxx					x xxxx	XXXXX
Shared LOS: * *	* *	* *	* *	*	* *	*
ApproachDel: xxxxxx	x	xxxxx	13.8		12.9	
ApproachLOS: *		*	В		В	
Note: Queue reported is	s the number	of cars pe	r lane.			

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



Movement:	L ·	- T	ound – R	L ·	- T	- R	L -	- T	- R	L -	- T	- R
Volume Module	≘: >>			19 No	ov 201	L9 <<						
Base Vol:	45	928	21		1076	3	0		15	0	0	34
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:	45	928	21	82	1076	3	0	0	15	0	0	34
Added Vol:	19	19	0	0	11	0	0	0	0	0	0	0
ATI:		138	0		190	0	0	0	0	0	0	0
Initial Fut:	64	1085	21	82	1277	3	0	0	15	0	0	34
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
	64	1085	21	82	1277	3	0	0	15	0	0	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:			21		1277	3	-	0	15	0	0	34
Critical Gap												
Critical Gp:			xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:						xxxxx				xxxxx		
Capacity Modu			'	1			1 1			1 1		1
Cnflict Vol:		xxxx	xxxxx	1106	xxxx	xxxxx	xxxx	xxxx	640	xxxx	xxxx	553
Potent Cap.:						xxxxx		xxxx		xxxx	xxxx	482
Move Cap.:						xxxxx		xxxx			xxxx	
Volume/Cap:						xxxx		xxxx	0.04	xxxx	xxxx	0.07
Level Of Serv	ice I	Module	e:	1			' '					'
2Way95thQ:	0.4	xxxx	XXXXX	0.4	xxxx	xxxxx	XXXX	xxxx	0.1	XXXX	xxxx	0.2
Control Del:	12.4	xxxx	XXXXX	11.5	xxxx	xxxxx	xxxxx	xxxx	13.8	xxxxx	xxxx	13.0
LOS by Move:	В	*	*	В	*	*	*	*	В	*	*	В
Movement:	LT ·	- LTR	- RT	LT ·	- LTR	- RT	LT -	- LTR	- RT	LT ·	- LTR	- RT
Shared Cap.:	xxxx	xxxx	XXXXX	XXXX	xxxx	xxxxx	XXXX	xxxx	xxxxx	XXXX	xxxx	XXXXX
SharedQueue:	xxxx	xxxx	XXXXX	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	XXXXX
Shrd ConDel:	xxxx	xxxx	XXXXX	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	XXXXX
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	x	xxxxx		x	xxxxx			13.8			13.0	
ApproachLOS:		*			*			В			В	
Note: Queue 1	repor	ted is	s the n	number	of ca	ars pei	lane					

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



	- T	ound - R	L ·	- T	- R	L ·	- T	- R	L ·	- Т	- R
Volume Module:						1 1			1 1		1
	45 1066			1266	3	0	0	15	0	0	34
Growth Adj: 1.	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45 1066	21	82	1266	3	0	0	15	0	0	34
Added Vol:	19 19	0	0	11	0	0	0	0	0	0	0
ATI:	0 17	0	0	29	0	0	0	0	0	0	0
Initial Fut:	64 1102	21	82	1306	3	0	0	15	0	0	34
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
	64 1102	21	82	1306	3	0	0	15	0	0	34
Reduct Vol:	0 0	-	0	0	0	0	0	0	0	0	0
FinalVolume:			82		3	-	0	15	0	0	34
Critical Gap Mo											
Critical Gp: 4											
FollowUpTim: 2									XXXXX		
Capacity Module											
Cnflict Vol: 13										XXXX	
Potent Cap.: 5							XXXX			XXXX	
Move Cap.: 5					xxxxx					XXXX	
Volume/Cap: 0.					XXXX		XXXX			XXXX	
Level Of Service			0 4					Λ 1			0 0
2Way95thQ: 0 Control Del: 12						XXXXX			XXXXX		13.1
LOS by Move:			11.0			*	*	14.0 B		xxxx *	13.1 B
		- RT	_					_			_
Shared Cap.: xx											XXXXX
SharedQueue:xxx											
Shrd ConDel:xxx											
Shared LOS:	* *		*	*	*		*	*	*	*	*
ApproachDel:	xxxxxx		×	xxxxx			14.0			13.1	
ApproachLOS:	*		25.2	*			В			В	
Note: Queue rep	orted i	s the 1	number	of ca	ars per	r lane	_				
2 10p					1.0.	,					

Appendix F Queue Length Calculations

Winchester/Payne SBL AM Winchester/Payne SBL Winchester/Payne SBL

AM
Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% AM
Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% Background Plus Project Conditions Avg. Queue Per Lane in Veh= 1.3 3 1.4 3 Percentile =

		Number of				Number of	ľ			Number of
Individual	Cumulative	Queued		Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles		Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.2645	0.2645	0		0.2554	0.2554	0		0.1738	0.1738	0
0.3518	0.2045	1		0.2334	0.6040	1		0.3041	0.1738	1
0.2339	0.8501	2		0.3466	0.8419	2		0.3041	0.4779	2
0.1037	0.9539	3		0.1083	0.9501	3		0.1552	0.8992	3
0.0345	0.9883	4		0.0369	0.9871	4		0.1552	0.9671	4
0.0092	0.9863	5		0.0309	0.9972	5		0.0238	0.9909	5
						5 6				5
0.0020	0.9995	6		0.0023	0.9995	6 7		0.0069	0.9978	6 7
0.0004 0.0001	0.9999 1.0000	7 8		0.0004 0.0001	0.9999 1.0000	8		0.0017 0.0004	0.9995 0.9999	8
				0.0001						9
0.0000	1.0000	9			1.0000	9 10		0.0001	1.0000	
0.0000	1.0000	10		0.0000	1.0000			0.0000	1.0000	10
0.0000	1.0000	11		0.0000	1.0000	11		0.0000	1.0000	11
0.0000	1.0000	12		0.0000	1.0000	12		0.0000	1.0000	12
0.0000	1.0000	13		0.0000	1.0000	13		0.0000	1.0000	13
0.0000	1.0000	14		0.0000	1.0000	14		0.0000	1.0000	14
0.0000	1.0000	15		0.0000	1.0000	15		0.0000	1.0000	15
0.0000	1.0000	16		0.0000	1.0000	16		0.0000	1.0000	16
0.0000	1.0000	17	Ī	0.0000	1.0000	17		0.0000	1.0000	17
0.0000	1.0000	18		0.0000	1.0000	18		0.0000	1.0000	18
0.0000	1.0000	19	Ī	0.0000	1.0000	19		0.0000	1.0000	19
0.0000	1.0000	20		0.0000	1.0000	20		0.0000	1.0000	20
0.0000	1.0000	21		0.0000	1.0000	21		0.0000	1.0000	21
0.0000	1.0000	22		0.0000	1.0000	22		0.0000	1.0000	22
0.0000	1.0000	23		0.0000	1.0000	23		0.0000	1.0000	23
0.0000	1.0000	24		0.0000	1.0000	24		0.0000	1.0000	24
0.0000	1.0000	25		0.0000	1.0000	25		0.0000	1.0000	25
0.0000	1.0000	26		0.0000	1.0000	26		0.0000	1.0000	26
0.0000	1.0000	27		0.0000	1.0000	27		0.0000	1.0000	27
0.0000	1.0000	28		0.0000	1.0000	28		0.0000	1.0000	28
0.0000	1.0000	29		0.0000	1.0000	29		0.0000	1.0000	29
0.0000	1.0000	30		0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31		0.0000	1.0000	31		0.0000	1.0000	31
0.0000	1.0000	32		0.0000	1.0000	32		0.0000	1.0000	32
0.0000	1.0000	33		0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34		0.0000	1.0000	34		0.0000	1.0000	34
0.0000	1.0000	35		0.0000	1.0000	35		0.0000	1.0000	35
0.0000	1.0000	36		0.0000	1.0000	36		0.0000	1.0000	36
0.0000	1.0000	37		0.0000	1.0000	37		0.0000	1.0000	37
0.0000	1.0000	38		0.0000	1.0000	38		0.0000	1.0000	38
0.0000	1.0000	39		0.0000	1.0000	39		0.0000	1.0000	39
0.0000	1.0000	40		0.0000	1.0000	40		0.0000	1.0000	40
0.0000	1.0000	41		0.0000	1.0000	41		0.0000	1.0000	41
0.0000	1.0000	42		0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43		0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44		0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45		0.0000	1.0000	45		0.0000	1.0000	45
0.0000	1.0000	46		0.0000	1.0000	46		0.0000	1.0000	46
0.0000	1.0000	47		0.0000	1.0000	47		0.0000	1.0000	47
0.0000	1.0000	48	Ī	0.0000	1.0000	48		0.0000	1.0000	48
0.0000	1.0000	49	Ī	0.0000	1.0000	49		0.0000	1.0000	49
0.0000	1.0000	50	Ī	0.0000	1.0000	50		0.0000	1.0000	50
0.0000	1.0000	51		0.0000	1.0000	51		0.0000	1.0000	51
0.0000	1.0000	52		0.0000	1.0000	52		0.0000	1.0000	52
0.0000	1.0000	53		0.0000	1.0000	53		0.0000	1.0000	53
0.0000	1.0000	54		0.0000	1.0000	54		0.0000	1.0000	54
0.0000	1.0000	55	Ī	0.0000	1.0000	55		0.0000	1.0000	55
0.0000	1.0000	56	Ī	0.0000	1.0000	56		0.0000	1.0000	56
0.0000	1.0000	57	Ī	0.0000	1.0000	57		0.0000	1.0000	57
0.0000	1.0000	58		0.0000	1.0000	58		0.0000	1.0000	58
0.0000	1.0000	59		0.0000	1.0000	59		0.0000	1.0000	59
0.0000	1.0000	60		0.0000	1.0000	60		0.0000	1.0000	60
0.0000	1.0000	61		0.0000	1.0000	61		0.0000	1.0000	61
0.0000	1.0000	62	Ī	0.0000	1.0000	62		0.0000	1.0000	62
0.0000	1.0000	63	Ī	0.0000	1.0000	63		0.0000	1.0000	63
0.0000	1.0000	64	Ī	0.0000	1.0000	64		0.0000	1.0000	64
0.0000	1.0000	65		0.0000	1.0000	65		0.0000	1.0000	65

1.8

4

Winchester/PayneWinchester/PayneWinchester/PayneSBLSBLSBLPMPMPM

PM PM PM Existing Conditions Background Conditions Background Plus Project Conditions

Avg. Queue Per Lane in Veh= 3.4 Avg. Queue Per Lane in Veh= 3.8 Avg. Queue Per Lane in Veh= 4.2

Percentile = 95% 7 Percentile = 95% 7 Percentile = 95% 8

Individual Cumulative Cumul			Number of			Number of	Ī			Number of
0.0226										
0.1117	Probability	Probability	Vehicles	Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.1911 0.3355 2 0.1658 0.2734 2 0.1532 0.2102 2 0.2068 0.2782 3 0.1685 0.7400 4 0.2068 0.4792 3 0.1682 0.3964 3 0.1685 0.7400 4 0.1941 0.8732 4 0.1944 0.5898 4 0.1775 5 0.1464 0.8792 4 0.1944 0.5898 4 0.1775 5 0.4664 0.8916 5 0.1633 0.7531 5 0.0728 0.5865 6 0.5920 0.5917 6 0.1453 0.5875 6 0.0350 0.3761 7 0.0586 0.3761 7 0.0586 0.3761 7 0.0586 0.3761 7 0.0586 0.3761 7 0.0586 0.3761 7 0.0586 0.3761 7 0.0586 0.387										
0.2180										
0.1865										2
0.1277 0.8677 5 0.1464 0.8196 5 0.1633 0.7531 5 0.0736 0.0366 0.9781 7 0.0496 0.9813 7 0.0666 0.9867 6 0.0920 0.9914 7 0.0496 0.9813 7 0.0666 0.9867 6 0.0920 0.9914 8 0.0234 0.9847 8 0.0380 0.9721 8 0.0005 0.9972 9 0.0008 0.9845 9 0.0188 0.9889 9 0.0188 0.0000 0.0921 0.0000 0.9989 11 0.0007 0.9898 11 0.0007 0.9898 11 0.0007 0.9898 11 0.0007 0.9898 11 0.0007 0.0007 0.0007 0.0008 0.10000 0.0000 1.0000 14 0.0007 0.0008 0.10000 13 0.0001 1.0000 14 0.0000 1.0000 15 0.0000 1.0000 15 0.0000 1.0000 15 0.0000 1.0000 15 0.0000 1.0000 15 0.0000 1.0000 15 0.0000 1.0000 16 0.0000 17 0.0000 17 0.0000 1.0000 17 0.0000 1.0000 17 0.0000 1.0000 18 0.0000 1.0000 18 0.0000 1.0000 18 0.0000 1.0000 19 0.0000 1.0000 19 0.0000 1.0000 19 0.0000 1.0000 18 0.0000 1.0000 19 0.0000 1.0000 1.0000 18 0.0000 1.0000 1.0000 19 0.0000 1.0000 1.0000 12 0.0000 1.0000 1.0000 18 0.0000 1.0000 1.0000 1.0000 18 0.0000 1.0000 1.0000 1.0000 18 0.0000 1.0000 1.0000 18 0.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 18 0.0000 1.000										3 1
0.0728										
0.0356										6
0.015 0.0994										7
0.0020	0.0152	0.9914	8	0.0234				0.0360		8
0.0006										
0,0002										
0.0000										
0.0000										
0,0000										
0.0000										
0.0000										
0.0000										
0.0000										
0.0000										
0.0000 1,0000 21 0,0000 1,0000 21 0,0000 1,0000 22 0.0000 1,0000 23 0,0000 1,0000 23 0,0000 1,0000 23 0.0000 1,0000 24 0,0000 1,0000 24 0,0000 1,0000 24 0.0000 1,0000 25 0,0000 1,0000 25 0,0000 1,0000 26 0.0000 1,0000 26 0,0000 1,0000 28 0,0000 1,0000 27 0.0000 1,0000 28 0,0000 1,0000 28 0,0000 1,0000 28 0.0000 1,0000 29 0,0000 1,0000 29 0,0000 1,0000 29 0.0000 1,0000 31 0,0000 1,0000 30 0,0000 1,0000 30 0.0000 1,0000 32 0,0000 1,0000 32 0,0000 1,0000 32 0.0000										
0.0000 1,0000 23 0,0000 1,0000 23 0,0000 1,0000 23 0.0000 1,0000 24 0,0000 1,0000 25 0,0000 1,0000 25 0.0000 1,0000 28 0,0000 1,0000 26 0,0000 1,0000 26 0.0000 1,0000 27 0,0000 1,0000 27 0,0000 1,0000 27 0.0000 1,0000 28 0,0000 1,0000 28 0,0000 1,0000 28 0.0000 1,0000 30 0,0000 1,0000 30 0,0000 1,0000 30 0.0000 1,0000 31 0,0000 1,0000 31 0,0000 1,0000 31 0,0000 1,0000 32 0,0000 1,0000 32 0,0000 1,0000 32 0,0000 1,0000 32 0,0000 1,0000 32 0,0000 1,0000 34 0,0000 1,0000 34 0,000	0.0000	1.0000	21		1.0000	21		0.0000		21
0.0000										
0.0000										
0.0000						24				
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Winchester/Fireside NBL Winchester/Fireside NBL Winchester/Fireside NBL AM

AM
Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% AM
Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% Background Plus Project Conditions Avg. Queue Per Lane in Veh= Percentile = 95% 0.2 0.2 0.2 1 1

		Number of			Number of	ſ			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.8278	0.8278	0	0.8222	0.8222	0		0.7947	0.7947	0
0.1565	0.9842	1	0.1609	0.9832	1		0.1826	0.9773	1
0.0148	0.9990	2	0.0158	0.9989	2 3		0.0210	0.9983	2 3
0.0009 0.0000	1.0000 1.0000	3 4	0.0010 0.0001	0.9999 1.0000	3 4		0.0016 0.0001	0.9999 1.0000	3 4
0.0000	1.0000	5	0.0001	1.0000	5		0.0001	1.0000	5
0.0000	1.0000	6	0.0000	1.0000	6		0.0000	1.0000	6
0.0000	1.0000	7	0.0000	1.0000	7		0.0000	1.0000	7
0.0000	1.0000	8	0.0000	1.0000	8		0.0000	1.0000	8
0.0000	1.0000	9	0.0000	1.0000	9		0.0000	1.0000	9
0.0000	1.0000	10	0.0000	1.0000	10		0.0000	1.0000	10
0.0000	1.0000	11	0.0000	1.0000	11		0.0000	1.0000	11
0.0000	1.0000	12	0.0000	1.0000	12		0.0000	1.0000	12
0.0000	1.0000	13 14	0.0000	1.0000	13 14		0.0000	1.0000	13 14
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0.0000	1.0000	16	0.0000	1.0000	16		0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17		0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18		0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19		0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20		0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21		0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22		0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23		0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24		0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25		0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26		0.0000	1.0000	26
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0.0000	1.0000	26 29	0.0000	1.0000	26 29		0.0000	1.0000	26 29
0.0000	1.0000	30	0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31		0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32		0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34		0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35		0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36		0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37		0.0000	1.0000	37
0.0000	1.0000	38	0.0000 0.0000	1.0000	38 39		0.0000	1.0000	38
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0.0000	1.0000	42	0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45		0.0000	1.0000	45
0.0000	1.0000	46	0.0000	1.0000	46		0.0000	1.0000	46
0.0000	1.0000	47	0.0000	1.0000	47		0.0000	1.0000	47
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0.0000	1.0000	54	0.0000	1.0000	54		0.0000	1.0000	54
0.0000	1.0000	55	0.0000	1.0000	55		0.0000	1.0000	55
0.0000	1.0000	56	0.0000	1.0000	56		0.0000	1.0000	56
0.0000	1.0000	57	0.0000	1.0000	57		0.0000	1.0000	57
0.0000	1.0000	58	0.0000	1.0000	58		0.0000	1.0000	58
0.0000	1.0000	59	0.0000	1.0000	59		0.0000	1.0000	59
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0.0000	1.0000	64	0.0000	1.0000	64		0.0000	1.0000	64
0.0000	1.0000	65	0.0000	1.0000	65		0.0000	1.0000	65

Winchester/FiresideWinchester/FiresideWinchester/FiresideNBLNBLNBLPMPMPM

Existing Conditions

Avg. Queue Per Lane in Veh=

Percentile = 95%

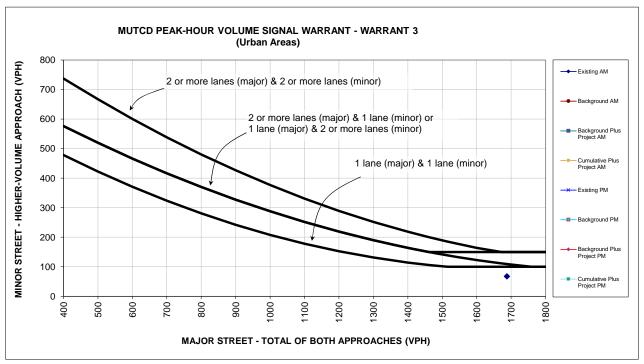
1 Percentile = 95%

		Number of			Number of	ľ			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.8726	0.8726	0	0.8596	0.8596	0		0.8022	0.8022	0
0.8726	0.8726	1	0.8396	0.8596	1		0.6022	0.8022	1
0.0081	0.9996	2	0.1300	0.9995	2		0.1766	0.9985	
			0.0098		3				2 3
0.0004	1.0000	3		1.0000			0.0014	0.9999	
0.0000	1.0000	4	0.0000	1.0000	4		0.0001	1.0000	4
0.0000	1.0000	5	0.0000	1.0000	5		0.0000	1.0000	5
0.0000	1.0000	6	0.0000	1.0000	6		0.0000	1.0000	6
0.0000	1.0000	7	0.0000	1.0000	7		0.0000	1.0000	7
0.0000	1.0000	8	0.0000	1.0000	8		0.0000	1.0000	8
0.0000	1.0000	9	0.0000	1.0000	9		0.0000	1.0000	9
0.0000	1.0000	10	0.0000	1.0000	10		0.0000	1.0000	10
0.0000	1.0000	11	0.0000	1.0000	11		0.0000	1.0000	11
0.0000	1.0000	12	0.0000	1.0000	12		0.0000	1.0000	12
0.0000	1.0000	13	0.0000	1.0000	13		0.0000	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14		0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15		0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16		0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17		0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18		0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19		0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20		0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21		0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22		0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23		0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24		0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25		0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26		0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27		0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28		0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29		0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	30 31		0.0000	1.0000	30 31
					32				32
0.0000	1.0000	32	0.0000	1.0000			0.0000	1.0000	
0.0000	1.0000	33	0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34		0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35		0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36		0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37		0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38		0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39		0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40		0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41		0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45		0.0000	1.0000	45
0.0000	1.0000	46	0.0000	1.0000	46		0.0000	1.0000	46
0.0000	1.0000	47	0.0000	1.0000	47		0.0000	1.0000	47
0.0000	1.0000	48	0.0000	1.0000	48		0.0000	1.0000	48
0.0000	1.0000	49	0.0000	1.0000	49		0.0000	1.0000	49
0.0000	1.0000	50	0.0000	1.0000	50		0.0000	1.0000	50
0.0000	1.0000	51	0.0000	1.0000	51		0.0000	1.0000	51
0.0000	1.0000	52	0.0000	1.0000	52		0.0000	1.0000	52
0.0000	1.0000	53	0.0000	1.0000	53		0.0000	1.0000	53
0.0000	1.0000	54	0.0000	1.0000	54		0.0000	1.0000	54
0.0000	1.0000	55	0.0000	1.0000	55		0.0000	1.0000	55
0.0000	1.0000	56	0.0000	1.0000	56		0.0000	1.0000	56
0.0000	1.0000	57	0.0000	1.0000	57		0.0000	1.0000	57
0.0000	1.0000	58	0.0000	1.0000	57 58		0.0000	1.0000	57 58
0.0000	1.0000		0.0000	1.0000			0.0000	1.0000	
0.0000	1.0000	59 60	0.0000	1.0000	59		0.0000	1.0000	59
		60 61			60 61				60 61
0.0000	1.0000	61	0.0000	1.0000	61		0.0000	1.0000	61
0.0000	1.0000	62	0.0000	1.0000	62		0.0000	1.0000	62
0.0000	1.0000	63	0.0000	1.0000	63		0.0000	1.0000	63
0.0000	1.0000	64 65	0.0000	1.0000	64		0.0000	1.0000	64 65
0.0000	1.0000	65	0.0000	1.0000	65	ļ.	0.0000	1.0000	65

Appendix G
Signal Warrant
Check

Winchester Hotel

5 . Winchester Boulevard and Fireside Drive



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).

^{** 150} vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

		La	roach nes 2 or More	Existing AM	Background AM	Background Plus Project AM	Cumulative Plus Project AM
Major Street - Both Approaches	Winchester Boulevard		X	1688	1901	1939	1981
Minor Street - Highest Approach	Fireside Drive	X		67	67	67	67
Maximum warrant threshold for minor stree	t volume			109	100	100	100
Difference between warrant threshold & min	nor street volume			42	33	33	33
		Warra	nt Met?	No	No	No	No
						ı	
			roach nes 2 or More	Existing PM	Background PM	Background Plus Project PM	Cumulative Plus Project PM
Major Street - Both Approaches	Winchester Boulevard	La	nes 2 or	Existing PM	Background PM	SS Background Plus Project PM	Cumulative Project PM
Major Street - Both Approaches Minor Street - Highest Approach	Winchester Boulevard Fireside Drive	La	nes 2 or More	Existing		Background Project PM	
Minor Street - Highest Approach	Fireside Drive	One	nes 2 or More	Existing 2155	2483	Background SSS Project PM	Cumulative SProject PM
, , , , , , , , , , , , , , , , , , , ,	Fireside Drive t volume	One	nes 2 or More	2155 34	2483 34	Background 2532 34	Cumulative St. 252 Project PM