APPENDIX H

FINAL TRANSPORTATION ANALYSIS REPORT

Final Transportation Analysis Report

200 North Bascom Avenue

(H19-029) (3-25305)

City of San Jose, California

April 5, 2021



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EXECUTIVE SUMMARY

This report summarizes the results of the Transportation Analysis (TA) conducted for the proposed Medical Office Building development at 200 North Bascom Avenue in the City of San Jose. The project proposes to construct a 4-story, 34,987 square feet building, which includes 29,421 square feet of medical office and 5,566 square feet of retail space, on a 0.46-acre site. Access to the project site and underground parking garage is provided via full access driveway on Forest Avenue.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook and set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy and Transportation Analysis Handbook, the TA report for the project includes a CEQA transportation analysis and a local transportation analysis (LTA).

The report also includes evaluations and recommendations concerning project site access and on-site circulation for vehicles, bicycles, and pedestrians; evaluation of on-site vehicle parking supply; passenger and commercial loading spaces and garbage/trash facilities.

CEQA Transportation Impacts

Project Vehicle Miles Traveled (VMT) Impacts and Mitigation Measures

If the VMT generated by the project (12.68 per employee) exceeds the threshold of 12.22 VMT per employee, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the significant VMT impact. The City of San Jose Transportation Analysis Handbook, adopted in April 2020, provides screening criteria where a CEQA transportation analysis is not required if met. For mixed-use projects, only components that meet the screening criteria, not the entire project, do not require CEQA transportation analysis.

The proposed project consists of 29,421 square feet (s.f.) of medical office space and 5,556 s.f. of retail space. TJKM converted the medical office space into general office space using conversion factors based on the daily trips the medical office generates. The medical office is expected to generate 1,024 daily trips, which, with a conversion factor of 9.74 trips/1,000 square feet for general office uses, equates to 105,133 s.f. of general office space. Although the retail portion of the project meets screening criteria for local-serving retail of 100,000 s.f. or less, the medical office does not meet the screening criteria for offices of 10,000 s.f. or less and requires a detailed CEQA transportation analysis.

TJKM established potential mitigation measures that can be applied to reduce the project VMT to meet the City's threshold by using the City's VMT Evaluation Tool. By implementing the following mitigation measures the proposed project will reduce the project VMT to 12.01, to meet the City's threshold.

- Traffic calming measures
- Pedestrian network improvements
- Limit parking supply
- Provide subsidized or discounted transit program 100 percent of Transit Subsidy



The mitigations include installing Rectangular Rapid Flash Beacon infrastructure for the existing crosswalk on the north leg of the Bascom Avenue/Olive Avenue intersection, ADA curb ramps at the northeast corner of the Forest Avenue/Topeka Avenue intersection, and crosswalk striping along the east leg of the Forest Avenue/Bascom Avenue intersection. The TDM measure proposes 100 percent of employees will be offered a fully subsidized VTA monthly transit pass.

Local Transportation Analysis

Project Trip Generation

The proposed project is expected to generate a net of 1,063 daily trips of which 73 net trips are generated during the a.m. peak hour and 100 net trips are generated during the p.m. peak hour. The proposed trip generation includes discounts for location based mode share adjustments, proposed multimodal infrastructure and proposed transportation demand management (TDM) programs as per direction of the City of San Jose.

Intersection Traffic Operations

The results of the intersection level of service analysis show that all the study intersections operate within standards of the City of San Jose Level of Service (LOS) D or better during the a.m. and p.m. peak hours under all scenarios. Thus, the project would not have any adverse effects at the study intersections.

Pedestrian, Bicycle and Transit Adverse Effects

The project proposes to provide additional pedestrian space, short-term bicycle parking, and improved transit stop along the project frontage on North Bascom Avenue. The proposed project does not conflict with existing and planned pedestrian or bicycle facilities. The proposed project will add very few trips to the existing transit facilities, which can be accommodated by the existing transit capacity. The project would not have an adverse effect on the pedestrian, bicycle and transit facilities in the study area.

On-Site Circulation

TJKM examined the project site plan in order to evaluate the adequacy of on-site vehicle circulation including delivery trucks, garbage trucks and emergency vehicles. Based on the evaluation, the proposed on-site vehicle circulation is adequate and should not result in any operational issues on City streets.

Parking

Based on the project site plan dated January 13, 2021 (**Figure 2**), 60 parking spaces are provided, which includes 42 standard parking spaces, six standard ADA parking spaces, one van ADA parking spaces, one electric vehicle van ADA parking space, four electric vehicle parking spaces, and six clean air parking spaces. Additionally, the project will provide eight motorcycle parking spaces, four long-term bicycle locker rooms (accommodates 40 bikes in total), four short term bicycle locker rooms (accommodates 40 bikes in total), four short term bicycle locker rooms (accommodates 40 bikes in total), requires 1 space per 250 square feet of floor area of medical office space, totaling 120 required vehicular parking spaces and 7 bicycle spaces. As per the Municipal Code parking reduction section 20.90.220



• The project is allowed up to a 50% reduction through the submittal of a TDM plan that contains a carpool/vanpool or car-share program or provides a transit use incentive program for employees and tenants.

As a TDM measure, the project is providing vanpool parking spaces and supplying transit passes to all employees, thus limiting the required parking supply to 60 spaces.

Neighborhood Interface

The project site is located in a residential area consisting of both multi-family and single-family homes and neighborhood commercial land uses. Currently the surrounding network is connected via a system of sidewalks and curb ramps, and Class II bicycle lanes and Class III bike routes; however some crosswalks are missing and gaps are observed in the bicycle network. The VTA Bascom Avenue Complete Streets Study proposes improved sidewalks and crosswalks, and the addition of buffered bicycle lanes along the project frontage. The proposed project does not conflict with the short-term and long-term improvements proposed in this study.

Construction Operations

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses the construction schedule, street closures and/or detours, construction staging areas and parking, and the planned truck routes.



INTRODUCTION

This report summarizes the results of the TA for the proposed medical office building development to be located at 200 North Bascom Avenue, on the northeast quadrant of the North Bascom Avenue and Forest Avenue intersection in the City of San Jose. The project proposes to construct a 4-story, 29,421 square feet medical office building and 5,566 square feet of retail space, on an approximately 0.46 acre site. The proposed project includes the demolition of the existing building present at the site. The proposed access to the project site would be from one full access driveway along Forest Avenue into an underground parking structure along Forest Avenue. The project area is designated as Neighborhood/Community Commercial in the Envision San Jose 2040 General Plan (March 2020). **Figure 1** illustrates the study intersections and the vicinity map of the proposed project. **Figure 2** shows the proposed project site plan.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook, adopted in April 2018. Based on the City of San Jose's Transportation Analysis Policy and Transportation Analysis Handbook, the TA report for the project includes a CEQA transportation analysis and a local transportation analysis (LTA).Transportation Policies.

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 (Steinberg) into law and started a process that changes transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. SB 743 directed the California Office of Planning and Research (OPR) to establish new CEQA guidance for jurisdictions that removes automobile vehicle delay and other similar measures of vehicular capacity or traffic congestion from CEQA transportation analysis. Rather, vehicle-miles traveled (VMT), or other measures that "promote[s] the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses," shall be used as a basis for determining significant transportation impacts in California. The intent of the change is to appropriately balance the needs of congestion management with statewide goals related to infill development, the promotion of public health through active transportation, and the reduction of greenhouse gas emissions.

In alignment with State of California Senate Bill 743 (SB 743), the City of San Jose's Transportation Impact Policy, Council Policy 5-3 has been replaced with a new Transportation Analysis policy, Council Policy 5-1. The new transportation policy establishes the thresholds for transportation impacts under CEQA, removing Level of Service (LOS) and replacing with VMT. The new transportation analysis policy came into effect on March 19, 2018.

The new Transportation Analysis Policy aligns with the Envision San Jose 2040 General Plan which seeks to focus new development growth within office, residential, and service land uses to internalize trips and reduce VMT. VMT based policies support dense, mixed-use, infill projects as established in the General Plan.

The Envision San Jose 2040 General Plan contains the following policies to encourage the use of nonautomobile 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 requires an evaluation of a project's potential impacts related to VMT and other significance criteria.



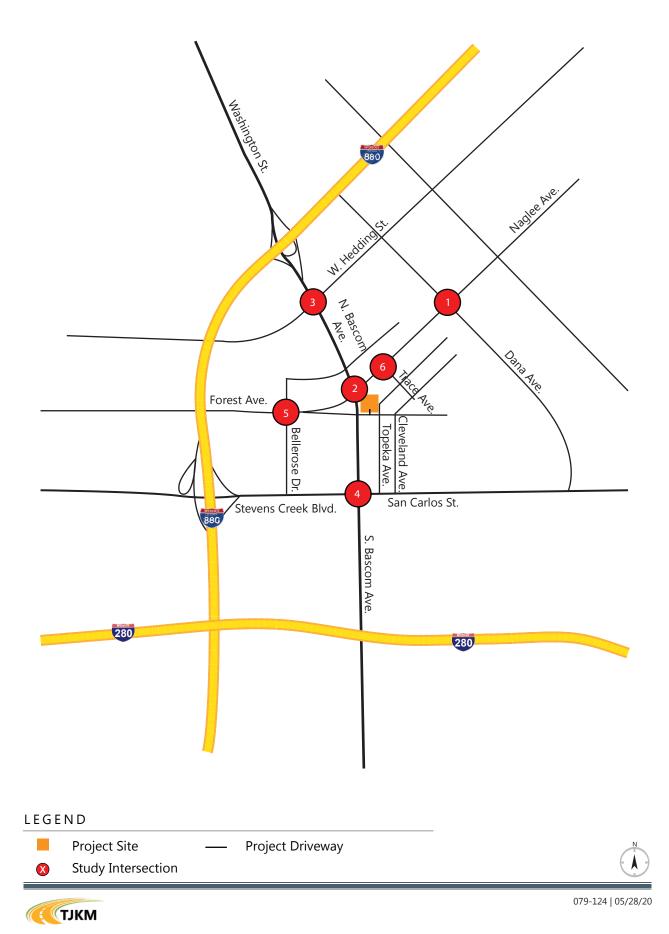
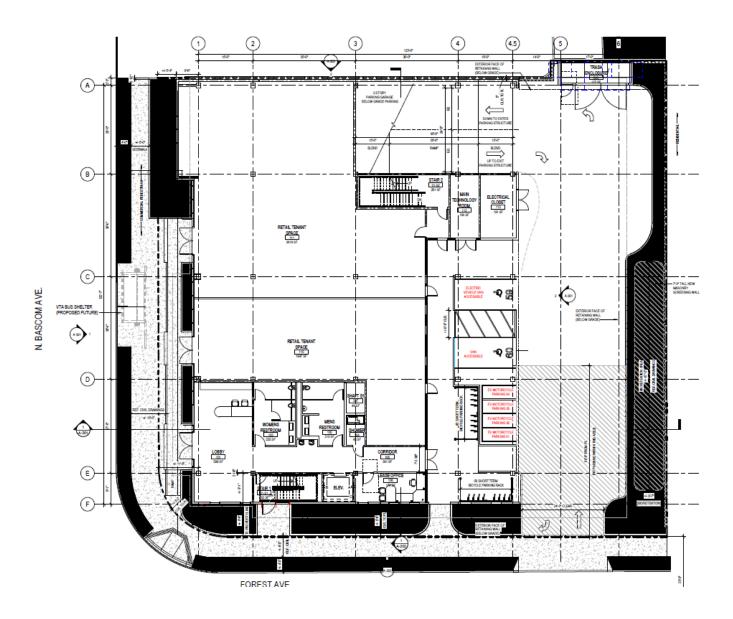


Figure 2: Project Site Plan





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CEQA TRANSPORTATION ANALYSIS SCOPE

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. 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. 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 service in the project vicinity.

To evaluate the project's VMT impact, VMT is calculated per employee for office and industrial developments (dividing the project's VMT by the number of employees). The project's VMT is then compared to the VMT thresholds of significance.

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

The threshold of significance for the proposed project, as established in the Transportation Analysis Policy, is based on the existing regional average VMT level for employment uses. **Figure 3** represents the VMT heat map for workers in the City of San Jose and also zoomed in figure of the employee VMT heat map with the project location identified. Developments in the green-colored areas are estimated to have VMT levels that are below the thresholds of significance, while the orange- and pink-colored areas are estimated to have VMT levels that are above the thresholds of significance.

The CEQA transportation analysis of the project includes a project-level VMT impact analysis using the City's VMT Evaluation Tool that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

LOCAL TRANSPORTATION ANALYSIS SCOPE

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

Due to the COVID-19 situation, all traffic counts are on hold until further notice. A compounded growth factor of 1% was applied to intersections requiring new counts. The City provided peak hour turning movement counts at four study intersections, and counts at the remaining two study intersections are on hold until further notice. TJKM evaluated traffic conditions at four study intersections during the a.m. and p.m. peak hours for a typical weekday. The peak periods observed will be between 7 - 9 a.m. and 4 – 6



p.m. The highest single one hour recorded for each period will be used in the analysis. The study intersections were selected in consultation with the City of San Jose staff. The study intersections and associated traffic controls are as follows:

- 1. Naglee Avenue/Dana Avenue (Signal/City ID #3443)**
- 2. N. Bascom Avenue/Naglee Avenue (Signal/City ID #3284)*
- 3. N. Bascom Avenue/Hedding Street (Signal/City ID #3283)*
- 4. N. Bascom Avenue/San Carlos Street (Signal/City ID #3279)*
- 5. Forest Avenue/Bellerose Drive (Two-Way Stop)***
- 6. Trace Avenue/Naglee Avenue (One-Way Stop)***

*Indicates 2018 traffic counts were provided and a compound growth factor of 1% was applied. **Indicates 2019 traffic counts were provided.

***Indicates traffic counts were not provided and are on hold until further notice.

This study addresses the following three traffic scenarios:

- **Existing Conditions** This scenario evaluates the study intersections based on existing traffic volumes, lane geometry and traffic controls.
- Background (Existing plus Approved Projects) Conditions This scenario is identical to the Existing Conditions, but with the addition of traffic from approved and pending developments within the vicinity of the proposed project.
- Background plus Project (Existing plus Approved Projects plus Project) Conditions This scenario is identical to Background Conditions, but with the addition of traffic from the proposed project.



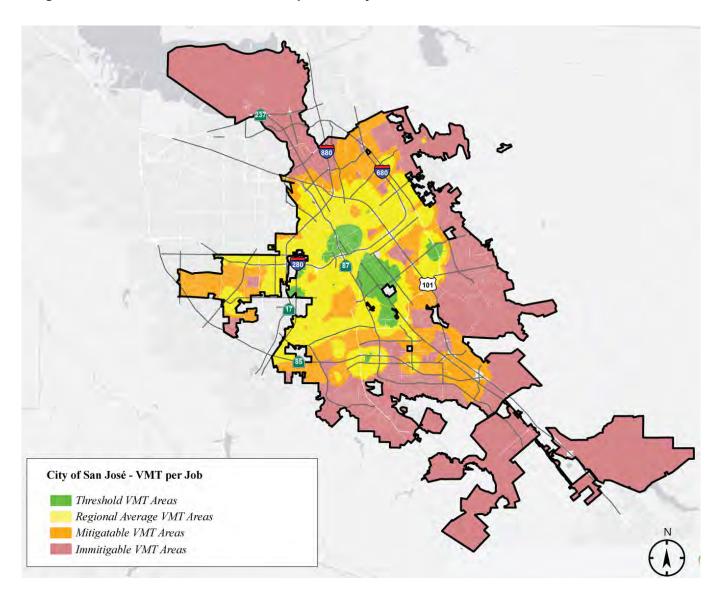
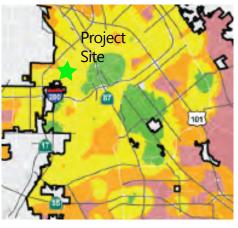


Figure 3: Vehicles Miles Travelled Heat Map in the City of San Jose





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VMT ANALYSIS METHODOLOGY

When assessing VMT per Capita for 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 of the project.

When assessing VMT per Employee for office or industrial project, the project's VMT is divided by the number of employees expected to occupy the project to determine the VMT per employee of the project.

VMT per capita and VMT per employee are not evaluated against one another; instead, each is evaluated against its corresponding threshold of significance. When assessing a retail, hotel, or school project, the project's total VMT, as opposed to a per-capita or per-employee VMT metric, is measured. The total VMT for the region with and without the project is calculated. The difference between the two scenarios is the net change in total VMT that is attributable to the project.

A detailed CEQA transportation analysis would not be required if a project meets the City's screening criteria. **Table 1** presents the screening criteria for projects that are expected to result in less-than-significant VMT impacts based on project description, characteristics, and/or location as per the City of San Jose guidelines.

- The City of San Jose's screening criteria for local-serving retail states that any retail project below 100,000 square feet is considered as a local-serving retail and it is presumed to have a less-than-significant VMT impact.
- The City of San Jose's screening criteria for small infill projects states that any office project less than 10,000 square feet is considered to have a less-than-significant VMT impact.

Local-serving retail typically redistributes existing trips instead of creating new ones. Therefore, City of San Jose's screening criteria for local-serving retail can be applied to retail component of the project. However, the office component would not meet the screening criteria and thus, the project requires VMT evaluation.

When a project does not meet the screening criteria described in **Table 1** above, a detailed CEQA transportation analysis will be required. **Table 2** presents the thresholds of significance for development projects, as established by the City of San Jose Council Policy 5-1.

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Туре	Screening Criteria
Single-family detached housing of 15 units or less; OR Small Infill Projects Single-family attached or multi-family housing of 25 units or less; OR Office of 10,000 square feet of gross floor area or less; OR Industrial of 30,000 square feet of gross floor area or less	
Local-Serving Reta	il 100,000 square feet of total gross floor area or less without drive-through operations
Local-Serving Publ Facilities	ic Local-serving public facilities

Table 1: Vehicles Mile Travelled - Screening Criteria



Туре	Screening Criteria
Residential/ Office Projects or Components	 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 or per-employee VMT is less than or equal to the threshold of significance 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.
Restricted Affordable Residential Projects or Components	 Affordability: 100% restricted affordable units(8), 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-Supporting 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 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.

The projects that require a detailed CEQA transportation analysis will use one of the two methods for assessing a project's VMT generation (Project VMT), if applicable: (1) San José VMT Evaluation Tool and (2) San José Travel Demand Model.



Project Types	Significance Criteria	Current Level	Threshold
Residential Uses	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent OR existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91 VMT per capita (Citywide Average)	10.12 VMT per capita
General Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent	14.37 VMT per employee (Regional Average)	12.21 VMT per employee
Industrial Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee	14.37 VMT per employee (Regional Average)	14.37 VMT per employee
Retail/ Hotel/ School Uses Net increase in existir regional total VMT		Regional Total VMT	Net Increase

Table 2: Vehicle Miles Travelled - Threshold of Significance

INTERSECTION OPERATIONS ANALYSIS METHODOLOGY

Traffic conditions at the study intersections were evaluated using level of service (LOS). LOS is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. LOS generally describes these conditions in terms of such factors as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The operational LOS are given letter designations from A to F, with A representing the best operating conditions (free-flow) and F the worst (severely congested flow with high delays). Intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets in urban areas.

Signalized Intersections

The study intersections under traffic signal control was analyzed using the 2000 Highway Capacity Manual (HCM) Operations Methodology for signalized intersections described in Chapter 16 (HCM 2000). This methodology determines LOS based on average control delay per vehicle for the overall intersection during peak hour intersection operating conditions. LOS methodology is approved by VTA, and adopted by the City of San Jose. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections was calculated



using TRAFFIX 8.0 analysis software and was correlated to a LOS designation as shown in **Appendix A**. The LOS methodology is described for signalized intersections in detail in **Appendix A**.

Unsignalized Intersections

The study intersections under stop control (unsignalized) were analyzed using the 2000 HCM Operations Methodology for signalized intersections described in Chapter 17 (HCM 2000). LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At the side street, controlled intersections or two-way stop sign intersections, the control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. The weighted average delay for the entire intersections is presented for all-way stop controlled intersections. The average control delay for unsignalized intersections was calculated using TRAFFIX 8.0 analysis software and was correlated to a LOS designation as shown in **Appendix A**. The LOS methodology is described for unsignalized intersections in detail in **Appendix A**.



EXISTING CONDITIONS

This section describes the existing conditions of the transportation system within the study area of the project. It presents the vehicle miles traveled (VMT) of the existing land uses in the proximity of the project and describes transportation facilities in the vicinity of the project site, including the roadway network, transit service, and pedestrian and bicycle facilities.

VMT of Existing Land Uses

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects.

Based on the VMT Evaluation Tool and the project's APN, the existing VMT for employment uses in the project vicinity is 12.72 per employee. Based on the San Jose VMT Evaluation Tool, the threshold for employment uses is 12.22 per employee. Therefore, the VMT levels of existing uses in the project vicinity are greater than the VMT levels.

EXISTING SETTING AND ROADWAY SYSTEM

Important roadways adjacent to the project site are discussed below:

Interstate 280 (I-280) is generally an eight-lane freeway near Downtown San Jose with auxiliary lanes between some interchanges. It extends from US 101 in San Jose to I-80 in San Francisco. The section of I-280 just north of the Bascom Avenue overcrossing has six mixed-flow lanes and two high-occupancy-vehicle (HOV) lanes. I-280 provides access to the project site via partial interchanges at Parkmoor Avenue (ramp to north) and Stevens Creek Boulevard.

Interstate 880 (I-880) is generally a six- to eight-lane freeway in East San Jose with auxiliary lanes between some interchanges. It extends from I-280 in San Jose to I-80 in Oakland. The section of I-880 near the project site has six to eight mixed-flow lanes. I-880 provides access to the project site via full interchanges at Stevens Creek Boulevard and North Bascom Avenue.

State Route (SR) 87 connects from SR-85 in south San Jose to US-101 near the San Jose International Airport. It is generally a six-lane freeway (two mixed-flow lanes plus one HOV lane in each direction) with auxiliary lanes near the I-280 interchange. Access to the project site from SR 87 is provided via an interchange with I-280.

North Bascom Avenue is a four-lane, north-south roadway with a center raised median within the project vicinity. This roadway extends between San Carlos Avenue to the south and Newhall Street in the north, where it continues as Washington Street. The posted speed limit on North Bascom Avenue is 35 miles per hour (mph). It provides access to local residential areas and commercial land uses.

San Carlos Avenue is a four-lane, east-west divided roadway within the project vicinity. This roadway extends between Bascom Avenue to the west and South 4th Street to the east. This roadway terminates as at San Jose State University in the east and continues as Stevens Creek Boulevard west of Bascom Avenue.



The posted speed limit on this roadway is 35 mph. It provides access to local residential areas and commercial and industrial land uses.

Naglee Avenue is a four-lane, northeast-southwest City Connector Street within the project vicinity. This roadway extends between Forest Avenue in the west and The Alameda in the east, which is a four-lane Grand Boulevard. The posted speed limit on this roadway is 35 mph. It provides access to local residential areas and institutions, such as Herbert Hoover Middle School and Central YMCA.

Hedding Street is a two-lane, northeast-southwest Local Collector Street, with a two-way left-turn lane (TWLTL) within the project vicinity. This roadway extends between Winchester Boulevard in the west and US-101 in the east, where it terminates. The posted speed limit on this roadway is 35 mph. It provides direct access to both single-family and multi-family residential uses.

Forest Avenue is a two- to four-lane, east-west local street within the project vicinity. This roadway extends between Winchester Boulevard in the west and Wabash Avenue in the east. The posted speed limit on this roadway is 25 mph within the project vicinity. It provides access to residential areas and commercial and medical land uses. Forest Avenue provides access to the project site via a full-access driveway.

EXISTING PEDESTRIAN FACILITIES

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

Pedestrian facilities include crosswalks, sidewalks, pedestrian signals, and off-street paths, which provide safe and convenient routes for pedestrians to access the destinations such as institutions, businesses, public transportation, and recreation facilities.

In the project vicinity, most of the study intersections are signalized and equipped with countdown pedestrian signal heads. The study intersections of North Bascom Avenue/Naglee Avenue, North Bascom Avenue/San Carlos Street, North Bascom Avenue/Hedding Street and Naglee Avenue/Dana Avenue have crosswalks on all legs. The intersection of Forest Avenue and Bellerose Drive provides three crosswalks, including an uncontrolled, high-visibility crosswalk across Forest Avenue. There are continuous sidewalks present on North Bascom Avenue, Forest Avenue, Naglee Avenue, Hedding Street, San Carlos Street, Dana Avenue, Bellerose Drive and Trace Avenue along both sides within the project vicinity. The project site has adequate accessibility via North Bascom Avenue, Forest Avenue, Naglee Avenue, San Carlos Avenue and Hedding Street. Sidewalks exist along the project frontage on North Bascom Avenue and Forest Avenue. Adequate street lighting exists along both sides of Forest Avenue, Naglee Avenue and North Bascom Avenue. Avenue within the vicinity of the project. Additionally, the project will dedicate a portion of the project site to commercial pedestrian space along the project frontage on North Bascom Avenue.

There are six bus stops in the immediate vicinity of the project site. Four stops are located on North Bascom Avenue and two bus stops are on the Naglee Avenue. All bus stops are accessible via existing



sidewalks. All the bus stops are accessible to and from the project site via existing sidewalks and crosswalks along North Bascom Avenue and Naglee Avenue. The existing pedestrian facilities in the study area are shown in **Figure 4**.

EXISTING BICYCLE FACILITIES

Bicycle facilities include the following:

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

Bicycle facilities are provided for the following roadways within the vicinity of project site:

Class II striped bike lanes are provided on the following roadways near the site:

- 1. Naglee Avenue between Forest Avenue and North Bascom Avenue along both sides.
- 2. Hedding Street between Winchester Boulevard and Mabury Road along both sides.
- 3. Forest Avenue between Ciro Avenue and Naglee Avenue along both sides.
- 4. Forest Avenue between Winchester Boulevard and Monroe Street along both sides.

Class III bike routes are provided on the following roadways near the site:

- 1. Forest Avenue between Monroe Street and Ciro Avenue along both sides.
- 2. Bellerose Drive between Stevens Creek Boulevard and Forest Avenue along both sides.
- 3. Dana Avenue between West San Carlos Street and Davis Street along both sides.

The Los Gatos Creek Trail is a City of San Jose and Santa Clara County Class I bicycle facility (off-street bike path) that runs from Lexington Reservoir south of Los Gatos to Meridian Avenue in San Jose. A separate portion of the trail runs between Lonus Street and Dupont Street, alongside Los Gatos Creek in San Jose. It is accessible via San Carlos Street and South Bascom Avenue. The bike path is also available for use by pedestrians.

There is adequate signage for bicyclists to maneuver without confusion. The City of San Jose bike plan 2020 dated November 17, 2009 describes a list of existing and proposed bicycle facilities in the City. Overall, existing bicycle facilities provide adequate connectivity between the proposed project site and the adjacent residential neighborhoods. The existing bicycle facilities in the study area are shown in **Figure 5**.

EXISTING TRANSIT FACILITIES

The VTA operates bus service and light rail services in the City of San Jose. The proposed project site is served by VTA local bus Routes 23, 59, 61 and Rapid 523. These routes run on weekdays and weekends. The existing transit facilities are shown in **Figure 6**. **Table 3** describes the services and frequency during the week and weekend for VTA bus routes.



	-		Weekday	s	Weekends	;
Route	From	То	Operating Hours	Headway (minutes)	Operating Hours	Headway (minutes)
23	Alum Rock Station	De Anza College Transit Center	5:44 a.m.–9:51 p.m.	13-31	5:44 a.m.–9:49 p.m.	13-31
59	Tasman & Baypointe	Valley Fair Transit Center	7:30 a.m.–4:46 p.m.	54-57	8:14 a.m.–6:53 p.m.	60
61	Sierra & Piedmont	Good Samaritan Hospital	7:15 a.m.–8:59 p.m.	20-60	7:15 a.m.–8:59 p.m.	20-60
Rapid 523	Lockheed Martin Transit Center	Berryessa BART	6:47 a.m.–10:00 p.m.	13-22	6:47 a.m.–10:00 p.m.	13-22

Table	3:	Existing	Transit	Services
-------	----	----------	---------	----------

Source: VTA website

VTA Light Rail Transit (LRT) Service

The Santa Clara Valley Transportation Authority (VTA) currently operates the 42.2-mile VTA light rail line system extending from south San Jose through downtown to the northern areas of San Jose, Santa Clara, Milpitas, Mountain View and Sunnyvale. The project site is located about 2.0 miles from the Race LRT station. Service at the Race LRT station is provided by the Old Ironside-Winchester LRT line, which operates approximately 13 hours a day (5:56 AM to 6:55 PM) with 30-minute headways. The Old Ironside-Winchester LRT line provides service from the Winchester station in Campbell, through downtown San Jose to north San Jose where it curves west and operates along the Tasman Corridor. The existing transit facilities in the study area are shown in **Figure 6**.

EXISTING PEAK HOUR TRAFFIC VOLUMES

The existing operations at the study intersections are evaluated for the highest one-hour volumes during weekday morning and evening peak periods. The peak periods observed were between 7 - 9 a.m. and 4 – 6 p.m. The highest single one hour recorded for each period was used in the analysis. The turning movement counts were provided by the City at four study intersections and counts for the remaining intersections are on hold until further notice.

- 1. Naglee Avenue/Dana Avenue (Signal/City ID #3443)
- 2. N. Bascom Avenue/Naglee Avenue (Signal/City ID #3284)
- 3. N. Bascom Avenue/Hedding Street (Signal/City ID #3283)
- 4. N. Bascom Avenue/San Carlos Street (Signal/City ID #3279)
- 5. Forest Avenue/Bellerose Drive (Two-Way Stop)*
- 6. Trace Avenue/Naglee Avenue (One-Way Stop)*

*Indicates counts were not provided and data collection is on hold until further notice.

Figure 7 illustrates the existing conditions lane geometry, and traffic control at the study intersections. **Figure 8** illustrates the existing conditions peak hour traffic volumes at the study intersections.



FIELD OBSERVATIONS

Due to the COVID-19 shutdown, field observations within the vicinity of the proposed project site and at the study intersections were not conducted and are on-hold until further notice. Field observations will be conducted after the shelter-in-place order is lifted and traffic returns to typical weekday conditions.





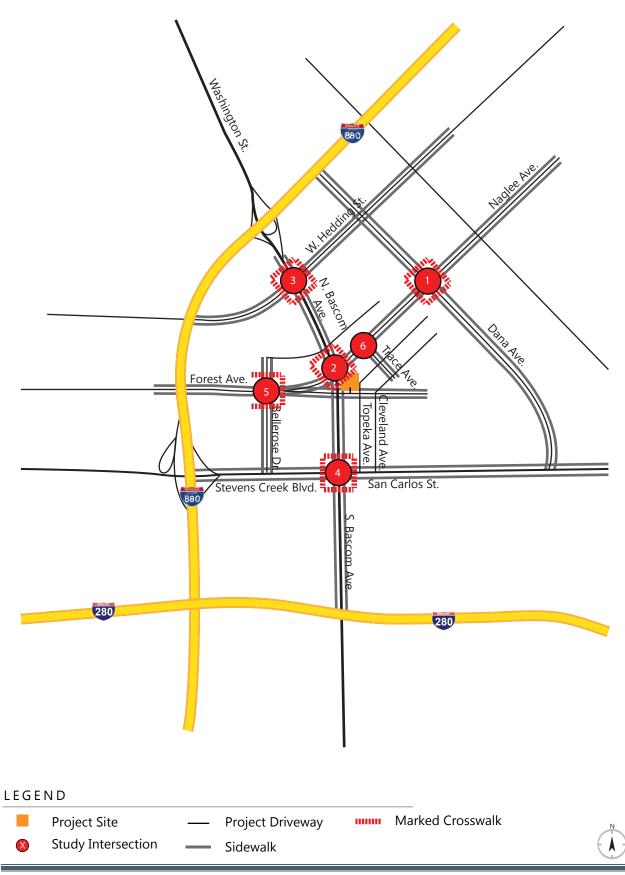




Figure 5: Existing Bicycle Facilities

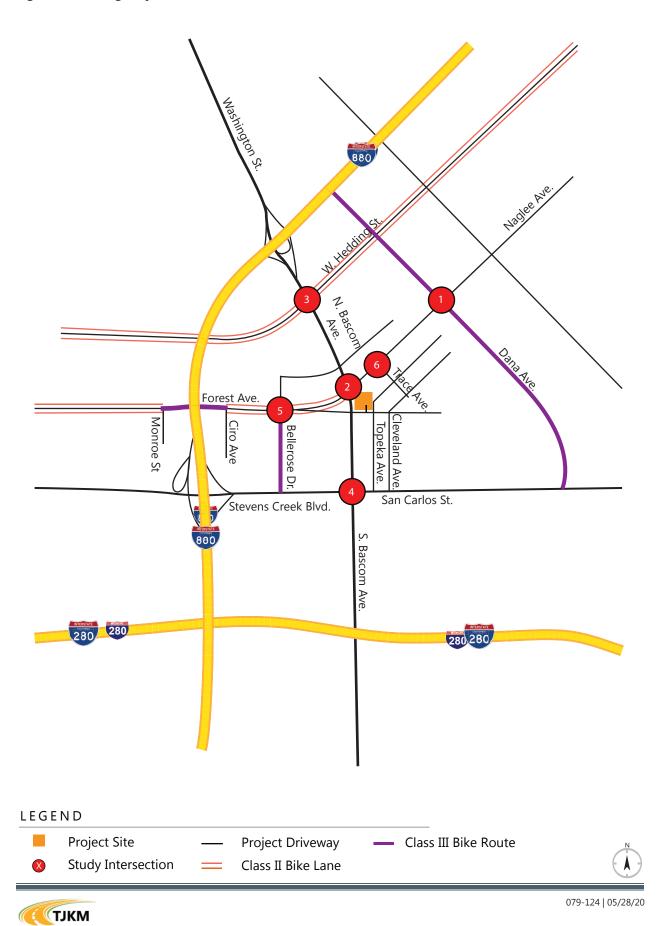
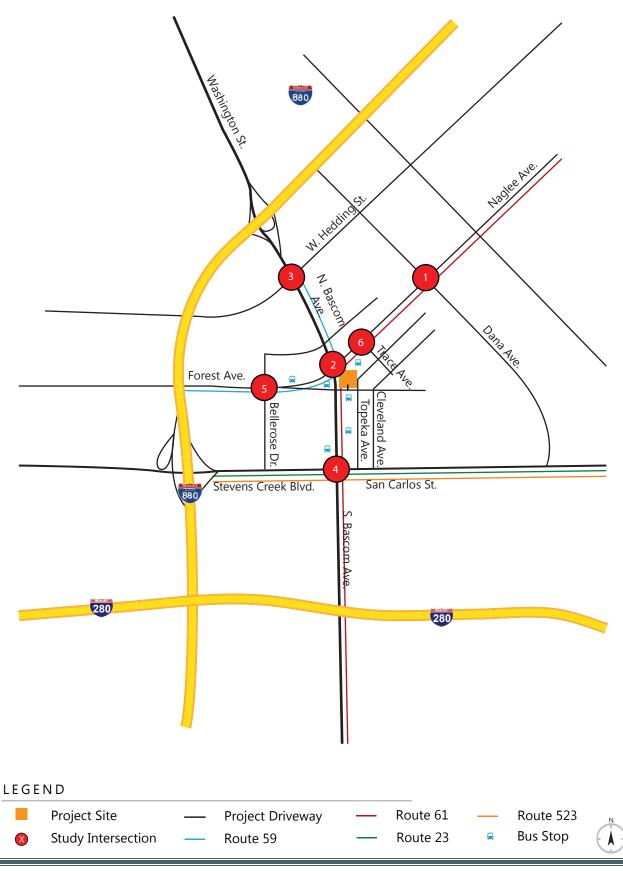


Figure 6: Existing Transit Facilities



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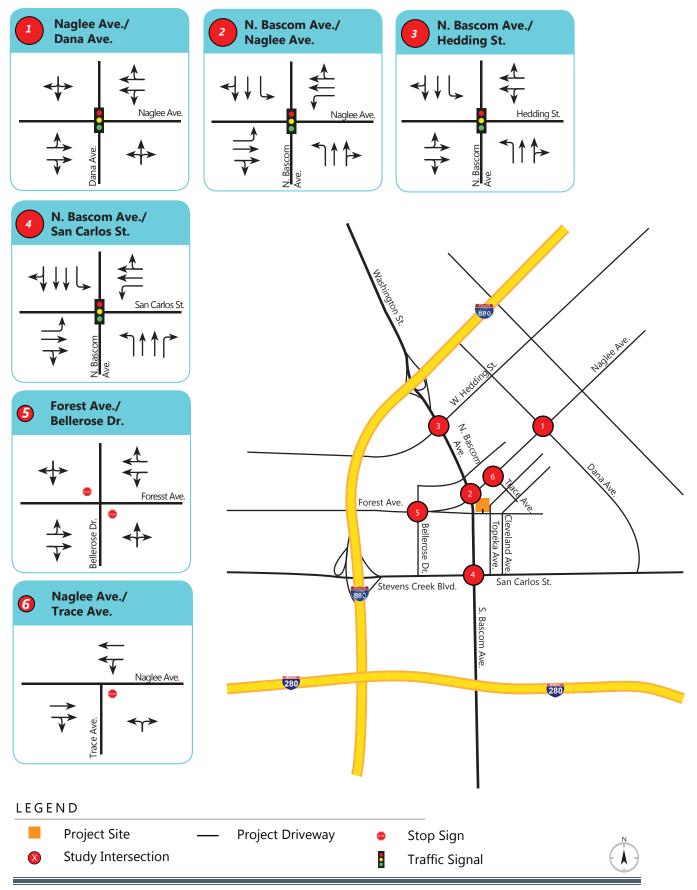
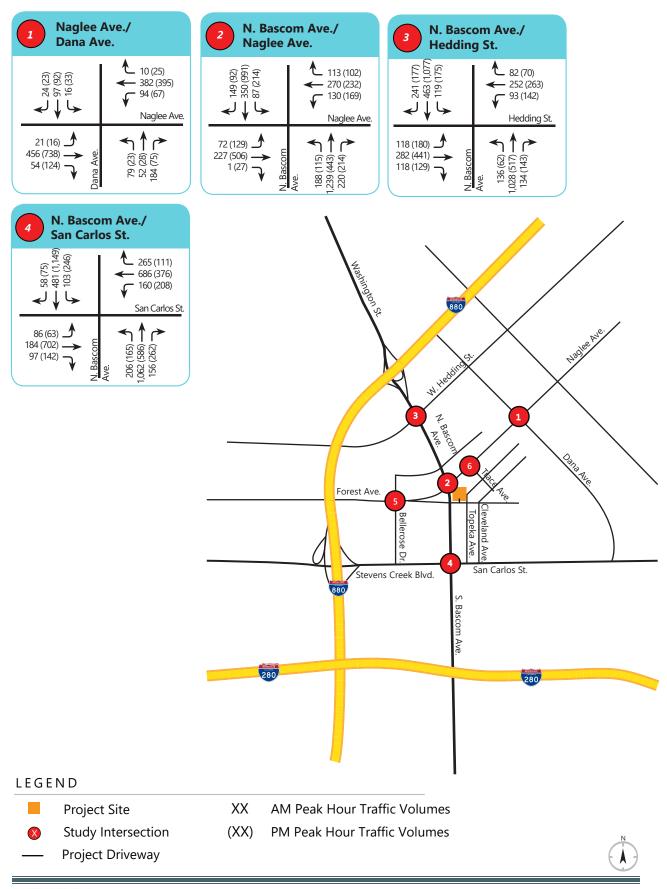


Figure 7: Existing Lane Geometry and Traffic Controls



079-124 | 05/28/20

Figure 8: Existing Peak Hour Traffic Volumes





INTERSECTION TRAFFIC OPERATIONS – EXISTING CONDITIONS

The existing operations of the study intersections were evaluated for the highest one-hour volume during the weekday morning and evening peak periods. A peak hour factor of 1.00 was used at the study intersections for the existing analysis. The results of the LOS analysis using the TRAFFIX software program for Existing Conditions are summarized in **Table 4**. **Figure 8** illustrates the existing vehicle turning movement volumes at the study intersections.

Under this scenario, all the study intersections operate within applicable jurisdictional standards of the City of San Jose Level of Service (LOS D) or better during the a.m. and p.m. peak hours. LOS worksheets are provided in **Appendix B**.

It should be noted that the LOS summary results presented in the LOS summary table (**Table 4**) are based on an isolated intersection analysis method adopted by the City of San Jose.

				Existing Conditions				
#	# Intersection Control Peak Hour ¹	Average Delay ²	LOS ³	Critical V/C ⁴	Critical Delay⁵			
1	Naglee Avenue/Dana	Signalized	AM	6.2	А	0.345	6.2	
L	Avenue	Signalized	PM	5.6	А	0.410	5.7	
2	N. Bascom Avenue/Naglee	Signalized	AM	33.4	С	0.593	31.2	
2	Avenue	Signalized	PM	42.3	D	0.667	42.1	
3	N. Bascom Avenue/Hedding	Cignalizad	AM	43.4	D	0.729	46.0	
3	Street	Signalized	PM	48.0	D	0.811	49.2	
4	N. Bascom Avenue/San	Cineralizzad	AM	38.6	D	0.644	39.2	
4	Carlos Street	Signalized	PM	43.7	D	0.681	46.9	

Table 4: Intersection Level of Service Analysis – Existing Conditions

Notes:

¹AM – morning peak hour, PM – evening peak hour

²Average intersection delay expressed in seconds per vehicle for signalized intersections and all-way stop controlled intersections. ³LOS = Level of Service

⁴Critical V/C - Critical Volume-to-Capacity ratio

⁵Critical delay is expressed in seconds per vehicle for signalized intersections and all-way stop controlled intersections.



CEQA TRANSPORTATION ANALYSIS

PROJECT LEVEL VMT IMPACT ANALYSIS

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San José VMT Evaluation Tool to assess a project's potential VMT based on the project's description, location, and attributes. For larger projects with regional traffic, the City's Travel Demand Model can be used to determine project VMT. Because the proposed project is small and would generate local traffic, the VMT Evaluation Tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact.

TJKM used the City of San Jose VMT Evaluation Tool to estimate the VMT from the proposed project. For office, residential and industrial land uses, the VMT Evaluation Tool can measure the VMT of each land use. The VMT analysis evaluates the project's VMT against the appropriate thresholds of significance established in Council Policy 5-1. Based on the screening criteria, the proposed medical office project would not be exempt from a VMT evaluation.

The City of San Jose VMT evaluation tool requires the user to input the Assessor's Parcel Number (APN) of the project, the VMT Evaluation Tool would retrieve from a built-in database the average VMT per capita and VMT per employee for existing buildings within the ½-mile buffer of the project (Existing VMT). Existing VMT is the current VMT generation for existing buildings in the area and is a base point for calculating Project VMT.

Using Existing VMT as the base point, the VMT Evaluation Tool calculates Project VMT through an evaluation of project description and the proposed VMT reduction measures. Projects located in areas where 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 Project VMT to the extent possible.

The VMT Evaluation Tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce Project VMT. There are four strategy tiers whose effects on VMT can be calculated in the VMT Evaluation Tool: (1) project characteristics, (2) multimodal network improvements, (3) parking, and (4) TDM. The first three strategies - land use characteristics, multimodal network improvements and parking - are physical design strategies that can be incorporated into the project description. The VMT Evaluation Summary Reports on pages 32-33 shows the list of potential VMT reduction measures under the three physical design strategies.

If the Project VMT still exceeds the threshold of significance after a combination of project characteristics, multimodal network improvements, and parking measures are included in the project description, the fourth strategy, TDM, should be considered. 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 (referred to as "alternative transportation modes" throughout the document). VMT Evaluation Summary Reports on pages 32-33 shows the list of VMT-reducing TDM measures and their



general descriptions. TDM measures will be enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

TJKM converted the medical office daily trips to the equivalent general office trips to use the City's VMT Evaluation Tool. As per the screening criteria outlined in **Table 1**, the retail portion of the project is significantly below 100,000 square feet, thus will have a less-than-significant VMT impact and will not be included in the CEQA analysis. The proposed project expects to generate 1,024 daily trips based on ITE rates. The proposed project is equivalent to 105,133 square-feet general office building square footage. **Table 5** shows the conversion calculation for the medical office building.

Land Use	
Medical Office Building (ITE LU 720) Trip Rate	34.80/1,000 square feet
Daily Trips	1,024
General Office Building (ITE LU 710) Trip Rate	9.74/1,000 square feet
Equivalent square footage	105,133 square footage

Table 5: Conversion Table

TJKM has taken into consideration for VMT reduction strategies for Tier 2, Tier 3 and Tier 4. Tier 2 is for Multimodal Infrastructure, Tier 3 is for parking, Tier 4 is for TDM Program. TJKM considered the total parking spaces available to employees is 60 spaces and 8 bicycle parking spaces provided by the project. Tier 4 evaluates TDM programs and TJKM considered 100% of the Transit Subsidy.

PROJECT IMPACTS AND MITIGATION MEASURES

VMT generated by the project (12.68 per employee) exceeds the threshold of 12.22 VMT per employee, resulting in a significant transportation impact on VMT, and requiring mitigation measures to reduce the project's VMT impact. According to the Transportation Analysis Handbook, projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas", and 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.

Based on the four strategy tiers included in the VMT Evaluation Tool, it is recommended the project implement the following mitigation measures to reduce the significant VMT impact.

By implementing the following mitigation measures the proposed project will reduce the project VMT to 12.01, to meet the City's threshold.

- o Traffic calming measures
- o Rectangular Rapid Flash Beacon (RRFB) at the Bascom Avenue/Olive Avenue intersection
- o Pedestrian network improvements
- Install ADA-compliant curb ramps at the northeast corner of Forest Avenue/Topeka Avenue intersection
- o Crosswalk striping along the east leg of Forest Avenue/Bascom Avenue intersection



- Limit parking supply
- Provide subsidized or discounted transit program 100 percent of Transit Subsidy

The project would add RRFB infrastructure at the intersection of Bascom Avenue/Olive Avenue for the existing crosswalk across the north leg of the intersection. The RRFB will comply with City standards and guidelines outlined in the California Manual on Uniform Traffic Devices (CA MUTCD). The project would install ADA curb ramps at the northeast corner of the Forest Avenue/Topeka Avenue intersection for the crosswalks across the north and east legs. Additionally, the project would add crosswalk striping across the east leg of the Forest Avenue/Bascom Avenue intersection to improve pedestrian access to the project site, located at the northeast corner of this intersection. The TDM measure proposes 100 percent of employees will be offered a fully subsidized VTA monthly transit pass.

These mitigation measures would reduce vehicle trips generated by the project, reducing parking supply and increasing the transit ridership. The combination of the mitigation measures would reduce the project VMT to 12.01 per employee, which would make the project impact less than significant.

The pictures below illustrate the City of San Jose VMT Evaluation Tool results showing the existing VMT within the project is area is 12.72 and the VMT with the proposed project would be 12.68, both of which exceed the City's threshold of significance of 12.22. With the proposed mitigation measures the project VMT would reduce to 12.01, which meets the City's threshold.

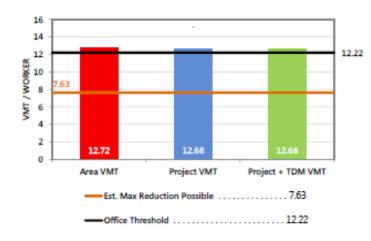


Project VMT without Mitigation

OJECT:				
	l Office Building Bascom Avenue, San	Jose Date:	2/29/2019 4/1/2021	
Parcel: 274210	44 Parcel Type	e: Urban Low Transit		
Proposed Parking S	paces Vehicles	s: 60 Bicycles: 48		
ND USE:				
Residential:		Percent of All Residential Units		
Single Family Multi Family Subtotal	0 DU 0 DU 0 DU	Extremely Low Income (< 30% MFI) Very Low Income (> 30% MFI, < 50% MFI) Low Income (> 50% MFI, < 80% MFI)	0 % Affordabl 0 % Affordabl 0 % Affordabl	
Office:	105.1 KSF			
Retail:	5.566 KSF			
Industrial:	0 KSF			
IT REDUCTION STR	ATEGIES			
Tier 1 - Project Ch	aracteristics			
Increase Reside	intial Density			
Existing Density (DU/Residential Acres in half-mile buffer)			9	
With Project Density (DU/Residential Acres in half-mile buffer)		9		
Increase Develo	opment Diversity			
Existing Activity Mix Index			0.63	
With Projec	ct Activity Mix Index		0.64	
then roje	dable and Below Mar	rket Rate		
		Extremely Low Income BMR units .		
Integrate Afford Extremely L			0 %	
Integrate Afford Extremely I Very Low In	ncome BMR units		0 %	
Integrate Afford Extremely I Very Low In	ncome BMR units			
Integrate Afford Extremely I Very Low Ir Low Incom Increase Emplo	ncome BMR units e BMR units yment Density		0 %	
Integrate Afford Extremely I Very Low Ir Low Incom Increase Employ Existing De	ncome BMR units e BMR units yment Density nsity (Jobs/Commerc	cial Acres in half-mile buffer)	0 % 0 % 28	
Integrate Afford Extremely L Very Low Ir Low Incom Increase Employ Existing De With Project	ncome BMR units e BMR units yment Density nsity (Jobs/Commerc ct Density (Jobs/Com		0 % 0 %	
Integrate Afford Extremely I Very Low Ir Low Incom Increase Employ Existing De	ncome BMR units e BMR units yment Density nsity (Jobs/Commerc ct Density (Jobs/Com	cial Acres in half-mile buffer)	0 % 0 % 28	

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT above the City's threshold and per industrial worker VMT below the City's threshold.



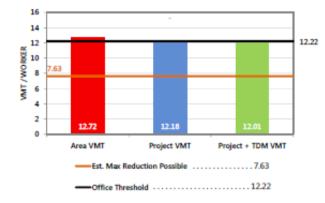


CITY OF SAN JOSE	E VEHICLE MILES	TRAVELED EVALUATION TOOL SUMM	ARY REPORT		
PROJECT:					
	fice Building om Avenue, San Jose Parcel Type: Urb es Vehicles: 60	Tool Version: Date: Date: Bicycles: 48	2/29/2019 4/1/2021		
LAND USE:	es venicies. oo	briyeles. 40			
Residential:	Der	cent of All Residential Units			
Single Family	0 DU	Extremely Low Income (< 30% MFI)	0 % Affordable		
Multi Family	0 DU	Very Low Income (> 30% MFI, < 50% MFI)	0 % Affordable		
Subtotal	0 DU	Low Income (> 50% MFI, < 80% MFI)	0 % Affordable		
Office: 10	05.1 KSF				
Retail: 5.	.566 KSF				
Industrial:	0 KSF				
VMT REDUCTION STRATE	EGIES				
Tier 1 - Project Charac	teristics				
Increase Residentia	I Density				
Existing Densit	9				
With Project Do	ensity (DU/Residentia	Acres in half-mile buffer)	9		
Increase Developm	ent Diversity				
Existing Activity	0.63				
With Project Ac	0.64				
Integrate Affordable and Below Market Rate					
Extremely Low Income BMR units			0 %		
Very Low Incor	0%				
Low Income BN	Low Income BMR units				
Increase Employme	int Density				
Existing Densit	28				
With Project Do	31				
Tier 2 - Multimodal In	frastructure				
Traffic Calming Me	asures (In Coordinatio	n with SJ)			
Are improvement	Are improvements provided beyond the development frontage?				
Pedestrian Network	k Improvements (In Co	oordination with SJ)			
Are pedestrian	Are pedestrian improvements provided beyond the development frontage?				
Tier 3 - Parking					
Limit Parking Suppl	ły				
		icipal Code	120 spaces		
	Total Parking Spaces Available to Employees				
Does the surro	unding street parking	have RPP, meters, or time limits?	No		
Tier 4 - TDM Program	5				
Subsidized or Disco	ounted Transit Progra	m			
Percent of Tran	sit Subsidy		100 %		

Project VMT with Mitigation

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold. There are selected strategies that require coordination with the City of San Jose to implement.





CUMULATIVE IMPACT ANALYSIS

Projects must demonstrate consistency with the Envision San Jose 2040 General Plan to address cumulative impacts. Consistency with the City's General Plan is based on 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 as part of the City's Transportation Analysis Handbook.

According to the San Jose 2040 General Plan, the project is designated as Neighborhood/Community Commercial. This designation supports a very broad range of commercial activity, including commercial uses that serve the communities in neighboring areas, such as neighborhood serving retail and services and commercial/ professional office development. Neighborhood/Community Commercial uses typically have a strong connection to and provide services and amenities for the nearby community and should be designed to promote that connection with an appropriate urban form that supports walking, transit use and public interaction. General office uses, hospitals and private community gathering facilities are also allowed in this designation. Development in this land use designation would typically be one to four stories in height.

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

- The high density residential mixed-use project would be situated within 2,000 feet of a major transit station, which would contribute toward the following:
- Increase in the proportion of commute travel using modes other than the single-occupant vehicle;
- Increase in daily transit ridership in the area; and
- Provide environmental benefits to the community due to the project's proximity to transit.
- The project would provide the minimum amount of parking required to adequately serve the office parking demand of the project, thereby avoiding excessive parking supply.
- The project would create a pedestrian-friendly environment internal to the site, as well as provide convenient and accessible external connections between the project site the adjoining neighborhood, parks, and transit facilities.
- The project would be integrated with the City's transportation system, including transit, roads, and pedestrian facilities.
- The project would be located in an area consisting of a mix of households and jobs, which would provide new residents and office employees with the opportunity to live and work in the same community.
 - The project would implement Transportation Demand Management (TDM) measures that provide incentives and services to encourage alternatives to the single-occupant vehicle (see Appendix G).
 - The project would not negatively impact existing transit, bicycle or pedestrian infrastructure, nor would it conflict with any adopted plans or policies for new transit, bicycle or pedestrian facilities.



Therefore, based on the project description, the proposed project would be consistent with the Envision San Jose 2040 General Plan. The project would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

LOCAL TRANSPORTATION ANALYSIS

The primary goal of a Local Transportation analysis (LTA) is to establish a local transportation system that is reflective of both land use context and multi-modal functions.

PROJECT TRIP GENERATION

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication *Trip Generation* (10th Edition). "Trip discounts applied to the proposed project trip generation are consistent with the City of San Jose and VTA Transportation Impact Analysis Guidelines" and were prepared in consultation with the City of San Jose staff. TJKM applied a 34% pass-by trip reduction based on the ITE publication *Trip Generation Handbook* (3rd Edition), 9% location based mode share discount for office land use and 13% location based mode share discount for retail land use based on the City of San Jose Transportation Analysis Handbook, and a 5.58% trip reduction was applied to office building based on the VMT Evaluation Tool.

TJKM used published trip rates for the ITE land uses Medical Dental Office Building (ITE Code 720) and Retail (ITE Code 820) for this project. **Table 6** shows the trip generation expected to be generated by the proposed project. The proposed project is expected to generate a net 73 weekday a.m. peak hour trips (57 inbound trips, 16 outbound trips) and 100 weekday p.m. peak hour trips (31 inbound trips, 69 outbound trips).

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

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

Trip distribution assumptions for the proposed project were developed based on the existing travel patterns, TJKM's knowledge of the study area, and consultation with the City of San Jose staff.

The distribution assumptions are as follows:

- 25 percent to/from I-880 south
- 20 percent to/from I-880 north
- 10 percent to/from Hedding Street east
- 10 percent to/from Hedding Street west
- 8 percent to/from North Bascom Avenue north
- 6 percent to/from Dana Avenue
- 5 percent to/from North Bascom Avenue south
- 5 percent to/from Naglee Avenue east
- 5 percent to/from San Carlos Street east
- 3 percent to/from Forest Avenue west
- 3 percent to/from Stevens Creek Boulevard



Figure 9 illustrates the trip distribution percentages and trip assignment project volumes developed for the proposed project. The assigned project trips were then added to traffic volumes under Background Conditions to generate Project Conditions traffic demands.

			Do	nily			А.М.	Peak			P.M. Peak					
Land Use (ITE Code)	Sizo	Size		Trips	Rate	In %	Out %	In	Out	Total	Rate	In %	Out %	In	Out	Total
Medical Dental Office Building (720) ¹	29.421	ksf	34.80	1,024	2.78	78	22	63	18	81	3.46	28	72	29	73	102
Location based Mode Share Adjustments ² -9%				-92				-6	-2	-8				-3	-7	-10
				932				57	16	73				26	66	92
Project Trip Adjustments³- 5.58%				-52				-3	-1	-4				-1	-4	-5
Sub Total	(A)			880				54	15	69				25	62	87
Shopping Center (LU 820) ^₄	5.566	ksf	37.75	210	0.94	62	38	3	2	5	3.81	48	52	10	11	21
Location based Mode Share Adjustments²-13%				-27				0	-1	-1				-1	-1	-2
				183				3	1	4				9	10	19
Pass by Trip Reduction ⁵	ction ⁵				N/A						-34%		-3	-3	-6	
Sub Total (B)				183				3	1	4				6	7	13
Net Project Trips (A	+B)			1,063				57	16	73				31	69	100

Table 6: Project Trip Generation

ITE Trip Generation Manual, 10th Edition, 2017

ksf=Thousand Square Feet

¹Average Trip rates from ITE Trip Generation Manual, 10th Edition, 2017 are used for Medical Dental Office Building (LU 720)

²Location based Mode Share Adjustments: Mode Share percentage for Office/Industrial is 91% for Urban Low-Transit and Mode Share percentage for Retail is 87% for Urban Low-Transit (Refer Transportation Analysis Handbook, April 2018: Table 6-Location based Vehicle Mode Share (March 2018)

³Trip Adjustments based on VMT Evaluation Tool.

⁴Average Trip rates from ITE Trip Generation Manual, 10th Edition, 2017 are used for Shopping Center (LU 820)

⁵ITE Pass-By reduction rate of 34% in the PM peak hour for Retail Land Use. It should be noted that daily pass-by reduction rate and AM peak hour is not available. Pass-by trip reduction based on the ITE publication *Trip Generation Handbook* (3rd Edition)



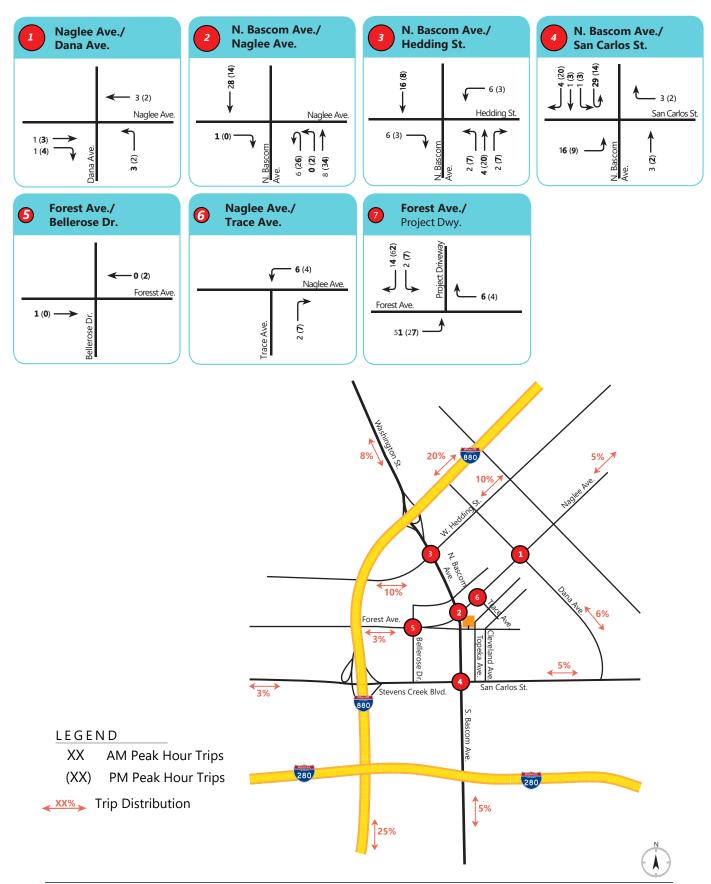


Figure 9: Project Trip Assignment and Distribution



BACKGROUND (EXISTING PLUS APPROVED PROJECTS) CONDITIONS

This scenario is similar to Existing Conditions, but with the addition of traffic from approved and pending developments located within the immediate vicinity of the project. The City staff provided the Approved Trips Inventory (ATI), which represents the traffic volumes generated by projects that are approved but not yet constructed. ATI volumes were added to the Existing Conditions volumes to project the peak hour turning movements at the study intersections under Background Conditions. The ATI sheets are included in **Appendix C**.

Figure 10 shows projected turning movement volumes at the study intersections for Background Conditions for both a.m. and p.m. peak hours. A peak hour factor of 1.00 was used at the study intersections for Background Conditions analysis.

The results of intersection level of service analysis for Background Conditions are summarized in **Table 7**. Detailed calculation sheets for Background Conditions (Existing plus Approved Projects) are provided in **Appendix C**. Under this scenario, all the study intersections operate within applicable jurisdictional standards of the City of San Jose Level of Service (LOS D) or better during the a.m. and p.m. peak hours.

		conuntion	<u> </u>					
#	Intersection	Intersection Control Peak Hour ¹		Ba Average Delay ²	ackgroun LOS ³	und Conditions Critical Critical V/C ⁴ Delay ⁵		
1	Naglee Avenue/Dana Avenue	Signalized	AM PM	6.3 5.9	A A	0.356 0.428	6.3 5.9	
2	N. Bascom Avenue/Naglee Avenue	Signalized	AM PM	34.1 43.6	C D	0.613 0.702	32.2 43.8	
3	N. Bascom Avenue/Hedding Street	Signalized	AM PM	44.5 49.6	D D	0.755 0.837	47.3 51.2	
4	N. Bascom Avenue/San Carlos Street	Signalized	AM PM	40.2 45.5	D D	0.704 0.747	41.6 49.2	

Table 7: Intersection Level of Service Analysis – Background (Existing plus Approved Projects) Conditions

Notes:

¹AM – morning peak hour, PM – evening peak hour

²Average intersection delay expressed in seconds per vehicle for signalized intersections and all-way stop controlled intersections. ³LOS = Level of Service

⁴Critical V/C - Critical Volume-to-Capacity ratio

⁵Critical delay is expressed in seconds per vehicle for signalized intersections and all-way stop controlled intersections.



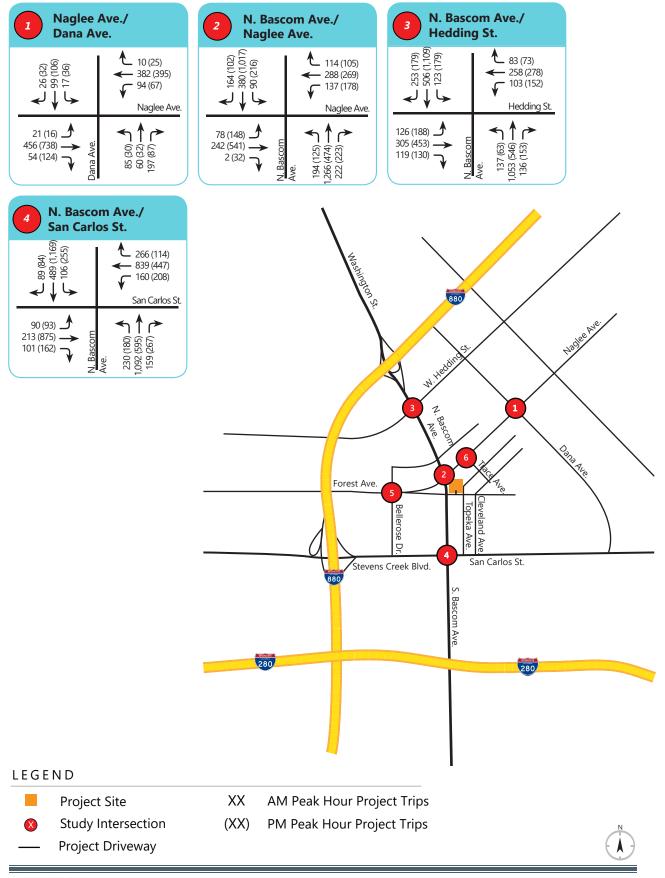


Figure 10: Background Conditions Peak Hour Traffic Volumes



BACKGROUND PLUS PROJECT CONDITIONS

This scenario is identical to Background Conditions, but with the addition of projected traffic from the proposed development.

The results for intersection level of service analysis for Background plus Project Conditions are summarized in **Table 8**. The results for Background Conditions are included for comparison purposes, along with the projected increases in critical delay and critical V/C ratios. Detailed calculation sheets for Background plus Project Conditions are provided in **Appendix D**. **Figure 11** shows projected turning movement volumes at the study intersections for Background plus Project Conditions.

Under this scenario, all the study intersections operate within standards of the City of San Jose. Based on the City of San Jose LOS standards, the project would not have any adverse effects at the study intersections.

		Control	Peak	Backgro	ound Co	nditions	Backgro C	und plu onditio	Δin	Δ in	
#	Intersection		Peak Hour ¹	Average Delay ²	LOS ³	Average Critical Delay ⁴	Average Delay ²	LOS ³	Average Critical Delay ⁴	Critical V/C ⁵	Critical Delay ⁶
1	Naglee		AM	6.3	А	6.3	6.3	А	6.3	0.000	0.0
T	1 Avenue/Dana Avenue	Signalized	PM	5.9	А	5.9	5.9	А	5.9	0.003	0.0
	N. Bascom	Signalized	AM	34.1	С	32.2	34.2	С	32.2	0.002	0.0
2	Avenue/Naglee Avenue		PM	43.6	D	43.8	44.3	D	45.3	0.021	1.5
-	N. Bascom	<i></i>	AM	44.5	D	47.3	44.8	D	47.7	0.006	0.4
3	3 Avenue/Hedding Street	Signalized	PM	49.6	D	51.2	50.2	D	52.0	0.009	0.8
	N. Bascom		AM	40.2	D	41.6	41.6	D	44.3	0.029	2.7
4	4 Avenue/San Signali: Carlos Street	Signalized	PM	45.5	D	49.2	45.8	D	49.2	0.000	0.0

Table 8: Intersection Level of Service Analysis – Background plus Project Conditions

Notes:

¹AM – morning peak hour, PM – evening peak hour

²Average intersection delay expressed in seconds per vehicle for signalized intersections and all-way stop controlled intersections. ³LOS = Level of Service

⁴Average critical delay is expressed in seconds per vehicle for signalized and all-way stop controlled intersections

⁵Change in critical volume to capacity ratio between Background and Background plus Project Conditions

⁶Change in average critical movement delay between Background and Background plus Project Conditions



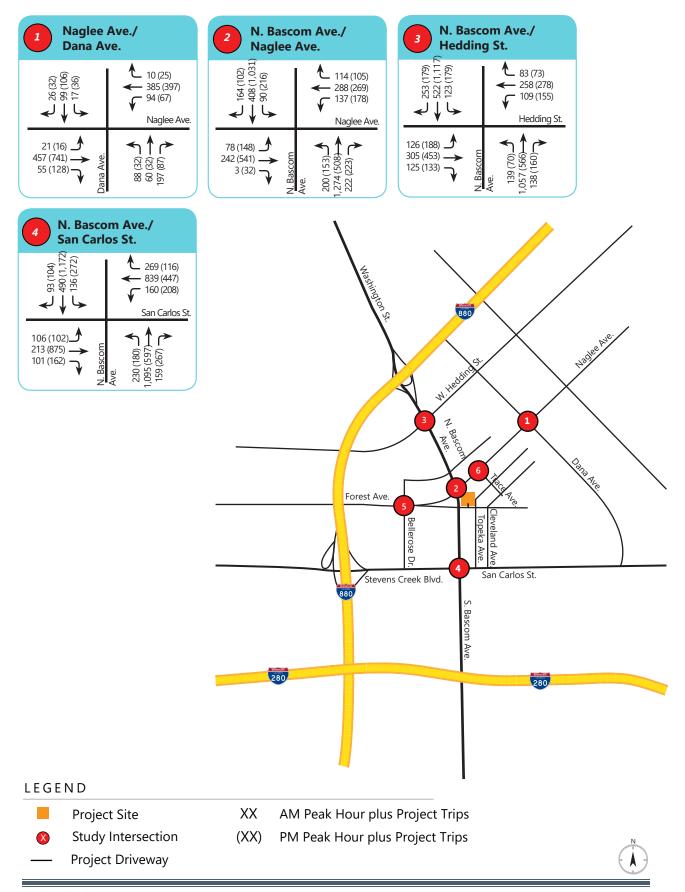


Figure 11: Background plus Project Conditions Peak Hour Volumes



QUEUING ANALYSIS AT STUDY INTERSECTIONS

TJKM conducted a vehicle queuing and storage analysis for all exclusive left turn pockets at the study intersections where project traffic is added under Background plus Project Conditions. The 95th percentile (maximum) queues were analyzed using the HCM 2000 Queue methodology contained in TRAFFIX software. Detailed calculations are included in the LOS appendices corresponding to each analysis scenario. **Table 9** summarizes the 95th percentile queue lengths at the study intersections under Background and Background plus Project Conditions scenarios.

At North Bascom Avenue/Naglee Avenue, the queue lengths for the northbound left-turn, southbound left-turn, eastbound left-turn and westbound left-turn would overflow the available storage length in the dedicated lane or lanes, during a.m., and p.m. peak hour. However, the overflows exist under background (without project) conditions and the project would add a maximum of two vehicles (1 vehicle=25 feet) to the average design queue length.

At North Bascom Avenue/Hedding Street, the queue lengths for the northbound left-turn, and southbound left-turn would overflow the available storage length in the dedicated lane or lanes, during any one peak hour. However, the overflows exist under background (without project) conditions and the project would add a maximum of one vehicle (1 vehicle=25 feet) to the average design queue length.

At North Bascom Avenue/San Carlos Street, the queue lengths for the northbound left-turn, southbound left-turn and westbound left-turn would overflow the available storage length in the dedicated lane or lanes, during any one peak hour. However, the overflows exist under background (without project) and the project would add a maximum of three vehicles (1 vehicle=25 feet) to the average design queue length.

#	Intersection	Lane Group	Storage Length		ground ditions	Backgr plus Pr Condi	roject	Change	
		•	•	AM	PM	AM	РМ	AM	PM
		NBL	85	329	314	341	368	12	54
2	N.Bascom 2 Avenue/Naglee Avenue	SBL	190	231	372	232	375	1	3
2		EBL	150	210	302	210	306	0	4
		WBL	95	298	401	298	408	0	7
	N.Bascom	NBL	90	296	198	302	228	6	30
3	Avenue/Hedding Street	SBL	220	326	376	328	381	2	5
		NBL	390	376	420	375	420	-1	0
4	N.Bascom	SBL	175	281	513	342	547	61	34
4	Avenue/San Carlos Street	EBL	305	252	190	289	206	37	16
	Canos Street	WBL	250	288	464	289	464	1	0

Table 9: Queuing Analysis Summary

Notes:

Storage length and 95th percentile queue is expressed in feet, **Bold** indicates overflow



QUEUING ANALYSIS AT PROJECT DRIVEWAY

TJKM conducted a vehicle queuing analysis at the project driveway along Forest Avenue. The 95th percentile (maximum) queues were analyzed using the HCM 2000 Queue methodology contained in TRAFFIX software for the project driveways. **Table 10** summarizes the 95th percentile queue lengths at the project driveway under Background plus Project scenario. As shown in **Table 10**, under Background plus Project Conditions the 95th percentile queues at the outbound approach of project driveway are expected to be minimal.

	-	Background plus Project Conditions					
Intersection	Control	АМ	РМ				
		95 th Percentile Queue (ft) ³	95 th Percentile Queue (ft) ³				
Forest Avenue/ Project Driveway	One-Way Stop	25	25				

Table 10: 95th Percentile Queues at Project Driveways

Notes:

1 vehicle=25 feet

¹Reported values of 95th percentile queues are for the outbound movements at the project driveways

Qualitative Analysis of Queueing at the Driveway

Forest Avenue driveway is approximately 105 feet east of the North Bascom Avenue/ Forest Avenue intersection. The queue would be less than one vehicle length at the project entrance during the a.m. and p.m. peak hours.



ADDITIONAL ANALYSIS

The following sections provide additional analyses of other transportation issues associated with the project site, including:

- Site access and impacts;
- On-site circulation
- Sight distance analysis
- Parking analysis;

SITE ACCESS AND ON-SITE CIRCULATION

This section analyzes site access and internal circulation for vehicles, pedestrians and bicycles based on the site plan presented in **Figure 2** (dated January 13, 2021). TJKM reviewed internal and external access for the project site for vehicles, pedestrians, and bicycles.

Vehicle Access

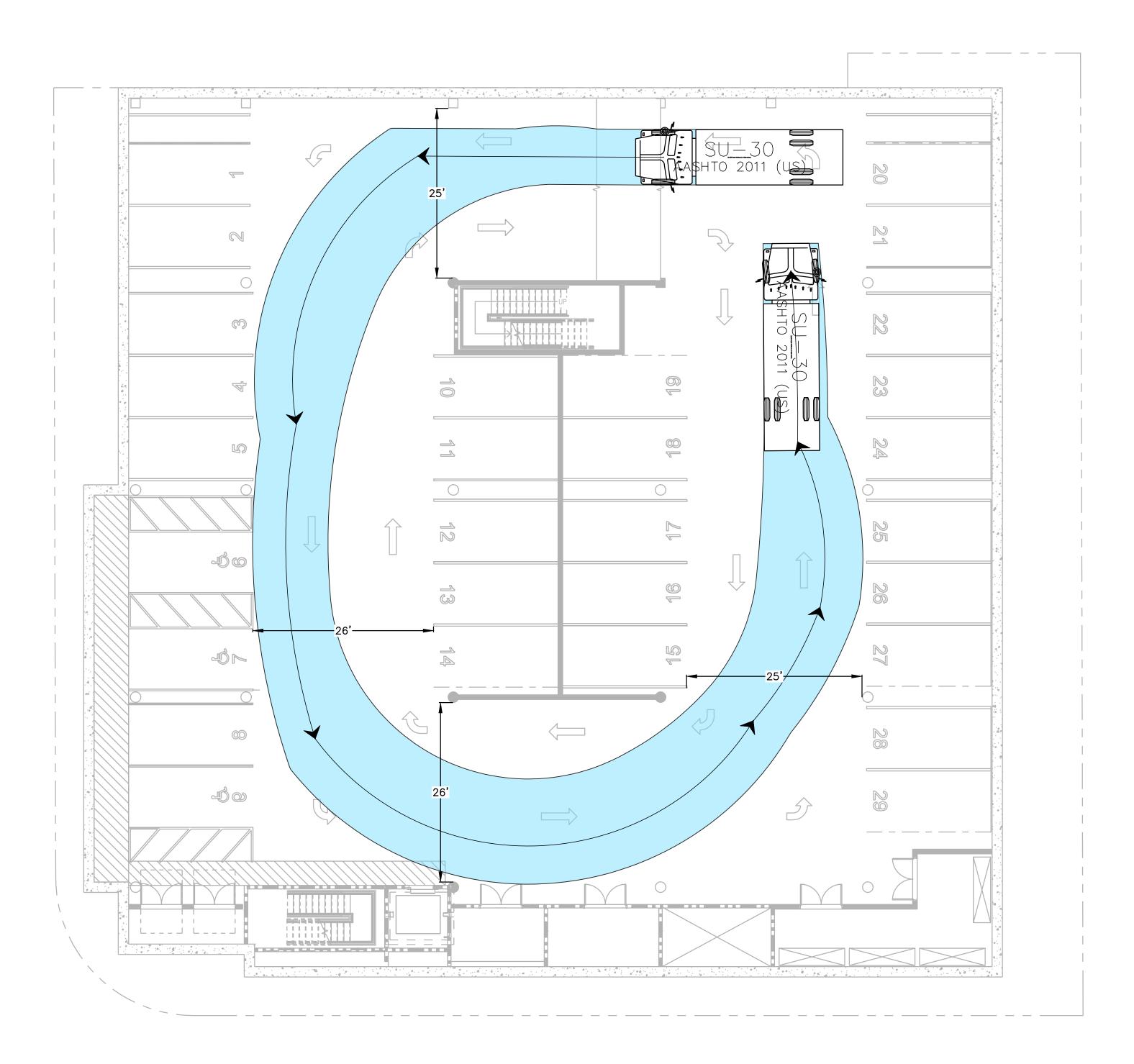
Site access would be provided via one 24-feet full access driveway along Forest Avenue. Full-access project driveway is approximately 105 feet east of the North Bascom Avenue and Forest Avenue intersection.

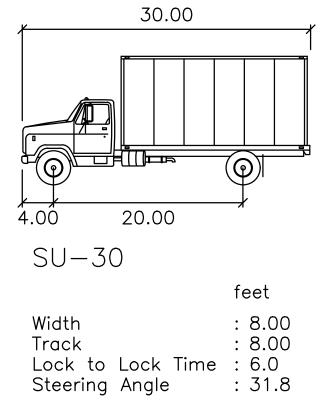
The proposed driveway will not be gated to avoid queue spill back into the public streets during peak periods. Based on the trip generation table the proposed project is expected to generate a net 73 weekday a.m. peak hour trips (57 inbound trips, 16 outbound trips) and 100 weekday p.m. peak hour trips (31 inbound trips, 69 outbound trips). Project trips was distributed as 100 percent of the trips will use the Forest Avenue driveway. The access driveways are expected to be adequate for passenger vehicles accessing the site.

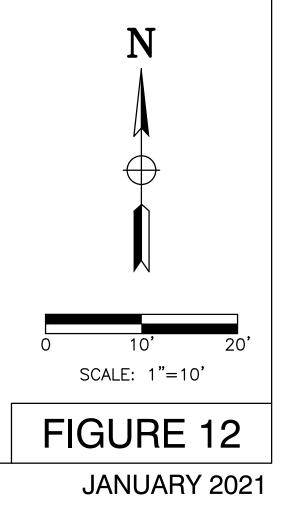
TJKM also examined the project site plan (**Figure 2**) in order to evaluate the adequacy of on-site circulation for vehicles, garbage trucks, delivery trucks and emergency vehicles. Circulation aisles range between 24 ft. and 39 ft. and accommodate two-way travel. The turning radii appear to be adequate for the garbage and delivery trucks. The proposed garbage pickup area is located in the northeast area of the first floor parking lot. Delivery trucks will also access the project site via the driveway on Forest Avenue and will circulate through the parking garage. Conflicts are not observed within the parking garage and also on first floor. **Figures 12 and 13** illustrate circulation of delivery trucks through parking garage levels 1 and 2, respectively. Garbage trucks will back into the project site via Forest Avenue to the trash enclosure area in the northeast corner of the project site, and will exit via the same driveway. This maneuver is illustrated in **Figure 14**. Emergency vehicles can access the project via the proposed driveway on Forest Avenue or by utilizing the rightmost lane on North Bascom Avenue. Overall, the proposed on-site vehicle circulation is adequate and should not result in any significant operational issues on City streets.



Turn Template: Parking Structure Level 1



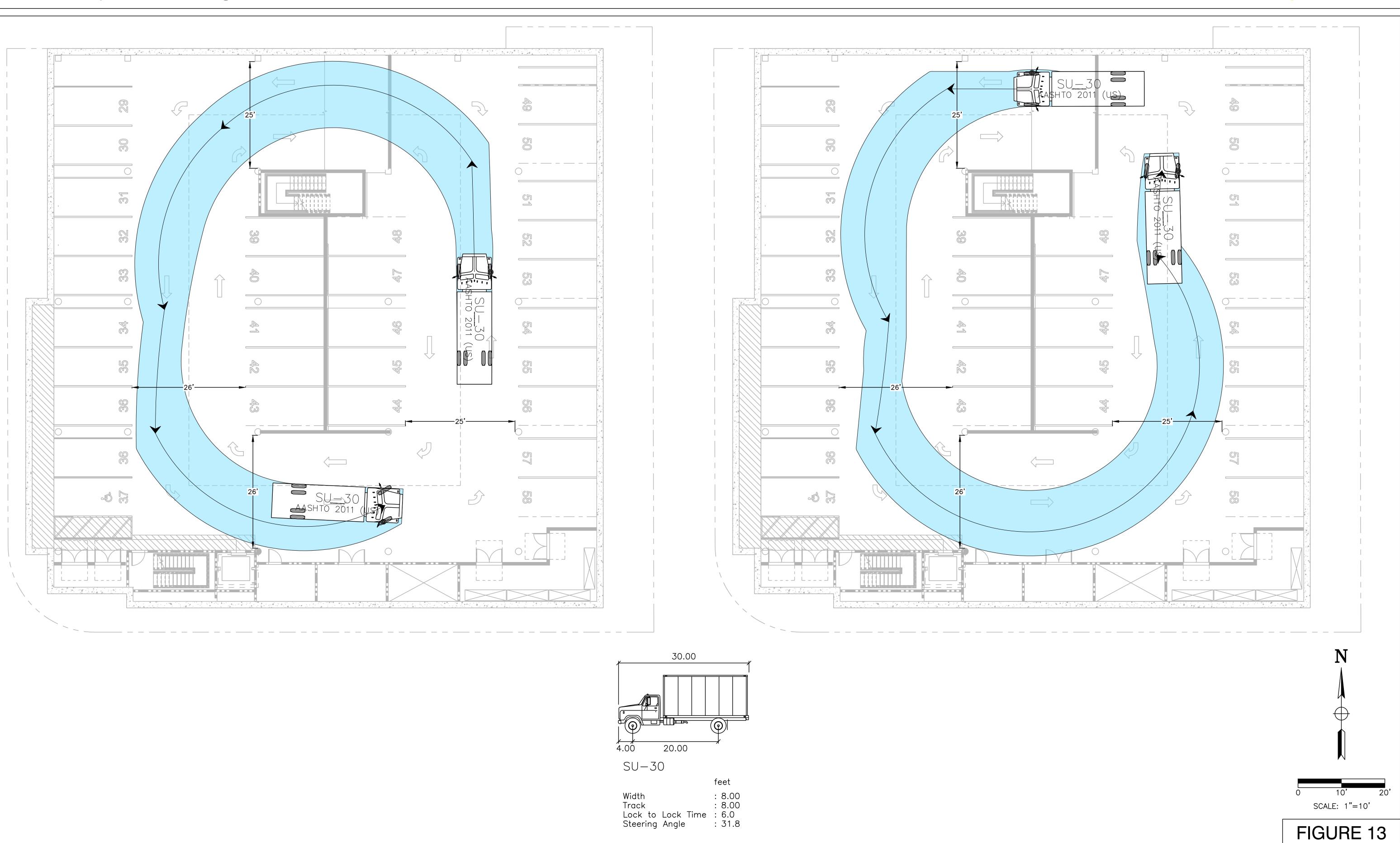


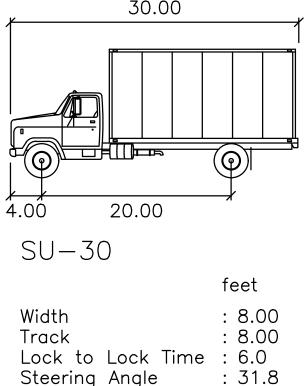




4305 Hacienda Drive, Suite 550 Pleasanton, CA 94588 tjkm@tjkm.com

Turn Template: Parking Structure Level 2



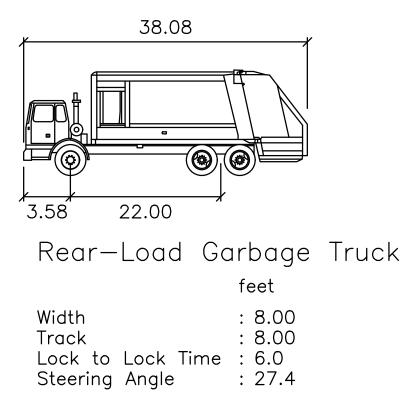


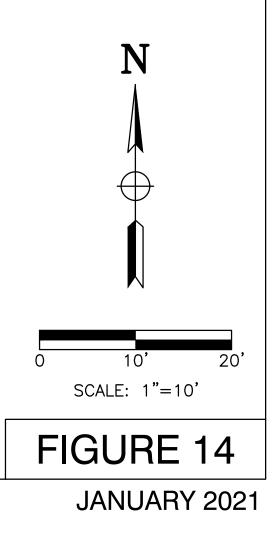
JANUARY 2021

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Turn Template: First Floor









Pedestrian Access

In the project vicinity, most of the study intersections are signalized and equipped with countdown pedestrian signal heads. The signalized study intersections have crosswalks on all legs. The project site has adequate accessibility via North Bascom Avenue, Naglee Avenue and Forest Avenue. There are continuous sidewalks present on North Bascom Avenue, Naglee Avenue, Forest Avenue, San Carlo Street, Hedding Street, Bellerose Drive, Trace Avenue and Dana Avenue along both sides within the project vicinity. There is adequate street lighting within the project vicinity. All the bus stops are accessible to and from the project site via existing sidewalks and crosswalks within the vicinity of the project site.

The project will be required to reconstruct ADA ramps at the intersection of Forest Avenue/Topeka Avenue as part of its Project VMT mitigation. The project would require to provide striping along the east leg of Forest Avenue/Bascom Avenue intersection for pedestrian safety and this intersection is very close to the project site. In addition to this, project would require to provide Rectangular Rapid Flash Beacon (RRFB) for north side of crosswalk at the Bascom Avenue/Olive Avenue intersection.

The proposed project does not conflict with the applicable or adopted policies, plans or programs related to pedestrians facilities or otherwise decrease the performance or safety of pedestrian facilities. The project proposes to dedicate a portion of the project site to commercial pedestrian space along the project frontage on North Bascom Avenue. The proposed improvements by the project applicant as shown in the site plan, would comply with ADA requirements. The project would not have an adverse effect on the existing or planned pedestrian facilities in the immediate project vicinity.

Bicycle Access

In terms of bicycle access to the project site, Class II bike lanes are provided along both sides of Naglee Avenue, Hedding Street and Forest Avenue near the project site. Class III bike routes are provided along both sides of Forest Avenue, Belle Rose Drive and Dana Avenue near the project site. A Class I bike path i.e. Los Gatos Creek trail runs parallel to Los Gatos Creek. Access to the trail is provided on San Carlos Street and South Bascom Avenue. There is adequate signage for bicyclists to maneuver without confusion.

According to the site plan (**Figure 2**), the project will provide four bicycle locker rooms for long-term parking in Parking Structure Level 2, which accommodates 40 bikes in total and four short-term bicycle parking facilities via bicycle locker rooms in parking structure level 1, which also accommodates 40 bikes in total. Also, project proposes to provide eight bicycle parking spaces via bicycle racks on the ground floor. The bicycle locker rooms will be located in parking structure level 1 & 2, encouraging multimodal travel to/from the project site.

The City of San Jose Bike Plan 2020 dated November 17, 2009 describes a list of existing and proposed bicycle facilities in the City. Overall, existing bicycle facilities provide adequate connectivity between the proposed project site and the adjacent residential neighborhoods. An impact to bicyclists occurs if the proposed project disrupt existing bicycle facilities; or conflict or create inconsistencies with adopted bicycle system plans, guidelines, and policies. The proposed project does not conflict with the applicable or adopted policies, plans or programs related to bicycle facilities or otherwise decrease the performance or safety of bicycle facilities. The project would not have an adverse effect on the existing or planned bicycle facilities in the immediate project vicinity.



Transit

The project site is adequately served by the Valley Transportation Authority (VTA) transit service via Routes 23, 59, 61 and 523 according to the VTA New Transit Service Plan (2019), adopted as an update to the Next Network Plan (2017). The routes are serviced on weekdays and weekends with headways ranging from 13 minutes to 60 minutes, and are accessible via multiple transit stops along North Bascom Avenue, Naglee Avenue, Forest Avenue and San Carlos Street. The stop at Bascom & Forest is located along the project frontage on North Bascom Avenue and is serviced by Route 61 on weekdays and weekends. According to the site plan (**Figure 2**), the project proposes to upgrade the Bascom & Forest stop to provide a VTA bus shelter, consistent with the Bascom Avenue Complete Streets Study (VTA, 2019). Additionally the project proposes to mitigate VMT through a subsidized or discounted transit program for employees and tenants. The project will need to coordinate with VTA to provide the bus shelter and implement the transit program. Based on American Community Survey data, 8.1 percent commute to work via transit in the project vicinity. The transit service within the immediate project site operates well below capacity, and additional trips generated by the proposed project could be accommodated by existing bus services. The project would not have an adverse effect on the existing transit facilities in the immediate project vicinity.

SIGHT DISTANCE ANALYSIS

Sight distance is evaluated to determine if a driver will have adequate visibility to enter a roadway safely without resulting in a conflict with traffic already on the roadway. The project access points should be free and clear of any obstructions that would materially and adversely affect sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways.

According to the Highway Design Manual (HDM), Chapter 200, 2020, the required minimum stopping sight distance for design speed of 25 mph (Forest Avenue) is 150 feet. The line of sight between vehicles exiting the project site at Forest Avenue and vehicles travelling westbound on Forest Avenue is clear and visible for at least 150 feet when no vehicles are parked on the north side of Forest Avenue. The line of sight between vehicles exiting the project site at Forest Avenue and vehicles travelling eastbound on Forest Avenue is clear and visible between the Forest Avenue and vehicles travelling eastbound on Forest Avenue and N. Bascom Avenue. As the project site is currently vacant, TJKM observed that vehicles are parked on the north side of Forest Avenue. As the project site is project prohibits on-street parking on the north side of Forest Avenue. TJKM recommends the project prohibits on-street parking on the north side of Forest Avenue between N. Bascom Avenue and Topeka Avenue to maintain adequate sight distance for vehicles exiting the project site and vehicles travelling eastbound on Forest Avenue.

PARKING

Based on the project site plan dated January 13,2021 (**Figure 2**), the project will provide 60 vehicular parking spaces, which includes 42 standard parking spaces, six standard ADA parking spaces, one van ADA parking spaces, one electric vehicle van ADA parking space, four electric vehicle parking spaces, and



six clean air parking spaces. Additionally, the project will provide eight motorcycle parking spaces, four long-term bicycle locker rooms (accommodates 40 bikes in total), four short term bicycle locker rooms (accommodates 40 bikes in total) and eight short-term bicycle parking spaces. The City of San Jose Municipal Code (Section 20.90.060/Table 20-190), medical office uses require one vehicular parking space per 250 square feet of floor area and one bicycle parking space per 4,000 square feet of floor area. The City of San Jose Municipal Code (Section 20.050) defines floor area as eighty-five percent of total gross floor area of a building. With 29,739square feet floor area of office use. As per the Municipal Code parking reduction section 20.90.220:

 The project is allowed up to a 50% reduction through the submittal of a TDM plan that contains a carpool/vanpool or car-share program or provides a transit use incentive program for employees and tenants.

As a TDM measure, the project is supplying transit passes to all employees and is providing eight vanpool parking spaces, reducing the required vehicular parking to 60 parking spaces. The project adequately meets City of San Jose standards for vehicular parking, and bicycle parking.

NEIGHBORHOOD INTERFACE

The project is located in a residential area consisting of both multi-family and single-family homes and neighborhood commercial land uses. Abraham Lincoln High School is located under a half-mile walking distance east of the project site, and Trace Elementary School and Herbert Hoover Middle School are located under a mile walking distance northeast of the project site. A connected network of sidewalks, crosswalks and curb ramps facilitate pedestrian traffic in the project study area. While Class II and III bicycle facilities are present, gaps in the bicycle network are present on North Bascom Avenue, Naglee Avenue and Forest Avenue, west of the project site, where bicycle facilities do not exist. Neighborhood concerns include pedestrian and bicycle safety, transit reliability and cut-through traffic and high speeds along Forest Avenue and Trace Avenue. The project generates 8 a.m. (6 entering, 2 exiting) trips and 11 p.m. (4 entering, 7 exiting) trips and 95 daily trips on Naglee Avenue, Trace Avenue and Forest Avenue, east of Bascom Avenue. While the vehicles are expected to travel through the residential neighborhoods along Trace Avenue and Forest Avenue, the project trips are low and are not expected to disrupt the residents of the neighborhood. Additionally, the VTA Bascom Avenue Complete Streets Study proposes pedestrian and bicycle facility improvements along Naglee Avenue which will encourage the use of alternative modes of transportation. The schools and project site are mainly surrounded by single-family and multi-family homes, which generate pedestrian and bicycle traffic during school peak periods. Thus, the safety of pedestrians and cyclists are a high priority issue and can be improved with the reduction of cut-through traffic and vehicular speeds. The VTA Bascom Avenue Complete Streets Study proposes the following short-term and long-term improvements within the project vicinity:

Short-Term Improvements

- Improved median along North Bascom Avenue between Bailey Avenue and Emory Street.
- Improved sidewalks landscaped with new trees along both sides of North Bascom Avenue.



- Improved crosswalks at all intersections on North Bascom Avenue between Bailey Avenue and Hedding Street.
- Addition of 7-8 foot-wide protected bike lanes on both sides of North Bascom Avenue between Bailey Avenue and Hedding Street.
- Addition of bike crossings on at intersections North Bascom Avenue with Olive Avenue, Naglee Avenue, Emory Street and Hedding Street.
- Improved transit stops along both sides of North Bascom Avenue. Addition of green-striped mixing zones at transit stops along North Bascom Avenue.
- Addition of new transit stops at intersections of North Bascom Avenue with Naglee Avenue, Emory Street and Hedding Street.
- Improved signals at the intersections of North Bascom Avenue and Naglee Avenue and North Bascom Avenue and Hedding Street.
- Proposed signals at the intersections of North Bascom Avenue and Olive Avenue and North Bascom Avenue and Emory Street.

Long-Term Improvements

- Improved median along North Bascom Avenue between Bailey Avenue and Emory Street.
- Improved sidewalks landscaped with new trees and pedestrian-oriented street lights along both sides of North Bascom Avenue. Widen sidewalks into landscaped areas where sidewalk is constrained.
- Addition of curb bulb-outs on cross-streets along North Bascom Avenue.
- Addition of 10 foot-wide protected bike lanes along both sides of North Bascom Avenue and Naglee Avenue.
- Addition of bike crossings on at intersections North Bascom Avenue with Olive Avenue, Naglee Avenue, Emory Street and Hedding Street.
- Improved transit stops along both sides of North Bascom Avenue. Extend curb bulb-outs into bicycle lanes at transit stops between Stevens Creek Boulevard and Olive Avenue.
- Addition of new transit stops at intersections of North Bascom Avenue with Naglee Avenue, Emory Street and Hedding Street.
- Proposed signal at the intersections of North Bascom Avenue and Olive Avenue and North Bascom Avenue and Emory Street.

The improved bike and pedestrian facilities along both sides of North Bascom Avenue and Naglee Avenue will encourage more pedestrian and bicycle traffic. Additionally, these improvements would provide better access to transit facilities. **Appendix E** contains proposed improvement figures from the VTA Bascom Avenue Complete Streets Study. The project will close the two existing driveways along N. Bascom Avenue and proposes to upgrade the Bascom Avenue and Forest Avenue bus stop to provide a VTA bus shelter. The project is consistent and would not conflict with the VTA Bascom Avenue Complete Street Study.

CONSTRUCTION OPERATIONS

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of



closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses the construction schedule, street closures and/or detours, construction staging areas and parking, and the planned truck routes.

CONCLUSIONS

CEQA Transportation Impacts

This report evaluated the transportation impacts of the proposed Medical Office Building development at 200 North Bascom Avenue in the City of San Jose. The project proposes to construct a 4-story, 34,987 square feet building, which includes 29,421 square feet of medical office and 5,566 square feet of retail space, on a 0.46-acre site. Access to the project site and underground parking garage is provided via full access driveway on Forest Avenue.

Project Vehicle Miles Traveled (VMT) Impacts and Mitigation Measures

VMT generated by the project (12.68 per employee) would exceed the threshold of 12.22 VMT per employee, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the significant VMT impact.

TJKM established potential mitigation measures that can be applied to reduce the project VMT to meet the City's threshold by using the City's VMT Evaluation Tool. By implementing the following mitigation measures the proposed project will reduce the project VMT to 12.01, to meet the City's threshold.

- o Traffic calming measures
- o Rectangular Rapid Flash Beacon (RRFB) at the Bascom Avenue/Olive Avenue intersection
- o Pedestrian network improvements
- Install ADA-compliant curb ramps at the northeast corner of Forest Avenue/Topeka Avenue intersection
- o Crosswalk striping along the east leg of Forest Avenue/Bascom Avenue intersection
- o Limit parking supply
- Provide subsidized or discounted transit program 100 percent of Transit Subsidy

Local Transportation Analysis

Project Trip Generation

The proposed project is expected to generate a net of 1,063 daily trips of which 73 net trips are generated during the a.m. peak hour and 100 net trips are generated during the p.m. peak hour. The proposed trip generation includes discounts for location based mode share adjustments, proposed multimodal infrastructure and proposed travel demand management (TDM) programs as per direction of the City of San Jose.

Intersection Traffic Operations

The results of the intersection level of service analysis show that all the study intersections operate within standards of the City of San Jose Level of Service (LOS) D or better during the a.m. and p.m. peak hours under all scenarios. Thus, the project would not have any adverse effects at the study intersections.



Pedestrian, Bicycle and Transit Adverse Effects

The project proposes to provide additional pedestrian space, short-term bicycle parking, and improved transit stop along the project frontage on North Bascom Avenue. The proposed project does not conflict with existing and planned pedestrian or bicycle facilities. The proposed project will add very few trips to the existing transit facilities, which can be accommodated by the existing transit capacity. The project would not have an adverse effect on the pedestrian, bicycle and transit facilities in the study area.

On-Site Circulation

TJKM examined the project site plan in order to evaluate the adequacy of on-site vehicle circulation including delivery trucks, garbage trucks and emergency vehicles. Based on the evaluation, the proposed on-site vehicle circulation is adequate and should not result in any operational issues on City streets.

Parking

Based on the project site plan dated January 13,2021 (**Figure 2**), 60 parking spaces are provided. The project is providing a Transportation Demand Management (TDM) Plan that will allow for a 50% reduction in spaces, resulting in a requirement of 60 spaces.

Neighborhood Interface

The project site is located in a residential area consisting of both multi-family and single-family homes and neighborhood commercial land uses. Currently the surrounding network is connected via a system of sidewalks and curb ramps, and Class II bicycle lanes and Class III bike routes; however some crosswalks are missing and gaps are observed in the bicycle network. The VTA Bascom Avenue Complete Streets Study proposes improved sidewalks and crosswalks, and the addition of buffered bicycle lanes along the project frontage. The proposed project does not conflict with the short-term and long-term improvements proposed in this study.

Construction Operations

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses the construction schedule, street closures and/or detours, construction staging areas and parking, and the planned truck routes.



Appendix A – Level of Service Methodology

LEVEL OF SERVICE METHODOLOGY

LEVEL OF SERVICE

The description and procedures for calculating capacity and level of service are found in Transportation Research Board, *Highway Capacity Manual 2000*. *Highway Capacity Manual 2000* represents the latest research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level, from A to F, with level-of-service A representing the best operating conditions and level-of-service F the worst. Each level of service represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish service levels.

A general description of service levels for various types of facilities is shown in Table A-I.

Table A-I

	Uninterrupted Flow	Interrupted Flow								
Facility Type	Freeways	Signalized Intersections								
	Multi-lane Highways	Unsignalized Intersections								
	Two-lane Highways	Two-way Stop Control								
	Urban Streets	All-way Stop Control								
LOS										
А	Free-flow	Very low delay.								
В	Stable flow. Presence of other users noticeable.	Low delay.								
С	Stable flow. Comfort and convenience starts to decline.	Acceptable delay.								
D	High density stable flow.	Tolerable delay.								
Е	Unstable flow.	Limit of acceptable delay.								
F	Forced or breakdown flow.	Unacceptable delay								

Level of Service Description

Source: Highway Capacity Manual 2000

Urban Streets

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas.

Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials.

Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals.

Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks. Pedestrian conflicts and lane obstructions created by stopping or standing buses, trucks and parking vehicles that cause turbulence in the traffic flow are typical of downtown streets.

The speed of vehicles on urban streets is influenced by three main factors, street environment, interaction among vehicles and traffic control. As a result, these factors also affect quality of service.

The street environment includes the geometric characteristics of the facility, the character of roadside activity and adjacent land uses. Thus, the environment reflects the number and width of lanes, type of median, driveway density, spacing between signalized intersections, existence of parking, level of pedestrian activity and speed limit.

The interaction among vehicles is determined by traffic density, the proportion of trucks and buses, and turning movements. This interaction affects the operation of vehicles at intersections and, to a lesser extent, between signals.

Traffic control (including signals and signs) forces a portion of all vehicles to slow or stop. The delays and speed changes caused by traffic control devices reduce vehicle speeds, however, such controls are needed to establish right-of-way.

The average travel speed for through vehicles along an urban street is the determinant of the operating level of service. The travel speed along a segment, section or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections.

Level-of-service A describes primarily free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.

Level-of-service B describes reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at signalized intersections are not significant.

Level-of-service C describes stable operations, however, ability to maneuver and change lanes in midblock location may be more restricted than at level-of-service B. Longer queues, adverse signal coordination, or both may contribute to lower travel speeds.

Level-of-service D borders on a range in which in which small increases in flow may cause substantial increases in delay and decreases in travel speed. Level-of-service D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors.

Level-of-service E is characterized by significant delays and lower travel speeds. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.

Level-of-service F is characterized by urban street flow at extremely low speeds. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.

The methodology to determine level of service stratifies urban streets into four classifications. The classifications are complex, and are related to functional and design categories. Table A-II describes the functional and design categories, while Table A-III relates these to the urban street classification.

Once classified, the urban street is divided into segments for analysis. An urban street segment is a oneway section of street encompassing a series of blocks or links terminating at a signalized intersection. Adjacent segments of urban streets may be combined to form larger street sections, provided that the segments have similar demand flows and characteristics.

Levels of service are related to the average travel speed of vehicles along the urban street segment or section.

Travel times for existing conditions are obtained by field measurements. The maximum-car technique is used. The vehicle is driven at the posted speed limit unless impeded by actual traffic conditions. In the maximum-car technique, a safe level of vehicular operation is maintained by observing proper following distances and by changing speeds at reasonable rates of acceleration and deceleration. The maximum-car technique provides the best base for measuring traffic performance.

An observer records the travel time and locations and duration of delay. The beginning and ending points are the centers of intersections. Delays include times waiting in queues at signalized intersections. The travel speed is determined by dividing the length of the segment by the travel time. Once the travel speed on the arterial is determined, the level of service is found by comparing the speed to the criteria in Table A-IV. Level-of-service criteria vary for the different classifications of urban street, reflecting differences in driver expectations.

Table A-II

Principal							
Principal	Antonial		al Category				
	Arterial	Minor Arterial					
Very important		Important					
Very minor		Substantial					
Freeways, importa	ant activity	Principal arterials					
centers, major traf	fic generators						
Relatively long tri	ps between major	Trips of moderate l	ength within				
points and through	n trips entering,	relatively small geo	ographical areas				
leaving, and passi	ng through city						
Design Category							
High-Speed	Suburban	Intermediate	Urban				
Very low	Low density	Moderate density	High density				
density							
Multilane	Multilane	Multilane	Undivided one				
divided;	divided:	divided or	way; two way,				
undivided or	undivided or	undivided; one	two or more				
two-lane with	two-lane with	way, two lane	lanes				
shoulders	shoulders						
No	No	Some	Usually				
Yes	Yes	Usually	Some				
0.5 to 2	1 to 5	4 to 10	6 to 12				
45 to 55 mph	40 to 45 mph	30 to 40 mph	25 to 35 mph				
Very little	Little	Some	Usually				
Low density	Low to	Medium to	High density				
	medium	moderate density	<i>.</i> , <i>.</i> ,				
	Very minor Freeways, importa centers, major traf Relatively long tri points and through leaving, and passin High-Speed Very low density Multilane divided; undivided or two-lane with shoulders No Yes 0.5 to 2 45 to 55 mph Very little	Very minorFreeways, important activity centers, major traffic generatorsRelatively long trips between major points and through trips entering, leaving, and passing through cityDesign (High-SpeedSuburbanVery low densityLow densityMultilane divided; undivided or two-lane with shouldersMultilane two-lane with shouldersNo Yes 0.5 to 2No 40 to 45 mph Very littleLow densityLot 5	Very minorSubstantialFreeways, important activity centers, major traffic generatorsPrincipal arterialsRelatively long trips between major points and through trips entering, leaving, and passing through cityTrips of moderate I relatively small gedDesign CategoryHigh-SpeedSuburbanIntermediateVery low densityLow densityModerate densityMultilane divided; undivided or two-lane with shouldersMultilane two-lane with shouldersMultilane divided; 				

Functional and Design Categories for Urban Streets

Source: Highway Capacity Manual 2000

Table A-III

Urban Street Class based on Function and Design Categories

	Functional Category				
Design Category	Principal Arterial	Minor Arterial			
High-Speed	Ι	Not applicable			
Suburban	II	Π			
Intermediate	II	III or IV			
Urban	III or IV	IV			

Source: Highway Capacity Manual 2000

Urban Street Levels of Service by Class											
Urban Street Class	Ι	II	III	IV							
Range of Free Flow Speeds (mph)	45 to 55	35 to 45	30 to 35	25 to 35							
Typical Free Flow Speed (mph)	50	40	33	30							
Level of Service		Speed (mph)									
А	>42	>35	>30	>25							
В	>34	>28	>24	>19							
С	>27	>22	>18	>13							
D	>21	>17	>14	>9							
Е	>16	>13	>10	>7							
F	≤16	≤13	≤10	≤7							

Table A-IV

Urban Street Levels of Service by Class

Source: Highway Capacity Manual 2000

Interrupted Flow

One of the more important elements limiting, and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop and yield signs. These all operate quite differently and have differing impacts on overall flow.

Signalized Intersections

The capacity of a highway is related primarily to the geometric characteristics of the facility, as well as to the composition of the traffic stream on the facility. Geometrics are a fixed, or non-varying, characteristic of a facility.

At the signalized intersection, an additional element is introduced into the concept of capacity: time allocation. A traffic signal essentially allocates time among conflicting traffic movements seeking use of the same physical space. The way in which time is allocated has a significant impact on the operation of the intersection and on the capacity of the intersection and its approaches.

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, *i. e.*, in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, level of service criteria for traffic signals are stated in terms of average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the ratio of green time to cycle length and the volume to capacity ratio for the lane group.

For each intersection analyzed the average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection. A level of service designation is given to the control delay to better describe the level of operation. A

description of levels of service for signalized intersections can be found in Table A-V.

Table A-V

	Description of Level of Service for Signalized Intersections
Level of Service	Description
А	Very low control delay, up to 10 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
В	Control delay greater than 10 and up to 20 seconds per vehicle. There is good progression or short cycle lengths or both. More vehicles stop causing higher levels of delay.
С	Control delay greater than 20 and up to 35 seconds per vehicle. Higher delays are caused by fair progression or longer cycle lengths or both. Individual cycle failures may begin to appear. Cycle failure occurs when a given green phase doe not serve queued vehicles, and overflow occurs. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	Control delay greater than 35 and up to 55 seconds per vehicle. The influence of congestions becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Control delay greater than 55 and up to 80 seconds per vehicle. The limit of acceptable delay. High delays usually indicate poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.
F	Control delay in excess of 80 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to higher delay.

Description of Level of Service for Signalized Intersections

Source: Highway Capacity Manual 2000

The use of control delay, which may also be referred to as signal delay, was introduced in the 1997 update to the *Highway Capacity Manual*, and represents a departure from previous updates. In the third edition, published in 1985 and the 1994 update to the third edition, delay only included stopped delay. Thus, the level of service criteria listed in Table A-V differs from earlier criteria.

Unsignalized Intersections

The current procedures on unsignalized intersections were first introduced in the 1997 update to the *Highway Capacity Manual* and represent a revision of the methodology published in the 1994 update to the 1985 *Highway Capacity Manual*. The revised procedures use control delay as a measure of effectiveness to determine level of service. Delay is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, *i. e.*, in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Control delay is the increased time of travel for a vehicle approaching and passing through an unsignalized intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

Two-Way Stop Controlled Intersections

Two-way stop controlled intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At two-way stop-controlled intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A level of service designation is given to the expected control delay for each minor movement. Level of service is not defined for the intersection as a whole. Control delay is the increased time of travel for a vehicle approaching and passing through a stop-controlled intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection. A description of levels of service for two-way stop-controlled intersections is found in Table A-VI.

Table A-VI

Description of Level of Service for Two-Way Stop Controlled Intersections

Level of Service	Description
А	Very low control delay less than 10 seconds per vehicle for each movement subject to delay.
В	Low control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay.
С	Acceptable control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay.
D	Tolerable control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay.
E	Limit of tolerable control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay.
F	Unacceptable control delay in excess of 50 seconds per vehicle for each movement subject to delay.

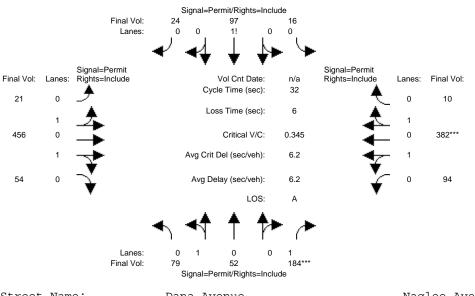
Source: Highway Capacity Manual 2000

Appendix B – Existing Conditions Intersections Level of Service Worksheets

Bascom Medical Office Building Transportation Analysis City of San Jose,CA

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

Intersection #1: Naglee Avenue/Dana Avenue



Street Name:			Dana A				Naglee Avenue					
Approach:	Not	rth Bo	und	Soi	ith Bo	und	Εa	ast Bo	ound	We	est Bo	ound
Movement:												
Min. Green:												
Y+R:									4.0			
Volume Module										1		
	79			16	97	24	21	456	54	94	382	10
Growth Adj:				1.00		1.00		1.00			1.00	1.00
Initial Bse:			184	16	97	24		456	54	94	382	10
User Adj:			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:			184	16	97	24	21		54	94	382	10
Reduct Vol:				0			0		0	0		0
Reduced Vol:				16		24			54		382	10
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
FinalVolume:						24			54		382	10
Saturation F				1					I	1		I
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.78	0.78	0.85	0.94	0.94	0.94	0.87	0.87	0.87	0.77	0.77	0.77
Lanes:	0.60	0.40	1.00	0.12	0.71	0.17	0.08	1.72	0.20	0.39	1.57	0.04
Final Sat.:									337			60
Capacity Ana	lysis	Modul	e:									
Vol/Sat:	0.09	0.09	0.11	0.08	0.08	0.08	0.16	0.16	0.16	0.17	0.17	0.17
Crit Moves:			* * * *								* * * *	
Green/Cycle:	0.33	0.33	0.33	0.33	0.33	0.33	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.27	0.27	0.35	0.23	0.23	0.23	0.33	0.33	0.33	0.35	0.35	0.35
Delay/Veh:	8.2	8.2	8.5	8.0	8.0	8.0	5.2	5.2	5.2	5.3	5.3	5.3
User DelAdj:				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:				8.0	8.0	8.0	5.2	5.2	5.2	5.3	5.3	5.3
LOS by Move:				A	A	A	A	A	A			A
HCM2k95thQ:	63	63	90	61	61	61	103	103	103	99	99	99
Note: Queue :	report	ted is	the d	istand	ce per	lane	in fe	et.				

Bascom Medical Office Building Transportation Analysis City of San Jose,CA

				perations (Ba	mputation Report se Volume Altern	ative)		
Intersection #1: Nag	glee Avenue/[Dana Aveni	ue	Existing	РМ			
· · · · · · · · · · · · · · · · · · ·	-	Signal=	-Permit/Rights=Inc	lude				
	Final Vol: Lanes:			33				
Sigr Final Vol: Lanes: Righ	nal=Permit nts=Include	•	Vol Cnt Date:	n/a	Signal=Permit Rights=Include	Lanes: Final	Vol:	
16 0 🍠	•		Cycle Time (sec):	40 6		0 25	i	
1			Loss Time (sec): Critical V/C:	0.410	- 4	1 039	-	
1	►	Avg C	rit Del (sec/veh):	5.7	•	0 1	5	
124 0	Ť	-	Delay (sec/veh):	5.6	Ť	- 0 67		
1	7	0	LOS:	А	•	r		
	-	5 4	• • •	• •				
	Lanes: Final Vol:	0 1 23	0 0 28	1 75				
		Signal=	Permit/Rights=Inc	lude				
Street Name:		Dana A			_	Naglee		-
Approach: Movement:	North E L - T	ound – R	South L - 7	Bound ' – R	Eas L -	t Bound T - R	West Bo L - T	ound – R
			. – –	- K		·		
Min. Green: Y+R:	10 10 4.0 4.0		10 1 4.0 4.	0 1 0 4.		10 10 4.0 4.0	10 10 4.0 4.0	10 4.0
1+R·			4.0 4.	0 4.	-	4.0 4.0	4.0 4.0	4.0
Volume Module								
Base Vol: Growth Adj:	23 28 1.00 1.00		33 9 1.00 1.0	2 2		738 124	67 395 1.00 1.00	25 1.00
Initial Bse:	23 28			2 2		738 124	67 395	25
User Adj:	1.00 1.00	1.00	1.00 1.0	0 1.0	0 1.00 1	.00 1.00	1.00 1.00	1.00
PHF Adj:	1.00 1.00		1.00 1.0				1.00 1.00	1.00
PHF Volume:	23 28			2 2		738 124	67 395	25
Reduct Vol:	0 0		0			0 0	0 0	0
Reduced Vol: PCE Adj:	23 28 1.00 1.00		33 9	2 2		738 124	67 395 1.00 1.00	25 1.00
MLF Adj:	1.00 1.00		1.00 1.0				1.00 1.00	1.00
FinalVolume:	23 28					738 124	67 395	
						·		
Saturation Fl			1000 100	100	0 1000 1	000 1000	1000 1000	1000
Sat/Lane: Adjustment:	1900 1900						1900 1900 0.76 0.76	1900 0.76
Lanes:			0.22 0.6					0.10
Final Sat.:	734 894	1615	386 107	6 26	9 61 2	807 472	398 2347	149
 Como citro Dec]					-			
Capacity Anal Vol/Sat:	0.03 0.03		0.09 0.0				0.17 0.17	0.17
Crit Moves: Green/Cycle:		0.25	***			***	0 60 0 60	0.60
Volume/Cap:			0.25 0.2				0.60 0.60 0.28 0.28	0.80
Uniform Del:			12.3 12.			4.3 4.3	3.8 3.8	3.8
IncremntDel:			0.5 0.			0.2 0.2	0.1 0.1	0.1
InitQueuDel:			0.0 0.			0.0 0.0	0.0 0.0	0.0
Delay Adj:	1.00 1.00		1.00 1.0			.00 1.00	1.00 1.00	1.00
Delay/Veh:			12.8 12.			4.5 4.5	3.9 3.9	3.9
User DelAdj:			1.00 1.0				1.00 1.00	1.00
AdjDel/Veh:			12.8 12.			4.5 4.5	3.9 3.9	3.9
LOS by Move:	В Е 30 30		В 95 9	B 1 5 9	B A 5 177	A A 177 177	A A 90 90	A Q Q
HCM2k95thQ: Note: Queue r							90 90	90
More Andre I	cported 1		Lacance F	CI Iall	L III TEEL	•		

Bascom Medical Office Building Transportation Analysis City of San Jose,CA

Exeting AM Intersection #2: N Bascom Avenue/Naglee Avenue Signal=Protect/Rights=include Final Vol: Lanes: Rights=include 72"' 1 0 227 1 1 227 1 227 1 1 227 1 20 227 1 20 20 20 20 20 20 20 20 20 20
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Final Vol: 149 300 B7 Lanes: 149 300 B7 Final Vol: Lanes: Final Vol: 149 10 CH Date: na Cycle Time (sec): 12 Critical VOC: 0.593 Avg Crit Dat (sec): 31.2 Avg Delay (sec)veh): 33.4 LOS: C Lanes: N Bascom Avenue Signal-Protect Mame: N Bascom Avenue Signal-Protect Mame: N Bascom Avenue Avg Delay (sec)veh): 33.4 LOS: C Movement: L - T - R Movement: L - T - R Movement: L - T - R Vol. T
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Final Vol: Lanes: Rights=Include Vol Chr Date: n/a Rights=Include Lanes: Final Vol: Cycle Time (sec): 140 Loss Time (sec): 140 Loss Time (sec): 140 Loss Time (sec): 12 1 Loss Time (sec): 12 1 Loss Time (sec): 12 1 1 0 Avg Delay (sec/veh): 33.4 1 130 Loss C 1 1 270*** Avg Delay (sec/veh): 33.4 1 130 Loss C 1 1 20**** Signal=FrotectRights=Overlap Street Name: N Bascom Avenue 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 L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R - R L - T - R - R L - T - R - R L - T - R - R - R - R - R - R - R - R - R
72" 1 Cycle Time (sec): 140 Loss Time (sec): 12 1 Critical VIC: 0.583 Arg Crit Del (sec/veh): 31.2 1 0 Arg Crit Del (sec/veh): 31.2 1 0 Arg Crit Del (sec/veh): 31.2 1 0 Arg Crit Del (sec/veh): 31.2 Critical VIC: 0.583 Arg Crit Del (sec/veh): 31.4 LOS: C Lanes: 1 0 2.2 0 1 220 Signal=Protect/Rights=Overlap Street Name: N Bascom Avenue Arg Delay (sec/veh): 320 Signal=Protect/Rights=Overlap Street Name: N Bascom Avenue Arg Crit Del (sec/veh): 31.4 LOS: C Arg Delay (sec/veh): 31.4 Arg Delay (sec/veh): 31.4 Arg Delay (sec/veh): 31.4 Arg Delay (sec/veh): 31.4 COS: C Arg Delay (sec/veh): 31.4 Arg Delay (se
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LOS: C Lanes: $1 & 0 & 2 & 0 & 1 \\ 1239^{**} & 220 \\ Signal=Protect/Rights=Overlap \\ Street Name: N Bascom Avenue Naglee Avenue Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - Rmin. Green: 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0$
Lanes:102011881239"************************************
Final Vol: 188 1239 ^{**} 220 Signal=Protect/Rights=Overlap Naglee Avenue Naglee Avenue 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 L - T - R L - T - R L - T - R L - T R L - T R L - T R L - T R L - T R L R T R L R R L R R L R R L R R R R <td< td=""></td<>
Final Vol: 188 1239 ^{**} 220 Signal=Protect/Rights=Overlap Naglee Avenue Naglee Avenue 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 L - T - R L - T - R L - T - R L - T R L - T R L - T R L - T R L - T R L R T R L R R L R R L R R L R R R R <td< td=""></td<>
Final Vol: 188 1239 ^{**} 220 Signal=Protect/Rights=Overlap Naglee Avenue Naglee Avenue 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 L - T - R L - T - R L - T - R L - T - R L - T R L - T R L - T R L - T R L - T R L R T R R R R R R R R R R <td< td=""></td<>
Signal=Protect/Rights=Overlap Nagles Averlag Street Name: Nagles Averlag 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 L - T - R L - T - R R L - T - R R L - T - R R L - T - R L - T - R R R R R R R R R R R R R R R R R R R R R R R <t< td=""></t<>
Street Name:N Bascom AvenueNaglee AvenueApproach:North BoundSouth BoundEast BoundWest BoundMovement:L-T-RL-T-R
Approach:North BoundSouth BoundEast BoundWest BoundMovement:L - T - RL - T - RL - T - RL - T - R
$\begin{array}{llllllllllllllllllllllllllllllllllll$
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 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 10 10 10 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 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 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 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:7:00-9:00 AM Base Vol: 188 1239 220 87 350 149 72 227 1 130 270 113 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 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 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 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 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 <t< td=""></t<>
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Initial Bse: 188 1239 220 87 350 149 72 227 1 130 270 113 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 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 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 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 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 1.00 1.00 1.00 1.00 1.00 1.00 <t< td=""></t<>
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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 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 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 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 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 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 188 1239 220 87 350 149 72 227 1 130 270 113
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Sat/Lane:1900190019001900190019001900190019001900Adjustment:0.950.950.850.950.910.910.950.950.950.910.91Lanes:1.002.001.001.400.601.001.990.011.001.410.59
Adjustment: 0.95 0.95 0.85 0.95 0.91 0.91 0.95 0.95 0.95 0.95 0.91 0.91 Lanes: 1.00 2.00 1.00 1.00 1.40 0.60 1.00 1.99 0.01 1.00 1.41 0.59
Lanes: 1.00 2.00 1.00 1.00 1.40 0.60 1.00 1.99 0.01 1.00 1.41 0.59
Final Sat.: 1805 3610 1615 1805 2418 1029 1805 3591 16 1805 2433 1018
Capacity Analysis Module:
Vol/Sat: 0.10 0.34 0.14 0.05 0.14 0.14 0.04 0.06 0.06 0.07 0.11 0.11
Crit Moves: **** **** **** ****
Green/Cycle: 0.28 0.58 0.71 0.08 0.38 0.38 0.07 0.13 0.13 0.13 0.19 0.19
Volume/Cap: 0.38 0.59 0.19 0.59 0.38 0.38 0.59 0.50 0.50 0.56 0.59 0.59
Delay/Veh: 41.4 19.4 7.1 68.5 31.3 31.3 71.1 57.9 57.9 60.6 53.5 53.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 41.4 19.4 7.1 68.5 31.3 31.3 71.1 57.9 57.9 60.6 53.5 53.5
AdjDel/Veh: 41.4 19.4 7.1 68.5 31.3 31.3 71.1 57.9 57.9 60.6 53.5 53.5 LOS by Move: D B A E C C E E E D D

Level Of Service Computation Report 2000 HCM Operations (Base Volume Alternative) Existing PM Intersection #2: N Bascom Avenue/Naglee Avenue Signal=Protect/Rights=Include Final Vol: 92 991*** 214 Lanes: Λ Signal=Protect Signal=Protect Lanes: Final Vol: Final Vol: Lanes: Rights=Include Vol Cnt Date: n/a Rights=Include Cycle Time (sec): 140 102 129 0 12 Loss Time (sec): 1 506*** Critical V/C: 0.667 232 1 Avg Crit Del (sec/veh): 42.1 0 169*** 27 Avg Delay (sec/veh): 42.3 1 LOS: D 2 Lanes: 0 Final Vol: 115 443 214 Signal=Protect/Rights=Overlap Street Name: N Bascom Avenue Naglee Avenue Approach: North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - R Movement: L - T - R 7 10 7 10 10 10 7 10 10 7 10 10 Min. Green: 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 _____ Volume Module:4:00-6:00 PM Base Vol: 115 443 214 214 991 92 129 506 27 169 232 102 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 92 506 Initial Bse: 115 443 214 991 129 27 214 169 232 102 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adi: 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 1.00 214 991 92 129 PHF Volume: 115 443 214 506 27 169 232 102 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 115 443 214 214 991 92 129 506 27 169 232 102 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 MLF Adj: 1.00 1.00 1.00 FinalVolume: 115 443 214 214 991 92 129 506 27 169 232 102 Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Adjustment: 0.95 0.95 0.85 0.95 0.94 0.94 0.95 0.94 0.94 0.95 0.91 0.91 1.00 2.00 1.00 1.00 1.83 0.17 1.00 1.90 Lanes: 0.10 1.00 1.39 0.61 Final Sat.: 1805 3610 1615 1805 3260 303 1805 3400 181 1805 2392 1052 Capacity Analysis Module: 0.12 0.30 0.07 0.15 Vol/Sat: 0.06 0.12 0.13 0.30 0.15 0.09 0.10 0.10 Crit Moves: **** * * * * * * * * * * * * Green/Cycle: 0.10 0.28 0.42 0.27 0.46 0.46 0.15 0.22 0.22 0.14 0.21 0.21 0.67 Volume/Cap: 0.67 0.44 0.32 0.44 0.67 0.46 0.67 0.67 0.67 0.46 0.46 53.9 49.6 Uniform Del: 61.2 41.3 27.1 42.2 29.8 29.8 49.6 57.1 48.5 48.5 1.2 2.2 6.7 IncremntDel: 9.6 0.3 0.3 0.6 1.1 1.1 2.2 0.5 0.5 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 42.9 30.9 30.9 Delay/Veh: 70.8 41.6 27.4 55.2 51.8 51.8 63.7 49.0 49.0 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 70.8 41.6 27.4 42.9 30.9 30.9 55.2 51.8 51.8 63.7 49.0 49.0 LOS by Move: C D C С E D E D D E D D 287 386 290 362 821 262 533 533 375 326 HCM2k95thO: 821 326 Note: Queue reported is the distance per lane in feet.

		Level C 2000 HCM O	perations (Bas	putation Report e Volume Alternative)	
Intersection #3: N Ba	scom Avenue	/Hedding Street	Existing /	AM	
		Signal=Protect/Rights=Ind	lude		
		241 463 0 1 1 0	119***		
	Lanes:		1		
	•	╯◀↓ ↓ ∳	► ≻		
Signal Final Vol: Lanes: Rights	I=Split	Vol Cnt Date:	n/a	Signal=Split Rights=Include Lanes: Final	/ol:
Å.		Cycle Time (sec):	140	· •	
118 0 _/			12		
1 🟒		Loss Time (sec):	12	📩 1	
282*** 0		Critical V/C:	0.729	0 252	2
1 -	•	Avg Crit Del (sec/veh):	46.0	↓ 1	
¥				¥	
118 0		Avg Delay (sec/veh):	43.4	0 93*	**
•		LOS:	D	¥	
	•	אד ריי ר			
	Lanes:	1 0 1 1	0		
	Final Vol:	136 1028***	134		
		Signal=Protect/Rights=Inc	lude		
Street Name:	N	Bascom Avenue		Hedding	Street
Approach:	North Bo			East Bound	West Bound
Movement:	L - T			L - T - R	L – T – R
Min. Green:	7 10	1.1	0 10	10 10 10	10 10 10
Y+R:	4.0 4.0	4.0 4.0 4.			4.0 4.0 4.0
-					
Volume Module:	7:00-9:00	AM			
Base Vol:	136 1028	134 119 46			93 252 82
	1.00 1.00	1.00 1.00 1.0			1.00 1.00 1.00
	136 1028	134 119 46			93 252 82
	1.00 1.00 1.00 1.00	1.00 1.00 1.0 1.00 1.00 1.0			1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:	136 1028	134 119 46			93 252 82
Reduct Vol:	0 0	0 0	0 0		0 0 0
Reduced Vol:	136 1028	134 119 46			93 252 82
	00 1.00	1.00 1.00 1.0			1.00 1.00 1.00
MLF Adj: 1	00 1.00	1.00 1.00 1.0	0 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	136 1028	134 119 46	3 241	118 282 118	93 252 82
-					
Saturation Flo					
		1900 1900 190		1900 1900 1900	1900 1900 1900
Adjustment: C		0.93 0.95 0.9		0.91 0.91 0.91	0.91 0.91 0.91
Lanes: 1 Final Sat.: 1		0.23 1.00 1.3 409 1805 225		0.45 1.09 0.46 786 1878 786	0.44 1.18 0.38 755 2046 666
Capacity Analy				i i 1	I I
	0.08 0.33	0.33 0.07 0.2	1 0.21	0.15 0.15 0.15	0.12 0.12 0.12
Crit Moves:	* * * *	* * * *		* * * *	* * * *
Green/Cycle: 0	0.14 0.45	0.45 0.09 0.3	9 0.39	0.21 0.21 0.21	0.17 0.17 0.17
Volume/Cap: 0		0.73 0.73 0.5			0.73 0.73 0.73
Delay/Veh: 5		33.3 77.3 32.			59.8 59.8 59.8
User DelAdj: 1		1.00 1.00 1.0		1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh: 5		33.3 77.3 32.			59.8 59.8 59.8
LOS by Move:			C C		
HCM2k95thQ:		921 311 54			482 482 482
Note: Queue re	eported is	the distance p	er raue	III LEEL.	

							outation Report Volume Alter					
Intersection #3: N B	Bascom A	Avenue	/Hedding	Street								
			Signal=F		hts=Include	•						
	Final		177	1077***		175 1						
	Lar	nes:		i	l	Έ.						
			′ 📢	· +	-44-	\rightarrow						
Sign	al=Split		•	•	•	:	Signal=Split					
Final Vol: Lanes: Righ	ts=Include		0	Vol Cnt I		n/a I 140	Rights=Include	e Lan ▲	es: Final \	/ol:		
180 0 🍠			U	ycle Time (sec):	140		e d	70			
	L .		L	.oss Time (sec):	12	1	Δ.				
1	►							<u> </u>				
441*** 0	►			Critical	V/C: 0).811		0) 263*	**		
1	►		Avg Cr	it Del (sec/	veh):	49.2		<u> </u>	l			
_1	7						1	7				
129 0	,		Avg I	Delay (sec/	veh):	48.0	•) 142			
•	r				LOS:	D		•				
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	Lar Final	nes:	1 0 62***	1 517		0 143						
	Filidi	voi. 6			hts=Include							
			-	-								
Street Name:			Bascom			-	_		edding			
Approach:		th Bc			ith Bo			st_Bo			est Bo	
Movement:	_		- R	_ L -		– R	L -		- R			- R
				1						1		10
Min. Green: Y+R:	7	10	10 4.0	7		10	10	10	10 4.0	10	10	10
	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
ا Volume Module			1	I					I	I		I
Base Vol:	62	517	143	175	1077	177	180	441	129	142	263	70
	1.00		1.00		1.00	1.00	1.00		1.00	1.00		1.00
Initial Bse:	62	517	143		1077	177	180	441	129	142	263	70
User Adj:	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:	62	517	143	175	1077	177	180	441	129	142	263	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	517	143	175	1077	177	180	441	129	142	263	70
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
FinalVolume:					1077				129		263	
Saturation Fl				1000	1000	1000	1000	1000	1000	1000	1000	1000
	1900		1900				1900			1900		1900
Adjustment:			0.92		0.93					0.92		
Lanes: Final Sat.:			0.43 756		1.72 3035			2043		0.60	1926	0.29 512
ا Capacity Anal				I					I	I		I
	0.03		0.19	0.10	0.35	0.35	0.22	0.22	0.22	0.14	0.14	0.14
Crit Moves:		••••	0.15	0.10	****	0.00		****	0.22	0.11	****	
Green/Cycle:		0.32	0.32	0.16	0.43	0.43	0.26	0.26	0.26	0.17	0.17	0.17
Volume/Cap:			0.59		0.82				0.82	0.82		0.82
Uniform Del:			40.0		34.8	34.8			48.4		56.3	56.3
IncremntDel:			0.9	3.2	3.6	3.6		5.9	5.9	8.9		8.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IIII CQUEUDEI ·		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay Adj:						20 4		54 2	54.2	65.2	65 2	65.2
Delay Adj:			40.8	57.4	38.4	38.4	54.2	54.2	51.2	05.2	05.2	05.2
Delay Adj: Delay/Veh:	85.3	40.8	40.8 1.00		38.4 1.00	38.4			1.00	1.00		1.00
Delay Adj: Delay/Veh: User DelAdj: AdjDel/Veh:	85.3 1.00 85.3	40.8 1.00		1.00			1.00	1.00			1.00	
Delay Adj: Delay/Veh: User DelAdj: AdjDel/Veh: LOS by Move:	85.3 1.00 85.3 F	40.8 1.00 40.8 D	1.00 40.8 D	1.00 57.4 E	1.00 38.4 D	1.00 38.4 D	1.00 54.2 D	1.00 54.2 D	1.00 54.2 D	1.00 65.2 E	1.00 65.2 E	1.00 65.2 E
Delay Adj: Delay/Veh: User DelAdj:	85.3 1.00 85.3 F 193	40.8 1.00 40.8 D 571	1.00 40.8 D 571	1.00 57.4 E 361	1.00 38.4 D 1077	1.00 38.4 D 1077	1.00 54.2 D 768	1.00 54.2 D 768	1.00 54.2	1.00 65.2	1.00 65.2 E	1.00 65.2

					aval Of Sa	nvico Comr	utation Pond	vrt				
							outation Repo Volume Alte					
Intersection #4: N	Bascom A	Avenue/	San Carl	os Stree	t	Existing						
					nts=Overlap							
	Final		58 1 0	481 3		103*** 1						
	Lar	nes:	່້	3	ľ	ί. –						
			′ ∢4	· 🕁	-44	`≁						
Sic	nal=Protect		•	•	•	ş	Signal=Protec	ct				
Final Vol: Lanes: Rig				Vol Cnt I		n/a F	Rights=Overla		nes: Final \	/ol:		
86*** 1	•		C	ycle Time (sec):	140		€ .	1 265			
			L	.oss Time (sec):	12		<u> </u>	. 200			
0	4				,			4	D			
184 2	•			Critical	V/C: 0	.644		È i	2 686*	**		
0 —	÷		Avg Cr	it Del (sec/	veh):	39.2	-)			
	Ť						1	¥				
97 1	•		Avg [Delay (sec/	veh):	38.6	,	-	1 160			
	•			I	LOS:	D		•				
			_ _		▲⊾							
		•	1									
		nes:	1 0	2	0	1						
	Final	Vol:	206	1062***		156						
			Signal=F	rotect/Rigr	nts=Overlap							
Street Name:		N	Bascom	Avenu	ıe			San	Carlo	s Stre	eet	
Approach:	Nor	th Bo	und		ith Bo	und	Ea	ast Bo	ound	We	est Bo	und
Movement:	_ L -		– R .	_ L -		– R	L -	· T	– R .	Ľ	- T	– R .
	1			1								
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Modul	•								1			
Base Vol:	206		156	103	481	58	86	184	97	160	686	265
Growth Adj:	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00
Initial Bse:	206		156	103	481	58	86	184	97	160	686	265
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:	206	1062	156	103	481	58	86	184	97	160	686	265
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	206	1062	156	103	481	58	86	184	97	160	686	265
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:	206	1062	156	103	481	58	86	184	97	160	686	265
	1		1									
Saturation F				1000	1	1	1	1	1000	1	1000	1
Sat/Lane:	1900		1900		1900	1900		1900			1900	1900
Adjustment:					0.91			0.95			0.95	0.85
Lanes:			1.00		3.00			2.00			2.00	1.00
Final Sat.:			1615		5187			3610			3610	1615
Capacity Ana												
Vol/Sat:	0.11		0.10	0.06	0.09	0.04	0.05	0.05	0.06	0.09	0.19	0.16
Crit Moves:		****	0.10	****	5.02	0.01	****	5.05	0.00	0.00	****	0.10
Green/Cycle:			0.66		0.24	0.32		0.16	0.47	0.20	0.30	0.38
Volume/Cap:			0.15		0.38	0.11			0.13		0.64	0.43
Delay/Veh:			9.0		44.2				21.4		44.3	32.3
User DelAdj:			1.00		1.00				1.00		1.00	1.00
AdjDel/Veh:			9.0		44.2				21.4		44.3	32.3
LOS by Move:			Э.0 А	70.4 E	D D	55.0 C	/J.4 E	D	21.4 C	D.1		52.5 C
HCM2k95thQ:			124	261		88		187	116	297		391
Note: Queue											0	
yee guodo			u									

						putation Repo e Volume Alte				
Intersection #4: N	Bascom Av	enue/San C	arlos Stree	et						
-		Sign	al=Protect/Rig	hts-Overla	n					
	Final Vol	: 75	1149***		246					
	Lanes	: 1 (I) 3 	0	1 I					
		-∢ ∢	4 ↓	-44-	`≁					
Sig	nal=Protect		• •	•		Signal=Prote	ct			
Final Vol: Lanes: Rig	hts=Overlap		Vol Cnt Cycle Time		n/a 140	Rights=Overl	ap Lar ▲	nes: Final V	ol:	
63 1	,		Cycle Time	(360).	140		₹	1 111		
0	ė.		Loss Time	(sec):	12		. ا	D		
702*** 2	•		Critica	IV/C	0.681	1	-	2 376		
	•	A								
0	7	AVg	g Crit Del (sec	/ven):	46.9		7	0		
142 1	Ľ.	A	vg Delay (sec	/veh):	43.7		<u> </u>	1 208**	*	
	•			LOS:	D		•			
				L00.	D					
		-	₹ ₹	†≁ ►						
		1	1 1]	ſ					
	Lanes Final Vol) 2 586	0	1 262					
			al=Protect/Rig	hts=Overla						
Street Name:		N Bagg	m Auon				Cor	Carlo	s Street	
Approach:			om Aven So		und	Ea			West E	Round
Movement:		T – R			- R			- R		– R
Min. Green:	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	9 4.0
Volumo Modul			-							
Volume Module Base Vol:		5.00 PM 586 262	2 246	1149	75	63	702	142	208 376	5 111
Growth Adj:	1.00 1.			1.00	1.00			1.00	1.00 1.00	
Initial Bse:		586 262		1149	75		702	142	208 376	
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.			1.00	1.00			1.00	1.00 1.00	
PHF Volume:		586 262		1149	75		702	142	208 376	
Reduct Vol: Reduced Vol:	0 165 5	0 (586 262		0 1149	0 75		0 702	0 142	0 0 208 376	
PCE Adj:	1.00 1.			1.00	1.00		1.00	1.00	1.00 1.00	
MLF Adj:	1.00 1.			1.00	1.00			1.00	1.00 1.00	
FinalVolume:				1149	75		702	142	208 376	
	1		-							
Saturation F			1000	1000	1000	1000	1000	1000	1000 1000	1000
Sat/Lane: Adjustment:	1900 19			1900 0.91	1900 0.85		1900 0.95	1900 0.85	1900 1900 0.95 0.95	
Lanes:	1.00 2.			3.00			2.00	1.00		
Final Sat.:	1805 36			5187			3610		1805 3610	
			-							
Capacity Ana	-									
Vol/Sat:	0.09 0.	16 0.10	5 0.14	0.22	0.05	0.03	0.19	0.09	0.12 0.10	0.07
Crit Moves: Green/Cycle:	****	25 0.42	0 0 01	**** 0.33	0.47	0 1 5	**** 0.29	0.42	**** 0.17 0.31	0 50
Volume/Cap:				0.55	0.47		0.29	0.42	0.68 0.34	
Uniform Del:				40.9	20.4			25.8	54.6 37.5	
IncremntDel:		7 0.4			0.1		1.9	0.2	6.1 0.2	
InitQueuDel:		0.0			0.0		0.0	0.0	0.0 0.0	
Delay Adj:	1.00 1.			1.00	1.00			1.00	1.00 1.00	
Delay/Veh:				42.1	20.5			26.0	60.8 37.7	
User DelAdj: AdjDel/Veh:				1.00 42.1	1.00 20.5			1.00 26.0	1.00 1.00	
LOS by Move:			5 54.6 C D		20.5 C		40.2 D	26.0 C	E E	
HCM2k95thQ:		61 364			88		649	188	438 310	
Note: Queue										
				-						

Appendix C – Background Conditions Intersections Level of Service Worksheets



Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background AM Intersection #1: Naglee Avenue/Dana Avenue Signal=Permit/Rights=Include Initial Vol: 26 99 17 Lanes: 0 0 1! 0 0 Signal=Permit Rights=Include Signal=Permit Rights=Include Initial Vol: Lanes: Initial Vol: Vol Cnt Date: n/a Lanes: ۸ Cycle Time (sec): 32 21 0 10 0 Loss Time (sec): 6 1 1 456 Critical V/C: 0.356 0 382*** 0 Avg Crit Del (sec/veh): 6.3 1 54 Avg Delay (sec/veh): 6.3 0 94 LOS: А Lanes: 0 0 0 1 Initial Vol: 85 60 197*** Signal=Permit/Rights=Include

Street Name:	Dana Avenue						Naglee Avenue						
Approach:	No	rth Bo	und	Sou	uth Bo	und	Ea	ast Bc	und	W	est Bo	und	
Movement:	L ·	- Т	– R	L ·		– R		- Т			- Т		
Min. Green:	10	10	10	10	10	10	10	10		10	10	10	
Y+R:	4.0		4.0	4.0		4.0		4.0			4.0	4.0	
Volume Modul													
Base Vol:	79	52	184	16	97	24	21	456	54	94	382	10	
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:		52	184	16	97	24	21		54	94	382	10	
Added Vol:	0		0	0	0	0	0	0	0	0	0	0	
ATI:	6		13	1		2	0	0	0	0	0	0	
Initial Fut:			197	17		26	21	456	54	94	382	10	
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:	85	60	197	17	99	26	21	456	54	94	382	10	
	0		0	0	0	0	0	0	0	0	0	0	
Reduced Vol:			197	17	99	26	21		54	94		10	
PCE Adj:			1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
MLF Adj:	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:			197	17		26		456	54		382	10	
	•												
Saturation F													
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900	
Adjustment:			0.85			0.94		0.87			0.77	0.77	
Lanes:		0.41	1.00			0.18		1.72			1.57	0.04	
Final Sat.:			1615		1240	326		2846	337		2289	60	
Capacity Ana													
Vol/Sat:	0.10	0.10	0.12	0.08	0.08	0.08	0.16	0.16	0.16	0.17	0.17	0.17	
Crit Moves:			* * * *								* * * *		
Green/Cycle:					0.34	0.34		0.47			0.47	0.47	
Volume/Cap:			0.36		0.23	0.23		0.34	0.34		0.36	0.36	
Uniform Del:			7.9	7.5		7.5	5.4		5.4	5.4		5.4	
IncremntDel:		0.3	0.4	0.2		0.2	0.1		0.1	0.2	0.2	0.2	
InitQueuDel:		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Delay Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Delay/Veh:			8.3	7.7	7.7	7.7	5.5	5.5	5.5	5.6	5.6	5.6	
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:	8.0	8.0	8.3	7.7		7.7	5.5	5.5	5.5	5.6	5.6	5.6	
LOS by Move:			A	A		A	A		A	A		A	
HCM2k95thQ:			95	62	62	62	106		106	102	102	102	
Note: Queue :	repor	ted is	the d	istan	ce per	lane	in fe	et.					

Level Of Service Computation Report

2000 HCM Operations (Future Volume Alternative) Background PM Intersection #1: Naglee Avenue/Dana Avenue Signal=Permit/Rights=Include Initial Vol: 32 106*** 36 Lanes: 11 Λ 0 Λ Signal=Permit Signal=Permit Initial Vol: Lanes: Rights=Include Vol Cnt Date: n/a Rights=Include Lanes: Initial Vol: Cycle Time (sec): 40 16 Λ 0 25 6 Loss Time (sec): 738*** Critical V/C: 0.428 0 395 Avg Crit Del (sec/veh): 5.9 124 Avg Delay (sec/veh): 5.9 0 67 LOS: Α 0 Lanes: Ω Initial Vol: 30 32 87 Signal=Permit/Rights=Include Street Name: Dana Avenue Naglee Avenue Approach: North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - R Movement: L - T - R 10 10 10 10 10 10 10 10 10 10 10 10 Min. Green: 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:4:00-6:00 PM Base Vol: 23 28 75 33 92 23 16 738 124 67 395 25 1.00 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 738 Initial Bse: 75 92 23 23 28 33 16 124 67 395 25 0 0 0 0 0 0 0 0 0 0 Added Vol: 0 0 ATI: 7 4 12 3 14 9 0 0 0 0 0 0 16 738 Initial Fut: 30 32 87 36 106 32 124 67 395 25 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adi: 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: 30 32 87 36 106 32 16 738 124 67 395 25 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 30 32 87 36 106 32 16 738 124 67 395 25 1.00 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 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 30 32 87 36 106 32 16 738 124 67 395 FinalVolume: 25 -----||-----|||------|| ____| Saturation Flow Module: 1900 1900 1900 1900 Sat/Lane: Adjustment: 0.83 0.83 0.85 0.91 0.91 0.91 0.88 0.88 0.88 0.76 0.76 0.76 0.48 0.52 1.00 0.21 0.61 0.18 0.04 1.68 0.28 0.28 1.62 0.10 Lanes: 317 Final Sat.: 765 816 1615 356 1050 61 2807 472 398 2347 149 Capacity Analysis Module: Vol/Sat: 0.04 0.04 0.05 0.10 0.10 0.10 0.26 0.26 0.26 0.17 0.17 0.17 * * * * * * * * Crit Moves: Green/Cycle: 0.25 0.25 0.25 0.25 0.25 0.25 0.60 0.60 0.60 0.60 0.60 0.60 Volume/Cap: 0.16 0.16 0.22 0.40 0.40 0.40 0.44 0.44 0.44 0.28 0.28 0.28 12.5 12.5 Uniform Del: 11.7 11.7 11.9 12.5 4.3 4.3 4.3 3.8 3.8 3.8 IncremntDel: 0.2 0.2 0.3 0.6 0.6 0.6 0.2 0.2 0.2 0.1 0.1 0.1 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 4.5 11.9 11.9 13.1 13.1 13.1 4.5 Delay/Veh: 12.2 4.5 3.9 3.9 3.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 11.9 11.9 12.2 13.1 13.1 13.1 4.5 4.5 4.5 3.9 3.9 3.9 LOS by Move: В В В B B В А A Α Α Α Α 38 38 54 115 115 115 177 177 177 90 HCM2k95thQ: 90 90 Note: Queue reported is the distance per lane in feet.

					CM Operati		outation Repo e Volume Alt					
Intersection #2: N	Bascom	Avenue/	Naglee A	venue		ackyrounu	AW					
			Signal-E	Protect/Rid	nts=Include							
	Initial La	Vol: ines:				90**** 1 •						
Sig Initial Vol: Lanes: Rig 78*** 1	Inal=Protect Ints=Include		C	Vol Cnt I ycle Time (Signal=Protec Rights=Includ	le Lai	nes: Initial ¹ 0 114			
0	\$		L	.oss Time (sec):	12	-	A	1			
242 1	÷			Critical		.613	-	—	1 288*	**		
1	₹		-	it Del (sec/		32.2		¥	0			
2 0	¥		Avg [Delay (sec/		34.1		₹ I	1 137	,		
					LOS:	C						
		•	<u>۲</u> ۳ (T	7	(
	La Initial	nes: Vol:	1 0 194 Signal=F	2 1266*** Protect/Righ	0 nts=Overlap	1 222						
Street Name:			Bascom			_	_		Jaglee			
Approach: Movement:	Nor L -	th Bo T	und - R	Sou L -	ith Bo - T	und – R	Ea L -	ast Bo · T	ound – R	We L -	est Bc - T	ound - R
Min. Green:	 7	10	 10		 10	 10	 7	10	 10		 10	 10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Modul	 e:7:00	-9:00	 AM									
Base Vol:		1239	220	87	350	149 1.00	72 1.00	227 1.00	1 1.00	130	270 1.00	113 1.00
Growth Adj: Initial Bse:	1.00 188	1239	1.00 220	1.00 87	1.00 350	149	1.00 72	227	1.00	1.00 130	270	113
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI: Initial Fut:	б 194	27 1266	2 222	3 90	30 380	15 164	6 78	15 242	1 2	7 137	18 288	1 114
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:		1266	222	90	380	164	78	242	2	137	288	114
Reduct Vol:	0	0 1266	0	0	0	0 164	0	0	0	0 127	0	0
Reduced Vol: PCE Adj:	1.00	1266 1 00	222 1.00	90 1 00	380 1.00	164 1.00	78 1.00		2 1.00	137 1 00	288 1.00	114 1.00
MLF Adj:	1.00		1.00		1.00	1.00		1.00			1.00	1.00
FinalVolume:	194	1266	222	90	380	164	78	242	2	137	288	114
Saturation F												
Sat/Lane:	1900		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85		0.91	0.91	0.95	0.95	0.95	0.95	0.91	0.91
Lanes:	1.00		1.00		1.40	0.60			0.02		1.43	0.57
Final Sat.:	1805		1615 		2408	1039 	1805 		30 		2475 	980
Capacity Ana	-		e:	'								
Vol/Sat:	0.11		0.14		0.16	0.16	0.04	0.07	0.07	0.08	0.12	0.12
Crit Moves: Green/Cycle:	0.26	****	0.71	****	0.39	0.39	**** 0.07	0 1 2	0.13	0 1 2	**** 0.19	0.19
Volume/Cap:			0.19		0.39	0.39			0.13		0.19	0.19 0.61
Uniform Del:			7.0		31.0	31.0	63.2		57.3		52.0	52.0
IncremntDel:		0.5	0.1	7.4	0.2	0.2	8.5	1.3	1.3	3.1	1.7	1.7
InitQueuDel:		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00		1.00		1.00	1.00	1.00		1.00	1.00		1.00
Delay/Veh:			7.1		31.2	31.2	71.7		58.6		53.7	53.7
User DelAdj:			1.00		1.00	1.00			1.00		1.00	1.00
AdjDel/Veh:			7.1		31.2	31.2 C	71.7 E		58.6 r		53.7	53.7
LOS by Move: HCM2k95thQ:	D 329	C 797	A 159	E 231	С 409	409		E 278	E 278	E 298	D 419	D 419
Note: Queue :									2,0	200	>	>
, Xucuc			u		- PCT							

Traffix 8.0.0715

Approach:North BoundSouth BoundEast BoundWest BoundMovement:L-T-RL-T-RMin. Green:710107101071010710Min. Green:71010710107101071010YR:4.04.04.04.04.04.04.04.04.04.04.04.0YR:4.04.04.04.04.04.04.04.04.04.04.0Volume Module:4:00-6:00 PMBase Vol:1154432142149919212950627169232102Growth Adj:1.001.001.001.001.001.001.001.001.001.001.00Initial Bse:1154432142149919212950627169232102Added Vol:000000000000Atded Vol:101.001.001.001.001.001.001.001.001.00Initial Bse:115474223216101710214854132178269105Reduce Vol:1254742232161017102148541321782					CM Opera	ervice Compl tions (Future	Volume Alt				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Intersection #2: N E	Bascom Avenue/	Naglee A	Avenue		Sackground	PIM				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			102	1017***		216					
Loss Tree (sec: 12 54''' 1 54''' 1 54'''' 1 54'''' 1 54'''' 1 54'''''' 1 54''''' 1 54''''''''''''''''''''''''''''''''''''	Initial Vol: Lanes: Rig		C			n/a R		le Lan			
541"************************************			I	Loss Time (sec):	12		`` ▲) 105	i	
22 0 Aug Deby (pecvent): 43.6 1 178" 1 178				Critical	V/C: 0).702		<u> </u>)	
Los: D Los: D Los: D Los: D Lance: 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , 12^{10} , $12^$	1	<u>-</u>	Avg C	rit Del (sec/	veh):	43.8)		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	32 0		Avg	Delay (sec/	veh):	43.6		¥ 1	178*	**	
Inital Vie 12* 474 223 Signal-Proceeding Develop Nagle Avenue Nagle Avenue Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 <t< td=""><td></td><td>•</td><td></td><td></td><td>LOS:</td><td>D</td><td></td><td>•</td><td></td><td></td><td></td></t<>		•			LOS:	D		•			
Intel Vie 12** 474 223 Street Name: N Bascom Avenue Nagle Avenue West Bound Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R - T - R - T - R - T - R - T - R - T - R - T - R - T - R - T - R - T - R - T R - T R R - T R R - T R R - T R R - T R R R R R R R R R R R R R R R R R		•	$ \land \blacktriangleleft$	†	^►	(
Approach:North BoundSouth BoundEast BoundWest BoundMovement:L-T-RL-T-RMin. Green:71010710107101071010Y+R:4.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.0 <td></td> <td></td> <td>5***</td> <td>474</td> <td></td> <td>223</td> <td></td> <td></td> <td></td> <td></td> <td></td>			5***	474		223					
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Final Sat.: 1805 3610 1615 1805 3235 324 1805 3381 200 1805 2487 971 Capacity Analysis Module:											
	Lanes: Final Sat.:										
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Uniform Del: 61.1 41.1 26.7 43.5 31.2 31.2 54.0 49.7 49.7 57.4 49.1 49.1 IncremntDel: 11.9 0.3 0.3 0.7 1.4 1.4 1.6 2.8 2.8 8.6 0.7 0.7 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.00 1.00 1.00 1.00	-										
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Delay/Veh: 73.0 41.4 27.0 44.2 32.6 32.6 55.6 52.5 56.0 49.7 49.7 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 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 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 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 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.											
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					putation Report re Volume Alternation	ve)		
Intersection #3: N	Bascom Avenu	e/Hedding		Background		,		
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1	≜	I	loss Time (sec):	12	€	1		
305*** 0	<u>→</u>		Critical V/C:	0.755	-	0 258		
1 -	÷	Avg C	it Del (sec/veh):	47.3	-	1		
119 0 -	*	Avg	Delay (sec/veh):	44.5	•	0 103		
	*	5	LOS:	D	•			
		h •1	T T	(
	Lanes: Initial Vol:	1 0 137 Signal=	1 1 1053*** Protect/Rights=Includ	0 136 e				
Street Name	: N	Bascom	Avenue			Hedding	Street	
Approach:	North B		South B			Bound	West	
Movement:	L – T 	- R 	L - T	– R 		r – R 	L – T 	- R
Min. Green:	7 10		7 10	10		10 10	101	
/+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 Modu	le:7:00-9:0	1	I		11	I	I	I
Base Vol: Growth Adj:	136 1028 1.00 1.00	134 1.00	119 463 1.00 1.00	241 1.00	118 28 1.00 1.0	32 118 00 1.00	93 25 1.00 1.0	
Initial Bse		134	119 463	241		B2 118	93 25	
Added Vol:	0 0	0	0 0	0	0	0 0		0 0
ATI: Initial Fut	1 25 : 137 1053	2 136	4 43 123 506	12 253		23 1)5 119	10 103 25	6 1 8 83
Jser Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.0		1.00 1.0	
PHF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.0		1.00 1.0	
PHF Volume: Reduct Vol:	137 1053 0 0	136 0	123 506 0 0	253 0	126 30 0	05 119 0 0	103 25 0	8 83 0 0
	: 137 1053	136	123 506	253	126 30	05 119	103 25	8 83
PCE Adj: MLF Adj:	1.00 1.00		1.00 1.00				1.00 1.0 1.0 1.0	
	: 137 1053		1.00 1.00 123 506				103 25	
	-							
Saturation : Sat/Lane:			1900 1900	1900	1900 190	00 1900	1900 190	0 1900
Adjustment:						91 0.91	0.91 0.9	
	1.00 1.77					11 0.43	0.46 1.1	
	1805 3143 -				792 192			
Capacity An	alysis Modu	le:				·		,
/ol/Sat:	0.08 0.34		0.07 0.22 ****	0.22	0.16 0.1	l6 0.16 **	0.13 0.1	3 0.13
Crit Moves: Green/Cycle	: 0.14 0.44			0.40			0.17 0.1	
/olume/Cap:	0.56 0.76	0.76	0.76 0.56	0.56	0.76 0.7	76 0.76	0.76 0.7	6 0.76
Jniform Del							55.4 55.	
IncremntDel	: 2.8 2.1 : 0.0 0.0		18.1 0.5 0.0 0.0	0.5 0.0		.5 4.5 .0 0.0	5.5 5. 0.0 0.	
Delay Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.0	00 1.00	1.00 1.0	0 1.00
Delay/Veh:			80.2 33.1				60.9 60.	
Jser DelAdj AdjDel/Veh:			1.00 1.00 80.2 33.1				1.00 1.0 60.9 60.	
LOS by Move	E C	С	F C	C	Е	E E	E	E E
HCM2k95thQ:			326 591			36 586	506 50	6 506
Note: Queue	reported i	s the d	istance per	r ⊥ane	in feet.			

Level Of Service Computation Report	
2000 HCM Operations (Future Volume Alternative) Background PM	
Intersection #3: N Bascom Avenue/Hedding Street	
Signal=Protect/Rights=Include Initial Vol: 179 1109*** 179 Lanes: 0 1 1 0 1	
188*** 0 Cycle Time (sec): 140	tial Vol: 73***
Loss Time (sec): 12	
453 0 Critical V/C: 0.837 0	278
1 Avg Crit Del (sec/veh): 51.2 1	
130 0 Avg Delay (sec/veh): 49.6 0	152
LOS: D	
Lanes: 1 0 1 1 0 Initial Vol: 63*** 546 153 Signal=Protect/Rights=Include	
Street Name: N Bascom Avenue Heddi Approach: North Bound South Bound East Bound Movement: L - T - R L - T - R L - T - R	ng Street West Bound L - T - R
	- 0 10 10 10
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.	
	-
Volume Module:4:00-6:00 PM Base Vol: 62 517 143 175 1077 177 180 441 12	9 142 263 70
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
Initial Bse: 62 517 143 175 1077 177 180 441 12 Added Vol: 0 0 0 0 0 0 0 0	9 142 263 70 0 0 0 0
	1 10 15 3
Initial Fut: 63 546 153 179 1109 179 188 453 13	
Jser Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00	
PHF Volume: 63 546 153 179 1109 179 188 453 13	
	0 0 0 0
Reduced Vol: 63 546 153 179 1109 179 188 453 13 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: 63 546 153 179 1109 179 188 453 13	
	-
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190	0 1900 1900 1900
Adjustment: 0.95 0.92 0.92 0.95 0.93 0.93 0.92 0.92 0.9	
Lanes: 1.00 1.56 0.44 1.00 1.72 0.28 0.49 1.17 0.3 Final Sat.: 1805 2727 764 1805 3043 491 848 2043 58	
	-
Capacity Analysis Module:	2 0 1 / 0 1 / 0 1 /
Vol/Sat: 0.03 0.20 0.20 0.10 0.36 0.36 0.22 0.22 0.2 Crit Moves: **** ****	2 0.14 0.14 0.14 ****
Green/Cycle: 0.05 0.32 0.32 0.16 0.43 0.43 0.26 0.26 0.2	
Volume/Cap: 0.70 0.62 0.62 0.62 0.85 0.85 0.85 0.85 0.8	
Jniform Del: 65.5 40.3 40.3 54.9 35.7 35.7 49.0 49.0 49. IncremntDel: 21.4 1.1 1.1 4.2 4.6 4.6 7.4 7.4 7.	
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 1.00 1.00 1.00
	3 67.0 67.0 67.0
	0 1 00 1 00 1 00
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	3 67.0 67.0 67.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	3 67.0 67.0 67.0 E E E E

	2000 HCM Operation	vice Computation Report	ve)	
Intersection #4: N Bascom Avenue		ackground AM		
Initial Vol: Lanes:	Signal=Protect/Rights=Overlap 89 489 1 0 3 0 1 0 3 0	06***		
Signal=Protect Initial Vol: Lanes: Rights=Overlap		Signal=Protect n/a Rights=Overlap	Lanes: Initial Vol: 1 266	
• 🔺	Loss Time (sec):	12	0	
213 2		704	2 839***	
	ũ ()	1.6	0	
101 1	Avg Delay (sec/veh): 4	0.2 D	1 160	
		•		
Lanes: Initial Vol:	1 0 2 0 230 1092*** Signal=Protect/Rights=Overlap	59		
	Bascom Avenue		San Carlos Stre	
Approach: North Bo Movement: L - T	ound South Bor - R L - T		Bound We I - R L -	est Bound - T - R
Min. Green: 7 10 Y+R: 4.0 4.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		10 10 7 10 4.0 4.0	$\begin{array}{ccc} 10 & 10 \\ 4.0 & 4.0 \end{array}$
Volume Module:7:00-9:00) AM			·
Base Vol: 206 1062 Growth Adj: 1.00 1.00 Initial Bse: 206 1062	156 103 481 1.00 1.00 1.00 156 103 481	1.00 1.00 1.0	3497160001.001.003497160	686 265 1.00 1.00 686 265
Added Vol: 0 0 ATI: 24 30 Initial Fut: 230 1092	$\begin{array}{cccc} 0 & 0 & 0 \\ 3 & 3 & 8 \\ 159 & 106 & 489 \end{array}$		0 0 0 29 4 0 13 101 160	0 0 153 1 839 266
User Adj: 1.00 1.00 PHF Adj: 1.00 1.00 PHF Volume: 230 1092	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		D01.001.0013101160	1.00 1.00 1.00 1.00 839 266
Reduct Vol: 0 0 Reduced Vol: 230 1092 PCE Adj: 1.00 1.00	$\begin{array}{cccc} 0 & 0 & 0 \\ 159 & 106 & 489 \\ 1.00 & 1.00 & 1.00 \end{array}$		00 1.00 1.00	1.00 1.00
MLF Adj: 1.00 1.00 FinalVolume: 230 1092	1.00 1.00 1.00 159 106 489	89 90 21	13 101 160	839 266
Saturation Flow Module	:			
Sat/Lane: 1900 1900 Adjustment: 0.95 0.95 Lanes: 1.00 2.00 Final Sat.: 1805 3610	1900 1900 1900 0.85 0.95 0.91 1.00 1.00 3.00	1900 1900 190 0.85 0.95 0.9 1.00 1.00 2.0 1615 1805 265	950.850.95001.001.00	0.95 0.85 2.00 1.00
		1615 1805 363 		3610 1615
Capacity Analysis Modul Vol/Sat: 0.13 0.30 Crit Moves: ****	0.10 0.06 0.09	0.06 0.05 0.0		0.23 0.16 ****
Green/Cycle: 0.29 0.43 Volume/Cap: 0.43 0.70 Uniform Del: 39.9 32.6	0.65 0.08 0.22 0.15 0.70 0.43 9.4 62.5 47.2	0.29 0.07 0.3 0.19 0.70 0.3 37.4 63.6 50	33 0.13 0.40	0.70 0.40
IncremntDel: 0.6 1.5 InitQueuDel: 0.0 0.0 Delay Adj: 1.00 1.00	0.1 14.0 0.3 0.0 0.0 0.0 1.00 1.00 1.00	0.2 16.3 0 0.0 0.0 0 1.00 1.00 1.0	.3 0.1 0.7 .0 0.0 0.0	1.9 0.4 0.0 0.0 1.00 1.00
Delay/Veh: 40.4 34.1 User DelAdj: 1.00 1.00 AdjDel/Veh: 40.4 34.1	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	37.679.9501.001.001.037.679.950	.4 20.7 47.1 00 1.00 1.00	42.8 29.2 1.00 1.00
LOS by Move: D C HCM2k95thQ: 376 867 Note: Queue reported is	A E D 130 281 323	D E 143 252 23	D C D	D C 743 373

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background PM												
Intersection #4: N	Bascom	Avenue/	San Carl	os Stree		g						
	L	Il Vol: anes:	Signal=F 84 1 0	Protect/Righ 1169*** 3		255 1						
Sig Initial Vol: Lanes: Rig 93 1	nal=Protec hts=Overla		с	Vol Cnt I ycle Time (Signal=Protec Rights=Overl		nes: Initial ^v I 114			
0	€		L	oss Time (sec):	12		▲ ``)	•		
875*** 2	₹			Critical	V/C:	0.747			2 447	7		
0	►		Avg Cr	it Del (sec/	veh):	49.2	4	5)			
162 1	÷.		Avg I	Delay (sec/	veh):	45.5		ί,	208*	**		
	-				LOS:	D		-				
	L	anes:		2	*	1						
	Initia	Il Vol: 18	0*** Signal=F	595 Protect/Righ	nts=Overla	267 p						
Street Name: Approach: Movement:	Noi L -	rth Bo [.] - T	– R .	Sou L -	uth Bo - T	ound – R	L -	ast Bc - T	- R	We _ L -	est Bo - T	– R
Min. Green: Y+R:	7 4.0	10 4.0	 10 4.0	7 4.0	10 4.0	10 4.0	 7 4.0	10 4.0	 10 4.0	 7 4.0	10 4.0	 10 4.0
Volume Module												
Base Vol: Growth Adj:	165 1.00	586	262 1.00		1149 1.00	75 1.00	63 1.00	702	142 1.00	208 1.00	376	111 1.00
Initial Bse:	165	586	262		1149	75	1.00 63	702	142	208	376	111
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI: Initial Fut:	15 180	9 595	5 267	9 255	20 1169	9 84	30 93	173 875	20 162	0 208	71 447	3 114
User Adj:	1.00		1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj:	1.00		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00
PHF Volume:	180	595	267		1169	84	93	875	162	208	447	114
Reduct Vol: Reduced Vol:	0 180	0 595	0 267	0 255	0 1169	0 84	0 93	0 875	0 162	0 208	0 447	0 114
	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:		595	267 l		1169	84		875	162		447	114
Saturation F			Į	I			11		1	ļ		I
Sat/Lane:		1900	1900		1900		1900		1900	1900		1900
Adjustment: Lanes:	0.95		0.85 1.00		0.91 3.00	0.85 1.00	0.95 1.00		0.85 1.00	0.95	0.95 2.00	0.85 1.00
Final Sat.:			1615		5187		1805		1615	1805		1615
Capacity Ana												
Vol/Sat:	-	0.16	0.17	0.14	0.23	0.05	0.05	0.24	0.10	0.12	0.12	0.07
Crit Moves:	****	0 00	0 00	0 00	****	0 4 4	0 1 4	****	0.45	****	0 7 4	0 54
Green/Cycle: Volume/Cap:			0.39 0.43		0.30 0.75	0.44 0.12	0.14 0.37	0.32	0.46 0.22	0.15 0.75		0.54 0.13
Uniform Del:			31.3		44.0	22.9	54.5		22.8	56.6		16.0
IncremntDel:			0.5	6.1	2.0	0.1	0.9	2.7	0.1	10.6	0.2	0.1
InitQueuDel:			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1.00		1.00		1.00	1.00	1.00		1.00	1.00		1.00
Delay/Veh: User DelAdj:			31.8 1.00		46.1 1.00	23.0 1.00	$55.4 \\ 1.00$		23.0 1.00	67.1 1.00		16.1 1.00
AdjDel/Veh:			31.8		46.1	23.0	55.4		23.0	67.1		16.1
LOS by Move:		D	C	E	D	C	E	D	C	E	D	В
HCM2k95thQ:			391	513		105	190	796	201	464	355	119
Note: Queue	report	ced is	the d				in fee					

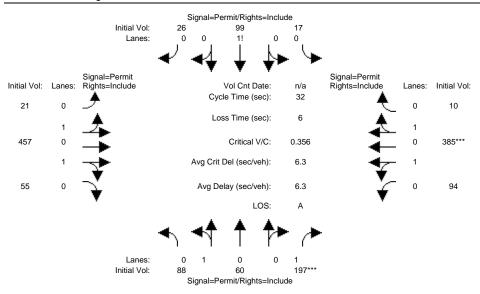
Appendix D – Background plus Project Conditions Intersections Level of Service Worksheet



City of San Jose,CA

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

Intersection #1: Naglee Avenue/Dana Avenue



Street Name: Approach:		rth Bo	Dana A		1th Bo	und	Naglee Avenue East Bound West					Bound	
Movement:		- Т							– R		зсьс Т		
	10		10	•	10	10	10			10		10	
Y+R:	4.0					4.0		4.0		4.0		4.0	
Volume Module				1		I			I	I		I	
Base Vol:	85	60	197	17	99	26	21	456	54	94	382	10	
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:	85	60	197	17	99	26	21	456	54	94	382	10	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Project Tri:	3	0	0	0	0	0	0	1	1	0	3	0	
Initial Fut:	88	60	197	17	99	26	21	457	55	94	385	10	
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:	88	60	197	17	99	26	21	457	55	94	385	10	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:			197	17	99	26	21	457	55	94	385	10	
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:			197	17		26	21		55	94		10	
Saturation F	low Me	odule:											
Sat/Lane:		1900			1900	1900		1900		1900		1900	
Adjustment:	0.77	0.77	0.85	0.94	0.94	0.94	0.87	0.87	0.87	0.77	0.77	0.77	
Lanes:		0.41	1.00		0.70	0.18		1.71		0.38		0.04	
Final Sat.:			1615			326			342		2298	60	
Capacity Ana	-												
Vol/Sat:	0.10	0.10	0.12	0.08	0.08	0.08	0.16	0.16	0.16	0.17		0.17	
Crit Moves:			* * * *								****		
Green/Cycle:			0.34		0.34	0.34		0.47	0.47	0.47		0.47	
Volume/Cap:			0.36		0.23	0.23		0.34	0.34	0.36		0.36	
Uniform Del:			7.9	7.5	7.5	7.5	5.4	5.4	5.4	5.4	5.4	5.4	
IncremntDel:			0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	
InitQueuDel:			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Delay Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Delay/Veh:			8.3	7.7	7.7	7.7	5.5	5.5	5.5	5.6	5.6	5.6	
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00	
AdjDel/Veh:		8.0	8.3	7.7		7.7	5.5	5.5	5.5	5.6	5.6	5.6	
LOS by Move: HCM2k95thQ:			A 95	A 62	A 62	A 62	A 106		A 106	A 102	A 102	A 102	
									TUP	TUZ	TUZ	TUZ	
Note: Queue :	lepor	lea IS	une a	istan	se per	Tane	ти те	さし.					

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background plus Project PM											
Intersection #1: Na	glee Avenue/Da	ana Avenu									
		•	Permit/Rights=Include								
	Initial Vol: Lanes:	32 0 0	106*** 1! 0	36 0							
	•	ע או	. L 💵	\							
	nal=Permit		• •		Signal=Permit						
Initial Vol: Lanes: Rig	hts=Include	С	Vol Cnt Date: ycle Time (sec):	n/a F 40	Rights=Include La	anes: Initial \	/ol:				
16 0	.		_oss Time (sec):	6	<u> </u>	0 25					
1	₽					1					
741*** 0	•			0.431	-	0 397					
1	*	Avg C	rit Del (sec/veh):	5.9	7	1					
128 0		Avg	Delay (sec/veh):	5.9	÷	0 67					
	•		LOS:	А	¥						
	-	ь 📣	▲ ♠ ▶	*							
		') 'I	I Yr	(*							
	Lanes: Initial Vol:	0 1 32	0 0 32	1 87							
		Signal=	Permit/Rights=Include	e							
Street Name:		Dana A	venue			Naglee					
Approach: Movement:	North Bo L - T	ound – R	South Bo L - T	ound – R		ound – R	West Bo L - T	und – R			
Min. Green:	10 10	10	10 10	10	10 10		10 10	10			
Y+R:	4.0 4.0	4.0 	4.0 4.0	4.0	4.0 4.0	4.0	4.0 4.0	4.0			
Volume Module			I			I	1	I			
Base Vol: Growth Adj:	30 32 1.00 1.00	87 1.00	36 106 1.00 1.00	32 1.00	16 738 1.00 1.00	124 1.00	67 395 1.00 1.00	25 1.00			
Initial Bse:	30 32	87	36 106	32	16 738	124	67 395	25			
Added Vol:	0 0	0	0 0	0	0 0	0	0 0	0			
Project Tri: Initial Fut:	2 0 32 32	0 87	0 0 36 106	0 32	0 3 16 741	4 128	0 2 67 397	0 25			
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: Reduct Vol:	32 32 0 0	87 0	36 106 0 0	32 0	16 741 0 0	128 0	67 397 0 0	25 0			
Reduced Vol:	32 32	87	36 106	32	16 741	128	67 397	25			
PCE Adj:								1.00			
MLF Adj: FinalVolume:	$1.00 \ 1.00$ 32 32	1.00 87	1.00 1.00 36 106	1.00 32	1.00 1.00 16 741		1.00 1.00 67 397	1.00 25			
Saturation FI Sat/Lane:	low Module 1900 1900		1900 1900	1900	1900 1900	1900	1900 1900	1900			
Adjustment:		0.85	0.91 0.91				0.76 0.76	0.76			
Lanes:	0.50 0.50		0.21 0.61		0.04 1.67		0.27 1.63	0.10			
Final Sat.:				317			396 2346	148			
Capacity Ana	lysis Modul	le:									
Vol/Sat: Crit Moves:	0.04 0.04	0.05	0.10 0.10	0.10	0.27 0.27		0.17 0.17	0.17			
Green/Cycle:	0.25 0.25	0.25	0.25 0.25	0.25	0.60 0.60		0.60 0.60	0.60			
Volume/Cap:	0.16 0.16	0.22	0.40 0.40	0.40	0.44 0.44	0.44	0.28 0.28	0.28			
Uniform Del: IncremntDel:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11.9 0.3	12.5 12.5 0.6 0.6	12.5 0.6	4.4 4.4 0.2 0.2		3.9 3.9 0.1 0.1	3.9 0.1			
InitQueuDel:		0.0	0.0 0.0	0.0	0.2 0.2		0.0 0.0	0.0			
Delay Adj:		1.00	1.00 1.00	1.00	1.00 1.00		1.00 1.00	1.00			
Delay/Veh: User DelAdj:		12.2 1.00	13.1 13.1 1.00 1.00	$13.1 \\ 1.00$	4.5 4.5 1.00 1.00	4.5 1.00	3.9 3.9 1.00 1.00	3.9 1.00			
AdjDel/Veh:		12.2	13.1 13.1	13.1	4.5 4.5	4.5	3.9 3.9	3.9			
LOS by Move:	B B	В	B B	В	A A	A	A A	A			
HCM2k95thQ: Note: Queue 1		54 sthed	115 115 istance per	115 r lane	179 179 in feet.	179	90 90	90			
			per								

Bascom Medical Office Building Transportation Analysis

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background plus Project AM Intersection #2: N Bascom Avenue/Naglee Avenue Signal=Protect/Rights=Include 90*** Initial Vol: 164 408 Lanes: Λ 0 Signal=Protect Signal=Protect Initial Vol: Lanes: Rights=Include Vol Cnt Date: n/a Rights=Include Lanes: Initial Vol: Cycle Time (sec): 140 78*** 114 0 12 Loss Time (sec): 1 242 Critical V/C: 0.615 288*** 1 Avg Crit Del (sec/veh): 32.2 0 3 Avg Delay (sec/veh): 34.2 137 С LOS: 2 Lanes: 0 1274*** Initial Vol: 200 222 Signal=Protect/Rights=Overlap Street Name: N Bascom Avenue Naglee Avenue Approach: North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - R Movement: L - T - R _____ 7 10 10 7 10 10 7 10 10 7 10 10 Min. Green: 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:7:00-9:00 AM Base Vol: 194 1266 222 90 380 164 78 242 2 137 288 114 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 90 380 137 Initial Bse: 194 1266 78 222 164 242 2 288 114 0 0 0 0 0 0 0 0 Added Vol: 0 0 0 0 Project Tri: 6 8 0 0 28 0 0 0 1 0 0 0 Initial Fut: 200 1274 222 78 242 90 408 164 3 137 288 114 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 1.00 222 164 78 114 PHF Volume: 200 1274 90 408 242 3 137 288 0 0 0 0 0 0 0 0 0 0 0 0 Reduct Vol: Reduced Vol: 200 1274 222 90 408 164 78 242 3 137 288 114 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: 200 1274 222 90 408 164 78 242 3 137 288 114 Saturation Flow Module: 1900 Adjustment: 0.95 0.95 0.85 0.95 0.91 0.91 0.95 0.95 0.95 0.95 0.91 0.91 1.00 2.00 1.00 1.00 1.43 0.57 1.00 1.98 0.02 1.00 1.43 0.57 Lanes: Final Sat.: 1805 3610 1615 1805 2464 991 1805 3559 44 1805 2475 980 Capacity Analysis Module: Vol/Sat: 0.11 0.35 0.14 0.05 0.17 0.17 0.04 0.07 0.07 0.08 0.12 0.12 * * * * * * * * * * * * * * * * Crit Moves: Green/Cycle: 0.26 0.57 0.08 0.39 0.39 0.07 0.13 0.13 0.19 0.71 0.13 0.19 Volume/Cap: 0.42 0.62 0.19 0.62 0.42 0.42 0.62 0.54 0.54 0.57 0.62 0.62 Uniform Del: 42.8 19.7 6.9 62.2 31.0 31.0 63.2 57.4 57.4 56.9 52.1 52.1 0.2 IncremntDel: 0.6 0.6 0.1 7.6 0.2 8.7 1.3 1.3 3.2 1.8 1.8 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 7.0 31.2 72.0 58.7 43.4 20.2 69.8 31.2 Delay/Veh: 58.7 60.0 53.8 53.8 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: 43.4 20.2 7.0 69.8 31.2 31.2 72.0 58.7 58.7 60.0 53.8 53.8 LOS by Move: D С Е С С Ε Ε Ε Е D D Α 341 802 159 232 430 430 210 280 HCM2k95thQ: 280 298 420 420 Note: Queue reported is the distance per lane in feet.

City of San Jose,CA

					CM Operat		utation Repo Volume Alt Project PM					
Intersection #2: N E	Bascom A	venue/Na	aglee A	venue								
	Initial V	/ol: 102		rotect/Rigl 1031***	nts=Include	216						
	Lan		2 D 1	1		1						
		-	-44		-↓>-	$\mathbf{\bullet}$						
	nal=Protect		•	•	•		Signal=Prote			<i>,</i> .		
Initial Vol: Lanes: Rig	nts=Include		Су	Vol Cnt I cle Time (n/a F 140	Rights=Inclue	▲	nes: Initial \			
148 1			Lo	oss Time (sec):	12		<u> </u>	0 105			
0	►			, ,	, 		-	<u> </u>	1			
541*** 1	•			Critical		.723			1 269			
1	•		Avg Crit	t Del (sec/	veh):	45.3	-	7	0			
32 0			Avg D	elay (sec/	veh):	44.3		2	1 178*'	**		
•				I	LOS:	D		•				
					Å.							
				Τ		(
	Lan		1 0	2		1						
	Initial V	/ol: 153**		508 rotect/Riał	nts=Overlap	223						
Street Nome:			-	-				ν.		Arromuo		
Street Name: Approach:	Nort	ы ва h Bour		Avenı Soı		und	Ea		laglee . ound		st Bo	und
Movement:	L -	т –	R	L -	- т	– R	L -	- Т	– R	L -		– R
Min Guani			 10	•						•	10	
Min. Green: Y+R:	7 4.0	10 4.0	4.0		10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module												
Base Vol: Growth Adj:	125 1.00 1	474 1 00 1	223	216 1.00	1017	102 1.00	148	541 1.00	32 1.00	178 1.00 1	269	105 1.00
Initial Bse:	125	474	223		1017	102	148	541	32	178	269	105
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	28	34	0	0	14	0	0	0	0	0	0	0
Initial Fut: User Adj:	153 1.00 1	508 1.00 1	223		1031 1.00	102 1.00	148 1.00	541 1.00	32 1.00	178 1.00 1	269	105 1.00
PHF Adj:	1.00 1		.00	1.00		1.00		1.00	1.00	1.00 1		1.00
PHF Volume:	153	508	223		1031	102	148	541	32	178	269	105
Reduct Vol:	0 153	0 508	0 223	0 216	0 1031	0 102	0 148	0 541	0 32	0 178	0 269	0 105
Reduced Vol: PCE Adj:			00		1.00				1.00	1.00 1		1.00
MLF Adj:			.00		1.00			1.00		1.00 1		1.00
FinalVolume:			223		1031	102	148		32	178	269	105
Saturation FI												
Sat/Lane:	1900 1		900	1900	1900	1900	1900	1900	1900	1900 1	.900	1900
Adjustment:			.85	0.95	0.94	0.94	0.95		0.94			0.91
	1.00 2		00		1.82	0.18		1.89	0.11	1.00 1		0.56
Final Sat.: 						321		3381	200	1805 2		971
Capacity Anal				I		I			I	I		I
		0.14 0	0.14	0.12	0.32	0.32	0.08	0.16	0.16	0.10 0).11	0.11
Crit Moves: Green/Cycle:	****		.44	0 26	**** 0.44	0.44	0 15	**** 0.22	0.22	**** 0.14 (20	0.20
Volume/Cap:).44		0.44	0.44		0.22	0.22	0.14 0		0.20
Uniform Del:			25.7	44.0		32.2		50.5	50.5	57.9 4		49.8
IncremntDel:			0.3	0.8	1.7	1.7	2.0	3.3	3.3	10.1	0.8	0.8
InitQueuDel: Delay Adj:			0.0	0.0	0.0 1.00	0.0 1.00	0.0	0.0 1.00	0.0 1.00	0.0 1.00 1	0.0	0.0 1.00
Delay/Veh:			26.0		33.9	33.9		53.9	53.9	68.1 5		50.6
User DelAdj:			.00		1.00	1.00		1.00	1.00	1.00 1	.00	1.00
AdjDel/Veh:			26.0		33.9	33.9		53.9	53.9	68.1 5		50.6
LOS by Move: HCM2k95thQ:		D 433	С 295	D 375	C 903	C 903	E 306	D 588	D 588	E 408	D 374	D 374
Note: Queue 1									200	TUO	5/4	514
	SPOLCC		u.	_~		-0110		•				

							outation Repo e Volume Alt					
Intersection #3: N	Bascom	Διριιο/	Hadding			ound plus F						
Intersection #3. N	Dascom	Avenue/										
	Initia La	I Vol:	Signal=1 253 0 1	Protect/Rigi		123*** 1						
	nal=Split hts=Include	e		Vol Cnt I ycle Time (sec):	n/a F 140	Signal=Split Rights=Incluc	de Lar	nes: Initial \) 83**			
1	\$		L	.oss Time (sec):	12		<u>.</u>	1			
305 0	•			Critical	V/C: 0	.761	-	È ') 258			
1	ᅷ		Avg Cr	it Del (sec/	veh):	47.7	4	7	1			
125 0	÷		Avg I	Delay (sec/	veh):	14.8		₹ °	0 109			
	•				LOS:	D		•				
		•	、 ◄◀	• 🕈		\checkmark						
	La Initia	anes: I Vol:	1 1 1 0 139 Signal=I	ا 1 1057*** Protect/Rigl		0 138						
Street Name:		N	Bascom	Aveni	Je			H	ledding	Stre	et	
Approach: Movement:	Nor L -	th Bor - T	und – R	Sou L -	uth Bo - T	und – R	Ea L -	ast Bo - T	und – R	We L	est Bo - T	ound – R
		- 1	- K 		- 1	- K 	- <u>u</u> 	- 1	- K		- 1	- R
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0
Volume Module	 e:7:00)-9:00	 AM									·
Base Vol:		1053	136	123	506	253	126	305	119	103	258	83
Growth Adj: Initial Bse:	1.00 137	1.00	1.00 136	1.00 123	1.00 506	1.00 253	1.00 126	1.00 305	$1.00 \\ 119$	1.00 103	1.00 258	1.00 83
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri: Initial Fut:	2 139	4 1057	2 138	0 123	16 522	0 253	0 126	0 305	6 125	6 109	0 258	0 83
User Adj:	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj: PHF Volume:	1.00		1.00	1.00 123	1.00 522	1.00 253	1.00 126	1.00 305	1.00		1.00	1.00
Reduct Vol:	139 0	1057 0	138 0	123	522 0	253 0	126	305 0	125 0	109 0	258 0	83 0
Reduced Vol:			138	123		253		305	125		258	83
PCE Adj: MLF Adj:	1.00		1.00		1.00		1.00 1.00	1.00	1.00 1.00		1.00 1.00	
FinalVolume:	139	1057	138	123	522	253	126	305	125	109	258	83
Saturation F												
Sat/Lane:			1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:					0.90				0.91		0.91	
Lanes: Final Sat.:									0.45 775		1.15 1988	0.37 639
Capacity Ana Vol/Sat:	-			0 07	0 22	0 22	0 16	0 16	0 16	0 1 2	0 1 2	0 1 2
Crit Moves:		0.34 ****		0.0/ ****	0.23	0.23	U.10 ****	0.10	0.10	0.13	0.13	0.13 ****
Green/Cycle:								0.21	0.21	0.17		0.17
Volume/Cap: Uniform Del:					0.57 32.9	0.57 32.9		0.76 51.8	0.76 51.8		0.76 55.3	0.76 55.3
IncremntDel:			2.2	18.9	0.6	0.6	4.7	4.7	4.7	5.8		5.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Delay/Veh: User DelAdj:			35.1 1.00		33.5 1.00	33.5 1.00		56.6 1.00	56.6 1.00		61.1 1.00	61.1 1.00
AdjDel/Veh:			35.1		33.5	33.5	56.6		56.6		61.1	61.1
LOS by Move:	Е	D	D	F	С	С	E	Е	Е	Е	E	Е
HCM2k95thQ: Note: Queue :		974 edis	974 the d		607 Te per			594	594	514	514	514
	-				-		In Lee					

Signal-ProtectRights-Includes Mark Colspan="4">Signal-ProtectRights-Includes Signal-ProtectRights-Includes Mark Colspan="4">Signal-ProtectRights-Includes Mark Colspan="4">Signal-ProtectRights-Includes Mark Colspan="4">Signal-ProtectRights-Include Mark Colspan="4">Mark Colspan="4">Signal-ProtectRights-Include Mark Colspan="4" Mark Colspan="4" Mark Colspan="4" Mark Colspan="4" Mark Colspan="4" Mark Colspan="4" Mark						CM Opera		utation Repo Volume Alte Proiect PM					
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Intersection #3: N E	Bascom	Avenue/	Hedding	Street	J		.,					
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		L		179	1117***	o o	179 1						
Loss Time (sec): 12 Critical VIC: 0.846 Aug Critical VIC: 0.856 Aug Critical VIC: 0.856 Aug Critical VIC: 0.846 Aug	Initial Vol: Lanes: Rig		e	C			n/a F		▲				
453 0 Cnical VIC: 0.846 0 278 133*** 0 Ang Cril Del (sectueh): 52.0 1 1 133*** 0 Ang Cril Del (sectueh): 50.2 0 155 133*** 0 Ang Delay (sectueh): 50.2 0 155 133*** 0 Ang Delay (sectueh): 50.2 0 155 133*** 0 Ang Delay (sectueh): 50.2 0 155 133*** 0 Morth Bound South Bound Kest Bound West Bound Novement: L T T R L - T - 110 10 10 10 10 10 10 10 10 10 110 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 <td< td=""><td></td><td>•</td><td></td><td>L</td><td>.oss Time (</td><td>sec):</td><td>12</td><td></td><td>▲<u> </u></td><td></td><td>*</td><td></td><td></td></td<>		•		L	.oss Time (sec):	12		▲ <u> </u>		*		
133" 0 Aug Delay (sectively): 50.2 0 155 Lanes: 1 0 1 0 1 0 1 0 0 Signal-ProtectRights=include Street Name: North Bound South Bound East Bound West Bound Movement: $1 - T - R$ $1 - T - R$ Aug Delay (sectively): 50.2 $1 - T - R$ $1 - T - R$ Aug Delay 10 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10		*► ►			Critical	V/C:	0.846		<u> </u>				
Lane: 1 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	1	-		Avg Cr	it Del (sec/	veh):	52.0	4	7	1			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	133*** 0	7		Avg [,	¥ ') 155			
Initial Vie: 70						LOS:	D						
Approach:North BoundSouth BoundEast BoundWest BoundMovement:L-T-RL-T-RL-T-RMin. Green:710107101010101010101010YHR:4.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.04.0<				0***	566		160						
Min. Green: 7 10 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 <	Street Name: Approach:	Noi	rth Bo	und			ound	Ea	ast Bo	und			und
Win. Green: 7 10 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 100 100 100 100 100 <td>Movement:</td> <td></td>	Movement:												
Wolume Module:4:00-6:00 PM No. 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 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 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 1.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 </td <td>Min. Green: Y+R:</td> <td>7 4.0</td> <td>10 4.0</td> <td>10 4.0</td> <td>7 4.0</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td>	Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10	10	10	10	10	10	10	10
Browth Adj: 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 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0													
Initial Bse: 63 546 153 179 1109 179 188 453 130 152 278 73 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <t< td=""><td>Base Vol:</td><td>63</td><td>546</td><td>153</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Base Vol:	63	546	153									
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <th0< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th0<>													
Initial Fut: 70 566 160 179 1117 179 188 453 133 155 278 73 Jser Adj: 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 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 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 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 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 1.00 1.00 1.00 1.00 1.00 1.00	Added Vol:												
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Uniform Del:65.740.240.255.435.835.849.149.149.156.356.3IncremntDel:33.41.21.24.94.84.87.77.77.711.211.2			0.33	0.33	0.16		0.43	0.26	0.26		0.17	0.17	
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Delay/Veh: 99.2 41.4 41.4 60.3 40.5 40.5 56.7 56.7 56.7 67.5 67.5 67.5													67.5
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Note: Queue reported is the distance per lane in feet.	Note: Queue 1	report	ed is	the d									

					outation Report				
				tions (Futur ound plus I		native)			
Intersection #4: N	Bascom Avenue	/San Carlos S	treet						
	Initial Vol: Lanes:		/Rights=Overlag 90 3 0	136*** 1					
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0	♣	Loss T	ime (sec):	12	. 4	0			
²¹³ ² <u> </u> 0	•	Ci Avg Crit Del		0.733 44.3		²	839***		
101 1	¥.	Avg Ont Delay		41.6	¥	1	160		
	*	, wg Doldy	LOS:	D	Ý		100		
	•	. 🛧	≜ ≜ ►	*					
	Lanes: Initial Vol:		I I 2 0 95*** /Rights=Overlap	1 159 5					
Street Name:		Bascom Av			_		arlos Str		
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 Min. Green: Y+R:	 7 10 4.0 4.0	10 4.0 4	7 10 .0 4.0	10 4.0	 7 4.0	10 4.0	 10 7 4.0 4.0		 10 4.0
			.0 4.0	4.0	4.0	4.0 4		4.0	
Volume Module Base Vol:	e:7:00-9:00 230 1092		06 489	89	90	213 1	LO1 160	839	266
Growth Adj:	1.00 1.00		00 1.00	1.00			00 1.00		1.00
Initial Bse: Added Vol:	230 1092 0 0	159 1 0	06 489 0 0	89 0	90 0	213 1 0	LO1 160 0 0		266 0
Project Tri:	0 3	0	30 1	4	16	0	0 0		3
Initial Fut: User Adj:	230 1095 1.00 1.00		36 490 00 1.00	93 1.00	106 1.00 1		LO1 160 .00 1.00		269 1.00
PHF Adj:	1.00 1.00		00 1.00	1.00	1.00 1		.00 1.00		1.00
PHF Volume:	230 1095		36 490	93	106	213 1	LO1 160	839	269
Reduct Vol:	0 0	0	0 0	0	0	0	0 0		0
Reduced Vol: PCE Adj:	1.00 1.00		36 490 00 1.00	93 1.00			LO1 160 .00 1.00	839 1.00	269 1.00
MLF Adj:			00 1.00					1.00	1.00
FinalVolume:	230 1095		36 490	93	106	213 1	L01 160	839	269
Saturation F									
Sat/Lane:			00 1900	1900				1900	1900
Adjustment:			95 0.91					0.95	0.85
Lanes: Final Sat.:			00 3.00 05 5187					2.00 3610	1.00 1615
	1								
Capacity Ana Vol/Sat:	0.13 0.30		08 0.09	0.06	0.06 0	0.06 0.	.06 0.09	0.23	0.17
Crit Moves:	****		**		****			* * * *	
Green/Cycle:			10 0.22		0.08 0			0.32	0.42
Volume/Cap:			73 0.43	0.19				0.73	0.40
Uniform Del: IncremntDel:		10.4 60 0.1 13	.9 47.0 .9 0.3	36.4 0.2).6 46.7).1 0.7	42.5 2.5	28.2 0.4
InitQueuDel:		0.0 0		0.2).0 0.0		0.0
Delay Adj:			00 1.00	1.00	1.00 1	.00 1.		1.00	1.00
Delay/Veh:			.9 47.3	36.6	80.4 5			45.0	28.6
User DelAdj:			00 1.00	1.00				1.00	1.00
AdjDel/Veh: LOS by Move:		10.5 74 B	.9 47.3 E D	36.6 D		D 20).7 47.4 C D	45.0 D	28.6 C
HCM2k95thQ:	375 899		42 323	147			L19 289		374
Note: Queue	reported is	the dist	ance per	lane	in feet				

					CM Opera		utation Repo Volume Alt Project PM					
Intersection #4: N I	Bascom	Avenue	'San Carl	os Stree								
		Il Vol: anes:	Signal=F 104 1 0	Protect/Righ 1172*** 3		p 272 1						
Initial Vol: Lanes: Rig	nal=Protec hts=Overla		с	Vol Cnt I ycle Time (Signal=Prote Rights=Overl	ap Lar	nes: Initial			
102 1			L	.oss Time (sec):	12		▲ ``	1 116	j		
0 875*** 2	≱			Critical	V/C:	0.747		<u> </u>) 2 447	,		
0	÷ .		Avg Cr	it Del (sec/	veh):	49.2)			
162 1	¥		Avg I	Delay (sec/	veh):	45.8		`	1 208*	**		
	•				LOS:	D		Ŧ				
		•	\ * 1	` ↑ .		(
		anes: Il Vol: 18	1 0 0*** Signal=F	2 597 Protect/Righ	0 hts=Overla	1 267 p						
Street Name: Approach:	Noi	rth Bo		Soi	ith Bo	ound		ast Bc		We	st Bo	
Movement:		- T 			- T 	- R	L -		- R	L -		- R
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	4.0		10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
 Volume Module												
Base Vol:	180	595	267		1169	84	93	875	162	208	447	114
Growth Adj: Initial Bse:	1.00 180	1.00 595	1.00 267		1.00 1169	1.00 84	1.00 93	1.00 875	1.00 162	1.00 208	1.00 447	1.00 114
Added Vol:	081	0	207	255 0	0	0	93 0	0/5	102	208	44/ 0	0
Project Tri:	0	2	0	17	3	20	9	0	0	0	0	2
Initial Fut:	180	597	267		1172	104	102	875	162	208	447	116
User Adj:	1.00		1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj: PHF Volume:	1.00 180	1.00 597	1.00 267		1.00 1172	$1.00 \\ 104$	$1.00 \\ 102$	1.00 875	1.00 162	1.00 208	1.00 447	1.00 116
Reduct Vol:	101 0	0	207	272	11/2 0	104	102	0/5	102	208 0	447	0
Reduced Vol:	180	597	267		1172	104	102	875	162	208	447	116
PCE Adj:	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		
FinalVolume:			267		1172	104		875	162		447	116
Saturation F												
Sat/Lane:		1900		1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:					0.91			0.95		0.95		
Lanes: Final Sat.:			1.00 1615		3.00 5187	1.00 1615			1.00 1615	1.00 1805		
Capacity Ana Vol/Sat:			e. 0.17	0 15	0.23	0.06	0 06	0.24	0.10	0.12	0 12	0.07
Crit Moves:	****	0.17	0.17	0.13	****	0.00	0.00	****	0.10	****	0.12	0.07
Green/Cycle:	0.13	0.23	0.38	0.21	0.30	0.45	0.15	0.32	0.46	0.15	0.33	0.54
Volume/Cap:			0.43		0.75			0.75		0.75		0.13
Uniform Del: IncremntDel:			32.0 0.5		44.0	22.4 0.1	53.6	42.2 2.7	22.9 0.2	56.6		16.2 0.1
InitQueuDel:			0.0	6.9 0.0		0.1	0.9 0.0	0.0	0.2	10.6 0.0	0.2 0.0	0.1
Delay Adj:			1.00		1.00			1.00		1.00		1.00
Delay/Veh:			32.5		46.0	22.5	54.5		23.0	67.2		16.3
User DelAdj:					1.00				1.00	1.00		1.00
AdjDel/Veh:			32.5		46.0				23.0	67.2		16.3
LOS by Move: HCM2k95thQ:			С 395	E 547	D 761	C 128	D 206	D 796	C 202	E 464	D 360	В 122
Note: Queue :									202	TOT	500	<u> </u>
Troffin 0.0.0715						Douglin Douglin						

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Appendix E – VTA Bascom Avenue Complete Streets Study Figures



CHAPTER 4 CORRIDOR DESIGN CONCEPTS

CHAPTER 4 CORRIDOR DESIGN CONCEPTS





INTRODUCTION

The Bascom Corridor is poised for significant improvements to make the roadway more efficient, safer, beautiful, and functional for the local community and the broader region. The coordination, timing and implementation of these improvements will be critical to ensure changes are made efficiently and address core community needs. Building from the Community Vision and Design Framework, the following chapter identifies specific improvements envisioned for each of the seven Corridor segments.

These physical improvements are organized into **Short-Term** and **Long-Term** alternatives. VTA and the Partner Agencies may choose to construct either alternative based on the community need, available funding, and timing for how these improvements will interact with other changes (such as improvements to intersecting streets, new major development projects, etc.). See Chapter 5 for detailed design basis recommendations and Chapter 6 for specific cost estimates and funding strategies.

The following pages outline all of the key physical changes envisioned for the Bascom Corridor, organized by individual segment (going from the south to the north) and whether they are a short or long-term improvement.

IN THIS CHAPTER

Introduction Southern Gateway South Neighborhood Campbell Core Central Bascom Regional Destination Heart of Burbank Northern Gateway



CENTRAL BASCOM Fruitdale to Hamilton



CENTRAL BASCOM EXISTING STREET LAYOUT

The Central Bascom corridor segment encompasses a mix of commercial, office, and residential uses in addition to parking lots. The segment is part of the South Bascom Urban Plan which is envisioned as a vibrant multimodal and mixed-use employment center that maximizes its close proximity to Bascom Light Rail Station. It has a 118-120-foot right-of-way with three, 11-to-13-foot travel lanes running in each direction, a center left-turn lane, and unprotected bike lanes on both sides of the road. Sidewalks range from 9 to 10 feet wide and have gaps in certain areas.

PROPOSED DESIGN CONCEPT

Based on past planning efforts and direction from City Council, the roadway is re-purposed to provide two travel lanes in each direction, each spanning 11 feet in width. This retrofit creates enough space to accommodate new 11-to-12 foot-wide protected bicycle lanes on both sides of the street. This network will improve multi-modal mobility throughout the area by connecting to existing facilities on the Los Gatos Creek Trail and Southwest Expressway, as well as planned facilities Hamilton Avenue, Stokes Street, Downing Avenue, and Enborg Lane. Near side transit stops near Pamlar Avenue, Eisenhower Street, Downing Avenue, and Bascom Branch Library are moved to the far side of intersections. All other stops are improved with bus shelters and other supportive amenities, including seating, signage, real-time travel updates, and curb bulbouts. On-street parking is expanded to serve existing businesses and new development.

Existing signal times are improved to synchronize with vehicle traffic. New traffic signals are added at mid-block crossings near eBay, and Bascom Branch Library. Crosswalks at San Jose Water Company and Maywood Avenue are supported by RRFB signals. All multi-modal improvements are designed to improve connectivity to the existing Light Rail station and incentivize further TOD investments. Sidewalk gaps near Lindaire and Maywood Avenues are remedied to create a continuous network of sidewalks. All existing crosswalks are improved with enhanced striping and directional ramps for ADA accessibility, improving safety for crossing pedestrians of all ages and abilities. New signalized crosswalks at Southwest Expressway, Pamlar Avenue, and Maywood Avenue are added to improve access to the Light Rail station and Los Gatos Creek Trail and reduce crossing distance by a guarter mile. Pedestrian crossings are improved at intersections of Stokes Street and Enborg Lane by getting rid of pork chop islands, reducing the turning radius of right-turn slip lanes and reducing the overall length of the crosswalks In the long-term, crosswalks may be added at Lindaire Avenue and Eisenhower Drive should traffic analysis warrant further changes to the streetscape.

Gateway signage is introduced at Hamilton Avenue, Los Gatos Creek Trail, and Southwest Expressway to announce arrival to and exit from the corridor segment.

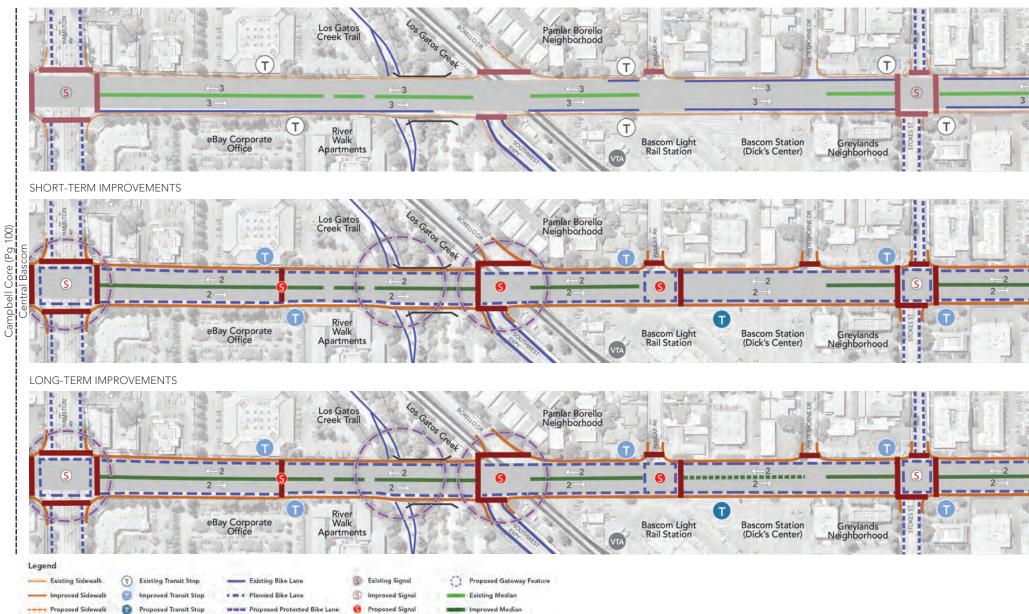




South Bascom Urban Village Plan 3d View

BASCOM CORRIDOR COMPLETE STREETS STUDY

EXISTING ROADWAY CONDITIONS



Real Proposed Median

S Proposed RRFB

I Number of Travel Lanes

Existing Crosswalk

Improved Crosswalk

VIA

Bascom Light Rail Station

Proposed Bike Crossing

- 600 - 100 -3+01-10-2010-Senior Center = San Jose Water Company pow T T ←3 €-3 -3 S S 3-> 3-> 3-> 3-2 3 242 T T) n 1 Del Mar High School J Bascom Branch Library FRUITDALE Mall Hour Cost . Opar H Т - CON 2+02.202240 = Senior Center San Jose Water Company Т Т ----2 ς IS II 2 2 Bascom Branch Library G Del Mar High School J 1. 1. 14 PUB FOR Bieght-max т 141 ALL ALL 7+01-202240-Senior Center San Jose Water Company S -----2 Bascom Branch Library A.C. 1.99 Т Del Mar High School 🗸 Mail State Birest install т

CHAPTER 4 CORRIDOR DESIGN CONCEPTS

0 50 100 200ft

Short-Term Improvements

The roadway is retrofitted to allow for two lanes of vehicle travel in each direction and on-street parking on either side of the street. The existing center turn lane is retained to allow vehicles to turn left into major destinations in the area. New 11-to-12 footwide protected bicycle lanes are added on either side of the roadway, which shield cyclists from vehicle traffic and on-street parking via new bollards.

Sidewalks on either side of the street are made continuous and landscaped with new street trees. Most intersections are redesigned with enhanced striping, directional ramps, and curb bulbouts to enhance safety for all crossing pedestrians. Bus bulbouts are implemented at all transit stops to improve safety for onloading and offloading passengers. To avoid conflict with these riders, bicycle lanes jog to the right of bus stops away from the roadway.

Long-Term Improvements

The center turn lane is converted into a 16-to-18 foot-wide median that is well-landscaped and provides pedestrian refuges and left-turn pockets at key intersections and destinations. New planter bulbouts are placed in between parking spaces to create a five row of street trees along the corridor segment.

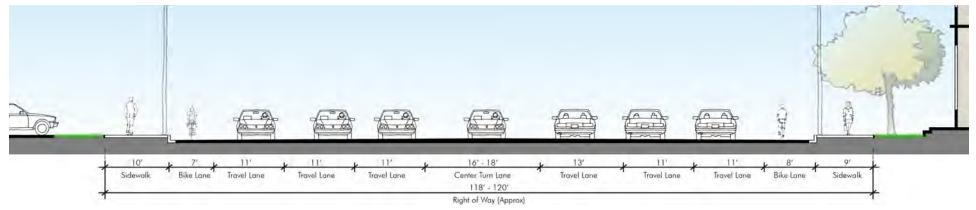
Sidewalks are lined with pedestrianoriented street lights to improve safety and are widened with curb bulbouts that reduce vehicle turning speeds, beautify the streetscape, improve storm water quality that flows to the Los Gatos Creek, and improve pedestrian safety by reducing crossing distances at all intersections. All other bulbouts previously constructed at crosswalks and transit stops are retained with no further changes.



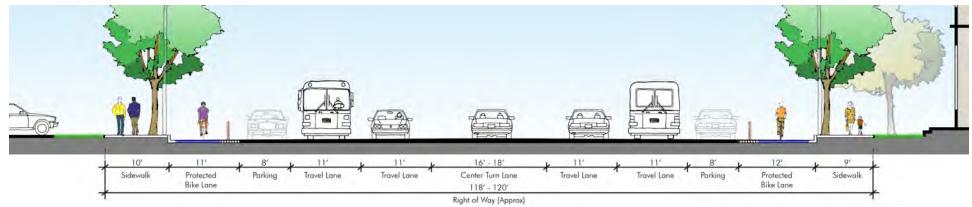


Protected Bicycle Lane Shielded by Parking

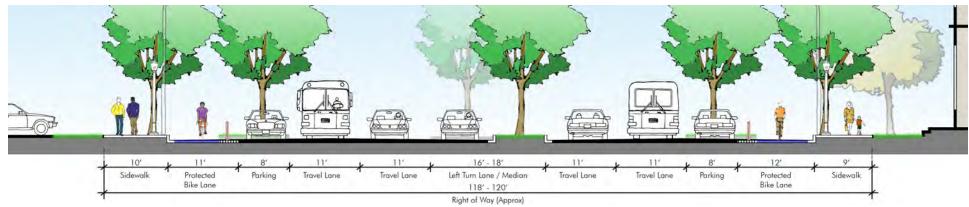
EXISTING STREET SECTION



PROPOSED STREET SECTION: SHORT-TERM



PROPOSED STREET SECTION: LONG-TERM



BASCOM CORRIDOR COMPLETE STREETS STUDY



INTERSECTIONS SHORT-TERM IMPROVEMENTS

- 1) Safe, continuous tree lined sidewalks
- 2 Enhanced existing crosswalks at all crosswalks. New crosswalks at Southwest Expy., Pamlar, Maywood, and Enborg
- 3 Enhanced bicycle facilities with Class IV protected bicycle lanes
- **4** Transit stops moved to far side
- 5 Two travel lanes in each direction, improved signal timing
- (6) Existing center turn lanes maintained







Protected Bike Lane



Enhanced Transit Stops



Long-Term Intersection Improvements



Planter Bulbouts





Wider Sidewalks with Amenities

INTERSECTIONS LONG-TERM IMPROVEMENTS

1 Landscaped sidewalks with expanded curb bulbouts at intersections and midblock crossings

2 Shortened crosswalk distances with pedestrian refuges at all intersections

Improved transit facilities with bus stop bulbouts on far sides of intersections

- Center turn lane replaced with landscaped median strip with left turn lanes and pedestrian refuges at key intersections and destinations
- 5 Gateway signage at Los Gatos Creek Trail, Southwest Expy., Hamilton Av, and Enborg Ln

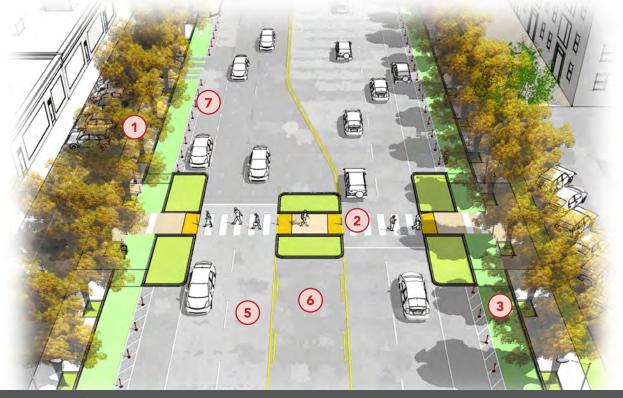
BASCOM CORRIDOR COMPLETE STREETS STUDY



Existing Mid-Block

MID-BLOCK SHORT-TERM IMPROVEMENTS

- Safe, continuous tree lined sidewalks (1)
- Mid-block crossings between Hamilton-(2) Southwest Expy., Stokes-Eisenhower, and Leon-Lindaire
- (3) Enhanced bicycle facilities with Class IV protected bicycle lanes
- New mid-block bus stop at Bascom (4) Branch Library with curb bulbout
- (5 Two travel lanes in each direction
- (6) Existing center turn lanes maintained
- On-street parking provided (7



Short-Term Mid-Block Improvements





Mid-Block crossing with Transit Stop 4

116



Long-Term Mid-Block Improvements





Mid-Block Crossing



MID-BLOCK LONG-TERM IMPROVEMENTS

(1)Sidewalks widened with expanded curb bulbouts at intersections

Reduced crosswalk lengths with (2) pedestrian refuges at all crossings

(3) Enhanced bicycle facilities with Class IV protected bicycle lanes

Center turn lane replaced with (4)landscaped median strip

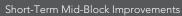
BASCOM CORRIDOR COMPLETE STREETS STUDY



MID-BLOCK SHORT-TERM IMPROVEMENTS

- 1) Safe, continuous tree lined sidewalks
- 2 New mid-block crossings between Fruitdale-Renova
- (3) Enhanced bicycle facilities with Class IV protected bicycle lanes
- 4 Maintained existing travel lanes and turn lanes, and improved signal timing











Long-Term Mid-Block Improvements



Mid-Block Crossing with Pedestrian Refuge at Median



Widened Sidewalks with Amenities

MID-BLOCK LONG-TERM IMPROVEMENTS

(1)Center turn lane converted to landscaped median strip with left turn lane

Appendix F – Transportation Demand Management



Final Transportation Demand Management Plan

200 North Bascom Avenue

(H19-029) (3-25305)

City of San Jose, California

January 26, 2021

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INTRODUCTION

Transportation Demand Management (TDM) refers to strategies that result in a more efficient use of transportation resources to help relieve traffic congestion, parking demand, and air pollution problems. Typically, TDM combines different services, facilities, and actions that result in a reduction of single-occupant vehicle trips. A TDM Plan is developed to guide efficient use of an existing transportation system and to ensure new developments are designed to maximize sustainable transportation usage. This plan is prepared for the proposed 200 North Bascom Avenue Project in San Jose, California. The project is a fourstory, 29,421 square feet medical office building, including 5,566 square feet of retail space on a 0.46 acre site. To propose effective and appropriate TDM measures, this plan is based on the project's size, location, and land uses.

To comply with City of San Jose Transportation Analysis guidelines, the TDM plan is included with the Transportation Analysis Report. The goal of this TDM Plan is to reduce the Vehicle Miles Traveled (VMT) to below the threshold of 12.22 VMT per employee. This can be achieved through four strategy tiers: (1) project characteristics, (2) multimodal network improvements, (3) parking, and (4) TDM.

Project Description

The project site is located along the northeast quadrant of the North Bascom Avenue and Forest Avenue intersection in the City of San Jose. The project site and vicinity are shown in **Figure 1**.

PROJECT TRIP GENERATION

An evaluation of the project's net trip generation was conducted for the daily, weekday a.m. peak hour, and weekday p.m. peak hour. A description of the analysis is discussed in the Local Transportation Analysis of the Transportation Analysis Report.

The project is estimated to generate a net 73 weekday a.m. peak hour trips (57 inbound trips, 16 outbound trips) and 100 weekday p.m. peak hour trips (31 inbound trips, 69 outbound trips). The project's trip generation is presented in **Table 1**.

Land Use			Da	ily	A.M. Peak				P.M. Peak							
(ITE Code)	Size	?	Rate	Trips	Rate	In %	Out %	In	Out	Total	Rate	In %	Out %	In	Out	Total
Medical Dental Office Building (720) ¹	29.421	ksf	34.80	1,024	2.78	78	22	63	18	81	3.46	28	72	29	73	102
Location based Mode Share Adjustments ² - 9%				-92				-6	-2	-8				-3	-7	-10
				932				57	16	73				26	66	92
Project Trip Adjustments ³ - 5.58%				-52				-3	-1	-4				-1	-4	-5
	Total (A)	1	880				54	15	69				25	62	87
Shopping Center (LU 820)⁴	5.566	ksf	37.75	210	0.94	62	38	3	2	5	3.81	48	52	10	11	21
Location based Mode Share Adjustments ² - 13%				-27				0	-1	-1				-1	-1	-2
				183				3	1	4				9	10	19
Pass by Trip Reduction⁵				N/A							-34%		-3	-3	-6	
	Sub Total (B)			183				3	1	4				6	7	13
Net Project	Frips (A+	B)		1,063				57	16	73				31	69	100

Table 1: Trip	Generation [•]	for Proposed	Project Conditions
---------------	-------------------------	--------------	---------------------------

ITE Trip Generation Manual, 10th Edition, 2017

ksf=Thousand Square Feet

¹Average Trip rates from ITE Trip Generation Manual, 10th Edition, 2017 are used for Medical Dental Office Building (LU 720) ²Location based Mode Share Adjustments: Mode Share percentage for Office/Industrial is 91% for Urban Low-Transit and Mode Share percentage for Retail is 87% for Urban Low-Transit (Refer Transportation Analysis Handbook, April 2018: Table 6-Location based Vehicle Mode Share (March 2018)

³Trip Adjustments based on VMT Evaluation Tool.

⁴Average Trip rates from ITE Trip Generation Manual, 10th Edition, 2017 are used for Shopping Center (LU 820)

⁵ITE Pass-By reduction rate of 34% in the PM peak hour for Retail Land Use. It should be noted that daily pass-by reduction rate and AM peak hour is not available. Pass-by trip reduction based on the ITE publication *Trip Generation Handbook* (3rd Edition)

PARKING

Based on the project site plan dated January 13,2021 (**Figure 2**), 60 vehicular parking spaces, including 8 ADA parking spaces, 6 clean air/vanpool spaces and 4 electric vehicle spaces. Of the 8 ADA parking spaces, one van accessible and one is electric vehicle spaces. In addition to the vehicular parking, the project will provide eight motorcycle parking spaces, and 40 bicycle parking spaces via four bicycle locker rooms (long-term parking), 40 bicycle parking spaces via four bicycle locker rooms (short-term parking) and eight bicycle parking spaces via bike rack (short-term parking). To encourage use of bicycle traffic, the project will provide a shower on the first floor for tenants. The City of San Jose Municipal Code (Section 20.90.220/Table 20-190), medical office uses require 1 vehicular parking space per 250 square feet, and 1 bicycle parking space per 4,000 square feet. With 29,739 square feet of office and retail space, the project requires a total of 120 vehicle spaces and 7 bicycle parking spaces. As per the Municipal Code parking reduction section 20.90.220:

The project is allowed up to a 50% reduction through the submittal of a TDM plan that contains a carpool/vanpool or car-share program or provides a transit use incentive program for employees and tenants.

As a TDM measure, the project is supplying transit passes to all employees and is providing six vanpool parking spaces, reducing the required parking to 60 parking spaces. Thus, the project adequately meets City of San Jose standards for parking.

REPORT ORGANIZATION

The remaining sections of this report describe transportation facilities and services provided in the project vicinity, TDM measures deemed appropriate for the proposed project, and the program for implementing and monitoring the TDM reductions.

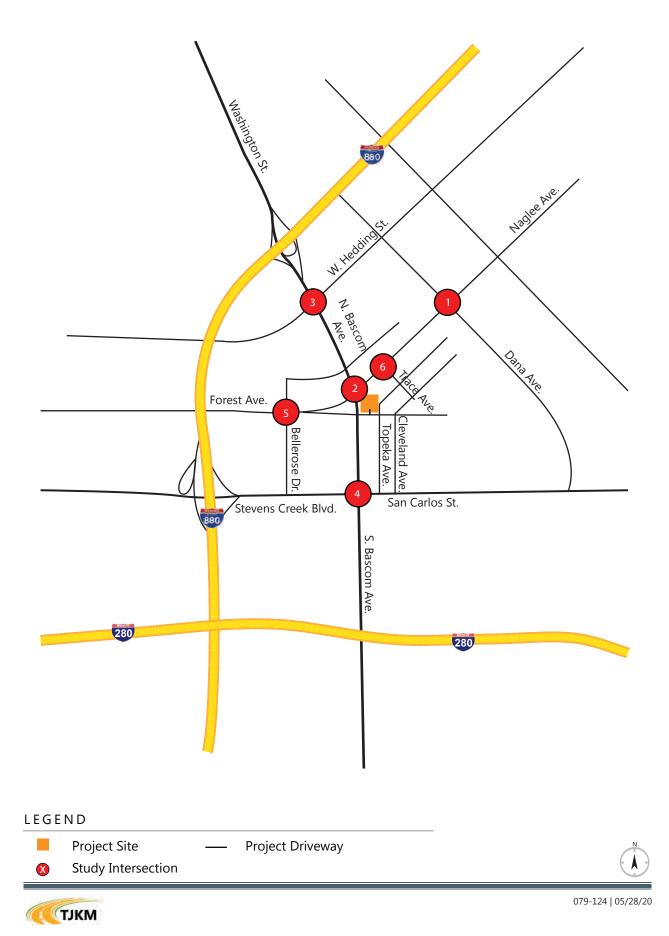
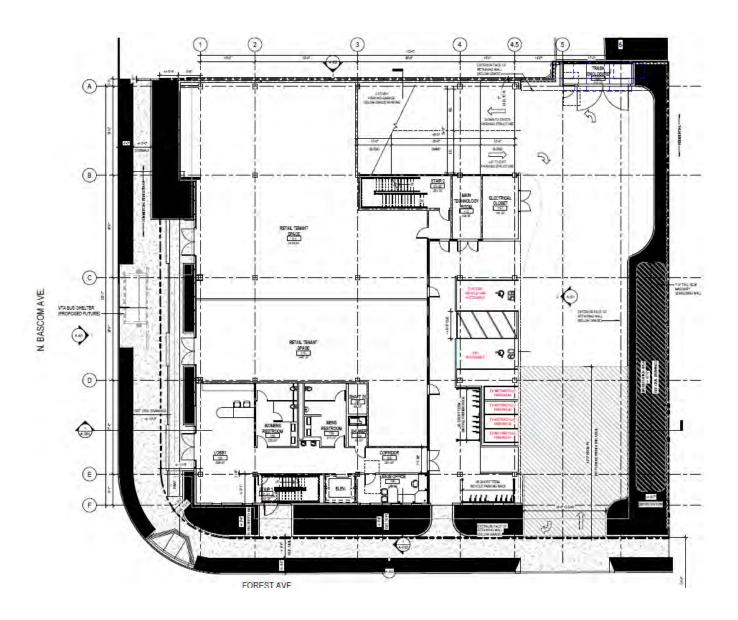


Figure 2: Project Site Plan







EXISTING TRANSPORTATION FACILITIES AND SERVICES

Transportation facilities and services that support sustainable transportation include pedestrian, bicycle and transit facilities. This section describes the existing facilities and services near the project site that will support the TDM measures from this Plan.

Pedestrian Facilities

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

Pedestrian facilities include crosswalks, sidewalks, pedestrian signals, and off-street paths, which provide safe and convenient routes for pedestrians to access the destinations such as institutions, businesses, public transportation, and recreation facilities.

In the project vicinity, most of the study intersections are signalized and equipped with countdown pedestrian signal heads. The study intersections of North Bascom Avenue/Naglee Avenue, North Bascom Avenue/San Carlos Street, North Bascom Avenue/Hedding Street and Naglee Avenue/Dana Avenue have crosswalks on all legs. The intersection of Forest Avenue and Bellerose Drive provides three crosswalks, including an uncontrolled, high-visibility crosswalk across Forest Avenue. There are continuous sidewalks present on North Bascom Avenue, Forest Avenue, Naglee Avenue, Hedding Street, San Carlos Street, Dana Avenue, Bellerose Drive and Trace Avenue along both sides within the project vicinity. The project site has adequate accessibility via North Bascom Avenue, Forest Avenue, Naglee Avenue, San Carlos Avenue and Hedding Street. Sidewalks exist along the project frontage on North Bascom Avenue and Forest Avenue. Adequate street lighting exists along both sides of Forest Avenue, Naglee Avenue and North Bascom Avenue within the vicinity of the project. Additionally, the project will dedicate a portion of the project site to commercial pedestrian space along the project frontage on North Bascom Avenue.

There are six bus stops in the immediate vicinity of the project site. Four stops are located on North Bascom Avenue and two bus stops are on the Naglee Avenue. All bus stops are accessible via existing sidewalks. All the bus stops are accessible to and from the project site via existing sidewalks and crosswalks along North Bascom Avenue and Naglee Avenue. The existing pedestrian facilities in the study area are shown in **Figure 3**.

Bicycle Facilities

Bicycle facilities include the following:

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

Class II striped bike lanes are provided on the following roadways near the site:

- Naglee Avenue between Forest Avenue and North Bascom Avenue along both sides.
- Hedding Street between Winchester Boulevard and Mabury Road along both sides.
- Forest Avenue between Ciro Avenue and Naglee Avenue along both sides.
- Forest Avenue between Winchester Boulevard and Monroe Street along both sides.

Class III bike routes are provided on the following roadways near the site:

- Forest Avenue between Monroe Street and Ciro Avenue along both sides.
- Bellerose Drive between Stevens Creek Boulevard and Forest Avenue along both sides.
- Dana Avenue between West San Carlos Street and Davis Street along both sides.

The Los Gatos Creek Trail is a City of San Jose and Santa Clara County Class I bicycle facility (off-street bike path) that runs from Lexington Reservoir south of Los Gatos to Meridian Avenue in San Jose. A separate portion of the trail runs between Lonus Street and Dupont Street, alongside Los Gatos Creek in San Jose. It is accessible via San Carlos Street and South Bascom Avenue. The bike path is also available for use by pedestrians.

There is adequate signage for bicyclists to maneuver without confusion. The City of San Jose bike plan 2020 dated November 17, 2009 describes a list of existing and proposed bicycle facilities in the City. Overall, existing bicycle facilities provide adequate connectivity between the proposed project site and the adjacent residential neighborhoods. The existing bicycle facilities in the study area are shown in **Figure 4**.

Transit Facilities

Under transit facilities, Valley Transportation Authority (VTA) light rail, buses and shuttles in the surrounding area are documented. **Figure 5** shows existing transit services available in the project facility.

VTA

The VTA operates bus service and light rail services in the City of San Jose. The proposed project site is served by VTA local bus Routes 23, 59, 61 and Rapid 523. These routes run on weekdays and weekends. **Table 2** describes the services and frequency during the week and weekend for VTA bus routes.

	-	-	Weekday	s	Weekends	;
Route	From	То	Operating Hours	Headway (minutes)	Operating Hours	Headway (minutes)
23	Alum Rock Station	De Anza College Transit Center	5:44 a.m.–9:51 p.m.	13-31	5:44 a.m.–9:49 p.m.	13-31
59	Tasman & Baypointe	Valley Fair Transit Center	7:30 a.m.–4:46 p.m.	54-57	8:14 a.m.–6:53 p.m.	60
61	Sierra & Piedmont	Good Samaritan Hospital	7:15 a.m.–8:59 p.m.	20-60	7:15 a.m.–8:59 p.m.	20-60
Rapid 523	Lockheed Martin Transit Center	Berryessa BART	6:47 a.m.–10:00 p.m.	13-22	6:47 a.m.–10:00 p.m.	13-22

Table 2: Existing Transit Services

Source: VTA website

VTA Light Rail Transit (LRT) Service

The Santa Clara Valley Transportation Authority (VTA) currently operates the 42.2-mile VTA light rail line system extending from south San Jose through downtown to the northern areas of San Jose, Santa Clara, Milpitas, Mountain View and Sunnyvale. The project site is located about 2.0 miles from the Race LRT station. Service at the Race LRT station is provided by the Old Ironside-Winchester LRT line, which operates approximately 13 hours a day (5:56 AM to 6:55 PM) with 30-minute headways. The Old Ironside-Winchester LRT line provides service from the Winchester station in Campbell, through downtown San Jose to north San Jose where it curves west and operates along the Tasman Corridor. The existing transit facilities in the study area are shown in **Figure 5**.



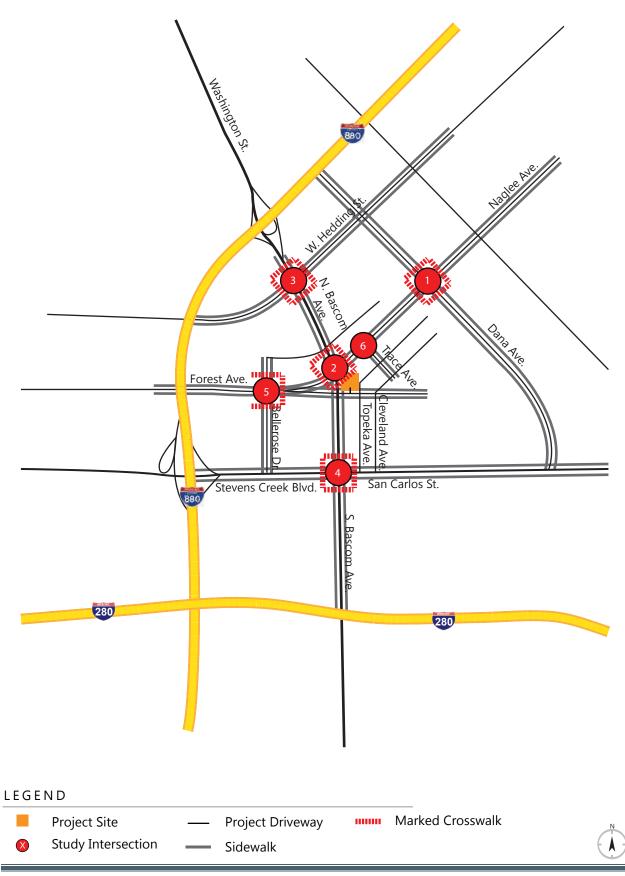




Figure 5: Existing Bicycle Facilities

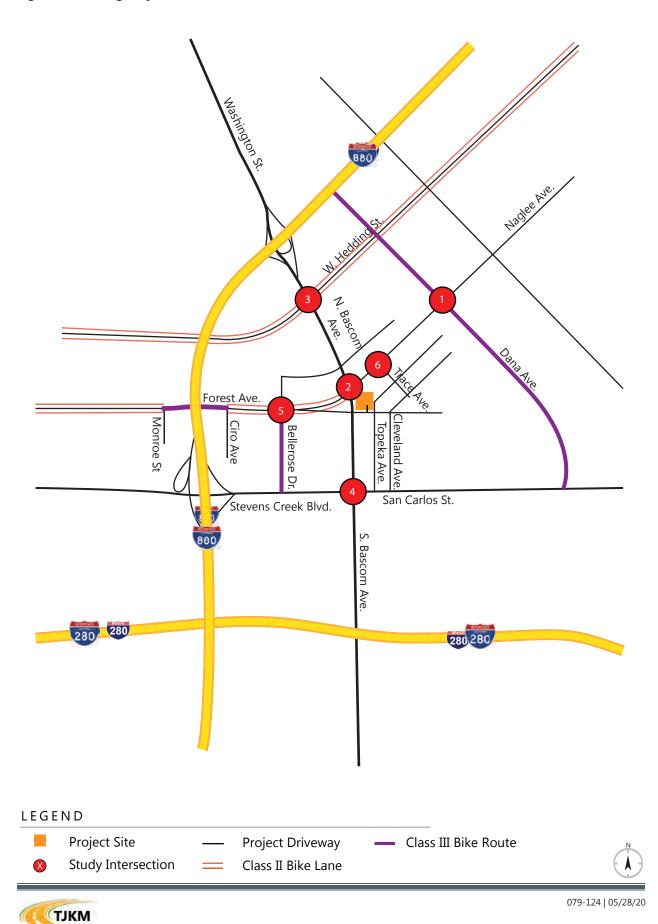
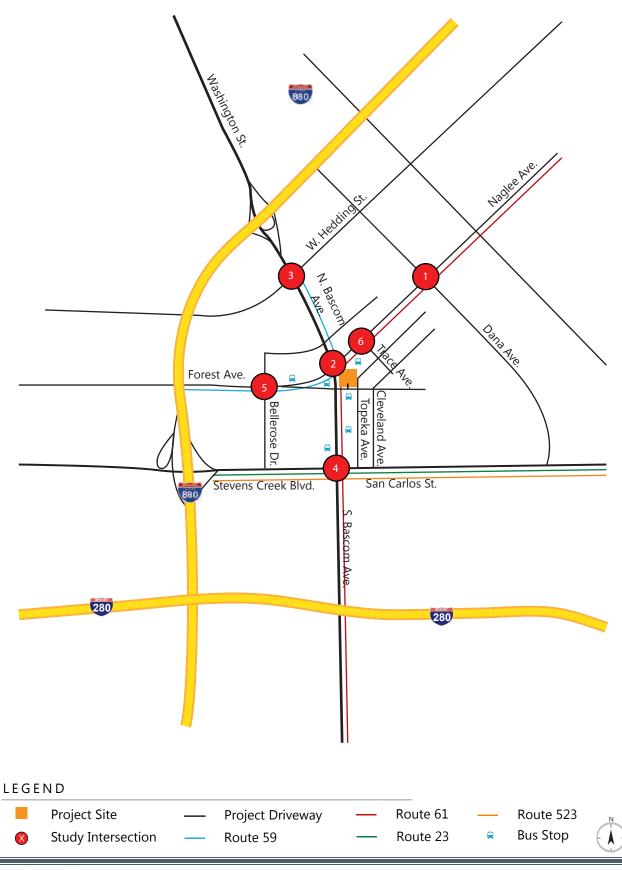


Figure 6: Existing Transit Facilities



((ТЈКМ

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TDM MEASURES

This section discusses TDM measures that are applicable to the proposed development. The City of San Jose VMT sketch tool evaluates a list of selected VT reductions measures that can be applied to the project to reduce the Project VMT. There are four strategy tier that can be calculated in the sketch tool: 1) project characteristics, 2) multimodal network improvements 3) parking and 4) TDM. The first three are physical design improvements to reduce VMT and incorporated in the project description. The fourth strategy is TDM measures that, when implemented will reduce Project VMT.

On-Site Amenities

Amenities on-site include provision of a TDM contact person, tenant welcome packet, bicycle storage, and high-bandwidth internet connections. Each is described below.

TDM Coordinator

A TDM contact person should provide information to employers on alternative modes of transportation. The TDM contact person will be from an on-site employee and will coordinate with the Commercial lessors and will provide:

- Information and resources on transportation choices available to employees.
- Transportation information packets to employees.
- A current welcome packet with commute alternatives, transit maps, schedules, events and promotions. Distribution of Tenant Welcome Packet

New commercial tenants will be provided transportation information packets that include information about transit routes and schedules (VTA Transit) bus stop locations, bike maps, ride matching services, transit planning resources, and on-site bicycle parking and amenities.

The welcome packet will provide a brief summary highlighting the most important features of the TDM program, which allows employees to be familiar with it and understand how to access additional information. It will also include hard-copy information, as necessary, pertaining to alternative transportation options and current transit maps and schedules.

Information Kiosk

A static kiosk or information center throughout the project site will post transit resources, bicycle and pedestrian information, and any promotions that are beneficial to promoting vehicle trip reduction. These kiosks would be designed to be complementary to the design of the Project development. Flyers advertising upcoming multimodal events, Transit and bike maps will be displayed.

Bicycle Storage

Short-term bicycle parking is defined as unsheltered, unenclosed bike racks with an intended parking duration of less than two hours. The majority of public bike racks are considered short-term. These are often seen at shopping centers, parks, and other public facilities.

Long-term bicycle parking is defined as a facility that is sheltered and secure, such as lockers, rooms, or stations where the intent is for longer periods, more than two hours. Examples of long term are bicycle lockers, which have a security system, often seen at transit stations, unattended bicycle parking such as storage areas or rooms near transit stations or adjacent to high-density housing, or attended bicycle facilities, where staff is on hand to provide valet services.

The project includes 40 bicycle long-term bicycle spaces, 40 bicycle short-term and eight short term bicycle spaces via bicycle rack.

The addition of long-term bicycle parking is secure and weather-protected in the retail commercial area to be shared between residents and employees.

Transit Elements

Clipper Card

Clipper Cards are all-in-one transit cards including BART, AC Transit, VTA, and most transit agencies in the nine County San Francisco Bay Area. As an incentive, the developer can purchase pre-loaded transit fare for residents and employees to try transit for a set amount of time, such as the equivalent to one week or a month. The Clipper Card costs \$3 and can be reloaded or set to an auto load if the balance falls below \$10. The Clipper Card can offer one clipper card per dwelling unit and one per employee. The investment can be over a set period of time, or until a set dollar amount has been reached.

SmartPass

The VTA SmartPass is an annual calendar-year pass available for Santa Clara County based employers. It is a deeply-discounted transit pass that allows participants unlimited rides. The fee for the SmartPass ranges from \$20.75 to \$180.00 per year per participant/employee.

Carpool and Vanpool Incentives

511 Ride Matching Assistance

The 511 RideMatch service provides a system to help commuters find carpools, vanpools, or bicycle buddies to share your commute. This free service helps commuters find others with similar routes and travel patterns with whom they can share a ride. Registered users are provided with a listing of other commuters near their employment or residential ZIP code along with the closest cross street, email, phone number, and hours they are available to commute to and from work. The participants can then choose and contact others who they can ride with. RideMatch also provides lists of existing car and vanpools in the area that may have available spaces.

Carpool/Vanpool Incentives for New Users

The 511 Regional Rideshare Program (RRP) offers a variety of incentives to those who try carpooling and vanpooling. Most of the programs reward people who form or try carpooling or vanpooling, and provide an award or subsidy after the first three or six months of participation.

Vanpool Formation Incentive – The 511 RRP provides up to \$500 in gas to new vanpools that meet specific eligibility requirements and complete three to six months of operation. Gas cards are awarded on a first-come-first-serve basis until funds are depleted.

Vanpool Seat Subsidy – The 511 RRP subsidizes vanpool seats in the form of gas cards. The subsidy provides \$100 per month, with a three-month limit per van during the program year, to help cover the fare of a lost participant. The gas cards are offered to eligible vans on first-come-first-serve basis until funds are depleted.

Guaranteed Ride Home

This program offers a free taxi or rental car ride home in case of an emergency (illness, family crisis, and unscheduled overtime). Employees working in Santa Clara County and use an alternative transportation mode on the day of the emergency are eligible for the program, and it is open to all Santa Clara County employees living within 100 miles of their place of employment. Employees must pre-register with the program, and eligible taxi and rental car rides can be reimbursed by submitting a receipt through the program's website (grh.alamedactc.org).

Preferred Van Pool Parking

To encouraging carpooling/vanpooling the project is providing six vanpool parking spaces.

Incentives

Telecommuting and Alternative Work Schedules

The Project will encourage employees to telecommute, shift work schedules, or commute outside of peak congestion periods to reduce commute vehicle trips. This information will be provided to all employees in their new employee packet.

Participation in Marketing/Educational Campaigns

The project will encourage alternate modes of transportation through local and regional marketing and or educational events that promote transit, active modes and ridesharing. This information can also be included in new employee packets, event promotion, and information kiosks.

Transportation Network Companies- a brief discussion

This is not considered a measure because it does not necessarily reduce VMT. Though there are limited studies on this type of service, the potential to reduce the need for parking spaces by less car ownership is possible. However based on mode substitution and frequency of use, there is a potential for Transportation Network Companies (TNCs) like Uber and Lyft-type rideshare services to contribute to growth in VMT. For the purpose of this TDM, it is not included as a measure, but a statement that this type of travel mode is an option.

TDM PROGRAM IMPACTS

TDM measure impacts are difficult to quantify due to a lack of data, and variation of performance measures and evaluation methods. This section briefly discussed some of the known impacts of TDM strategies. The FHWA discusses results of studies that determine how vehicle trips are affected by a variety of TDM measures. **Table 3** details the TDM listed above and the estimated Vehicle Trip Reduction (VTR) percentages by the Federal Highway Administration (FHWA) The VTR range in the FHWA report

Integrating Demand Management into the Transportation Planning Process: A Desk Reference was used as an estimate. The excerpt from this report is included in **Appendix A**.

Program Elements	Implementation	
On-Site Amenities		
Distribution of TDM Information	 The project will compile and distribute information regarding all TDM measures to commercial tenants through provision of a TDM Contact Person and Tenant Welcome Packet 	1-3%
Information Kiosk	 The project will provide information kiosks with multimodal transportation information, special events, and incentives 	1-3%
Bicycle Storage	• The developer includes long-term and short-term bicycle parking on-site	1-3%
Transit Elements		
Clipper Card or VTA SmartPass	The developer will provide clipper cards or SmartPasses for the life of the project	5-15%
Carpool and Vanpool Program	s	
511 Ride Matching Assistance	• The developer will advertise and promote the program to residents	1-3%
Carpool/Vanpool Incentives for New Users	• The developer will advertise and promote the program to residents	1-3%
Guaranteed Ride Home	The developer will advertise and promote the program to residents	1-3%
Incentives		
Telecommuting and Alternative Work Schedules	The project will encourage telecommuting or alternative work schedules	5-10%
Participating in Marketing/Educational Campaigns	• The project will promote events and campaigns that support alternate modes of transportation	1-3%

Table 3: TDM Measures and Vehicle Trip Reduction Range

* Source: Integrating Demand Management into the Transportation Planning Process: A Desk Reference, FHWA 2012

TDM IMPLEMENTATION AND MONITORING

The purpose of the TDM Plan is to reduce vehicle trips, traffic congestion, and encourage use of non-auto modes of transportation. The developer will be held responsible for implementing and maintaining the measures of the TDM Plan for the life of the project. After the project is constructed, it will be inspected for compliance with physical measures (bicycle facilities, kiosks, wayfinding signs, etc.) before the first Certificate of Occupancy is issued. Regular inspections will occur periodically.

Annual Surveys

Surveys will be conducted annually, once fully occupied. Surveys shall not coincide with a special event or promotion geared at increasing alternative modes of transportation (e.g., Bike to Work Day, Walk to School Day, etc.).

Prior to distribution to the employers, the TDM Coordinator will submit the proposed survey to the City for review and approval.

A minimum of 65 percent must respond to the survey each year. In order to achieve the 65 percent response rate, the developer can develop incentives / prizes to encourage response. Examples of incentives include raffles for gift certificates, transit passes, and electronic accessories.

Reporting

The TDM Coordinator will be responsible for summarizing the survey information received into a single Annual Monitoring Report. A copy of this TDM Annual Monitoring Report will be submitted to the City for review and comments. Copies will also be sent to the employers.

At the time of project approval, a trip cap will be established in the project's conditions of approval. A trip cap is a maximum number of personal motorized vehicle-trips within specified timeframes that are allowed to be generated by a project. The project will be subject to an annual trip monitoring report that will be submitted to the Department of Planning, Building and Code Enforcement's Environmental Review for approval.

If, at the time of the annual trip monitoring report, the project exceeds the established trip cap, the project will be required to submit a follow up report within six months to demonstrate the project is within compliance. Penalties for non-compliance will be assessed and determined by the City of San Jose.

CONCLUSION

The TDM Measures detailed in this report can provide the project with an achievable reduced vehicle miles traveled from 12.69 to 12.01 per employee. Transit incentives will yield the largest result of VTR. Paired with vanpool parking, education and marketing, the reduction of VMT will further align with the City of San Jose's sustainability goals.

Appendix A

FHWA Report Excerpt: Integrating Demand Management into the Transportation Planning Process: A Desk Reference



Integrating Demand Management into the Transportation Planning Process: A Desk Reference



August 2012 FHWA-HOP-12-035

10.2 Travel Impacts

TDM originated from commuter-based programs aimed at shifting commuters from drive alone travel choices to other modes. These mode shift impacts address several policy measures, namely congestion relief, accessibility improvement, air pollution mitigation, and smarter land use decisions. The principal means for evaluating TDM, and therefore the core performance measures, are related to travel impacts, especially changes in the use of drive-alone vehicles. At the core of these performance measures is a basic quantification or estimation of changes in travel behavior: changes reflecting adoption of new travel choices. This focuses the core performance measures on:

- Mode shift (change in % use of each travel mode).
- VTR (reduction in the number of vehicles used by travelers adopting other choices).
- VMT Reduction (reduction in the amount of travel represented by shift in travel mode or location).

From these performance measures, especially VMT reduction, a host of other performance indicators can be derived, especially those related to emissions (environmental) and energy use. Table 10.1 shows estimated ranges of TDM program effectiveness by type of program or strategy and level of transit service, as developed for site-specific TDM programs in Fairfax County, VA.¹⁷⁸ In this table, "high" transit service corresponds to rail, "moderate" to peak-period bus headways of 20 minutes or less, and "low" to other conditions. These estimates of net mode shift were developed for the Fairfax County Department of Transportation, based on an assessment of various literature sources combined with professional judgment, in order to provide TDM planners with a basic understanding of the potential for mitigating trip generation, and therefore added traffic, from new developments.

Table 10.1: National Evidence on TDM Program ImpactsVehicle Trip Reduction from Background Conditions

TDM Program or Strategy	High Transit	Moderate Transit	Low Transit			
Support, Promotion, Information	3-5%	1-3%	<1%			
Alternative Commute Services	5-10%	5-10%	1-3%			
Financial Incentives	10-20%	5-15%	1-5%			
Combined Strategies						
With Free Parking	15-20%	10-15%	3-7%			
With Paid Parking	25-30%	15-20%	N/A			

Other guidance has gone further than this simple table. One of the earliest FHWA guidance documents on TDM provided dozens of effectiveness look-up tables derived from the FHWA predecessor to the COMMUTER Model. The 1993 report, "Implementing Effective TDM Measures: Inventory of Measures and Synthesis of Experience,"¹⁷⁹ provided charts showing the corresponding VTR for various employer TDM strategies applied to various starting conditions (as is the case with the transit conditions in Table 10.1).

¹⁷⁸ Cambridge Systematics, Inc, Increasing the Integration of TDM into the Land Use and Development Process, prepared for Fairfax County Department of Transportation, draft final report, May 2010.

¹⁷⁹ FHWA, "Implementing Effective TDM Measures: Inventory of Measures and Synthesis of Experience" DOT-T-94-02, September 1993, http://ntl.bts. gov/DOCS/474.html

Appendix B

Sample TDM Survey

Transportation Survey

Company: Date:	
Unique ID:	3. What time do you usually begin work in the morning?
1. What is your home city/town?	Before 6AM 6-7AM 7-7:30AM 7:30-8AM
	8-8:30AM 8:30-9AM 9-10 AM After 10AM
2. What is your home zip code?	4. What time do you usually end work in the evening?
	Before 4PM 4:30-5PM 5-5:30PM 5:30-6PM 6-6:30PM
	6:30-7PM 7-7:30PM 7:30-8PM After 8PM
5. How often do you vary your hou	urs by more than 30 minutes from these times?
Never 1-2 days per month	1-2 days per week 3+ days per week
6. How many hours are you sched	duled to work each week?
Less than 17 17-25 26-30	31-35 36-40 More than 40
7 How long does it take you to tra	avel to work on a typical day (minutes one way)?
	45 to 60 61 to 90 More than 90
8. How many miles (one way, app	proximately) do you travel from home to work on a typical day?
1 to 10 11 to 20 21 to 40	41 to 60 61+
9. Please indicate how you comm	uted to work each day this week:
(Please note primary mode only)	Monday Tuesday Wednesday Thursday Friday
 a) Drove alone the entire way b) Drove alone, then took public transport c) Took public transportation the entire w d) Shared ride, then took public transport e) Rode in a two-person carpool f) Rode in a three- to seven-person carpool g) Rode in an eight- or more person vany h) Dropped off at work i) Bicycled j) Walked k) Out of the office (sick, vacation, jury du l) Scheduled day off m) Worked at home n) Other 	ray tation pol pool
10. If you took public transportatic (Please check all used) Bus Route #s Commuter Rail to Porter Sq	on for all or part of your commute, which route(s) did you use?Red LineGreen LineCommuter Rail to North StationCommuter Rail to South Station

11. Why have you chosen your commut					
	lo Other Option Other (describe)				
12. How many times a month (on average) do you use your own vehicle for work-related business during the day?					
None 1 to 4 5 or More					
13. If you drive to work, where is the veh	nicle usually parked?				
Parking lot/structure at worksite Parking lot/structure off-site On-street					
14. If you drive only part of the way, where do you usually park?					
Train Station Park & Ride lot Parking					
Please answer Questions 15-18 only if you drive alone to work					
15. What are your reasons for	16. What concerns you most about				

driving alone to work? (Mark all that apply) Enjoy my privacy, prefer driving alone Work hours are irregular Need car for work-related trips Need a car for errands before/after work Do not have any other option Need car in case of emergencies Difficulty finding others to carpool with Driving alone takes less time Take children to school or daycare Other modes/routes are not safe Other modes cost too much Transit schedules or routes do not work for me Shift is outside of peak commuting period Other

16. What concerns you most about your commute?
(Mark all that apply)
Overall travel time from home to work
Cost of commute
Finding a convenient parking space
Congestion on streets and highways
Frustration of commuting
Concerned about bad weather
Other (please explain)

17. How likely would you be to change to ridesharing, transit or other commuting alternatives IF THE FOLLOWING INCENTIVES, SERVICES WERE IN PLACE? (Mark one space for each option)

	Very Likely	Somewhat Likely	Not Likely	Already Available
Guaranteed Ride Home program in case of emergency or unscheduled overtime	- ,	- 5	-)	
On-site information on transit routes and schedules				
Shuttle to train/bus station				
Subsidy for transit fares				
Subsidy for vanpool fares				
Vans available for ridesharing				
Preferential or reserved parking for employees who rideshare				
Help finding someone with whom to carpool/vanpool				
Company car made available for business use during the day				
Bicycle storage made available				
Showers and lockers made available				
Financial incentives for biking and walking				
On-site parking rates raised by 10% or more				
Other				

18. Please rank, in order of preference, the TOP THREE commute options you would consider using instead of driving alone:

C	Transit	Bicycle	Walk	Carpool	Vanpool	
1 st Choice				•	·	
2 nd Choice						
3 rd Choice						
Would not consider						