Exhibit J

This page intentionally left blank.

Keith Higgins

Traffic Engineer

SUSAN STREET APARTMENTS

TRANSPORTATION IMPACT ANALYSIS

FINAL DRAFT REPORT

PAJARO, MONTEREY COUNTY, CALIFORNIA

Prepared for
Avila Construction
Monterey, CA 93940

Prepared by
Keith Higgins, Traffic Engineer
Gilroy, CA 95020

December 8, 2021

2060 ROCKROSE COURT, GILROY, CA 95020
T 408.201.2752 KEITH@KEITHHIGGINSTE.COM

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF APPENDICES

1 INTRODUCTION

The proposed Susan Street Apartments (Project) is located in the Pajaro area of Monterey County, California, near Watsonville. The project site covers approximately 3.41 acres at 0 Susan Street, north of San Juan Road and adjacent to the Pajaro River. The project is proposed to include 60 standard apartments and 1 manager apartment. This will provide as many as 480 beds for agricultural employee (H2A) housing. The locations of the Project site and study area are indicated in **Exhibit 1**. The project site plan is shown in **Exhibit 2**.

The project is analyzed as standard apartments in this report, as a worst-case condition. This report summarizes the analysis of potential traffic effects associated with both alternatives of the proposed Project as well as cumulative effects. Existing and Cumulative conditions are also analyzed with and without the Project. Vehicular, pedestrian, bicycle and transit circulation are evaluated at the Project site and the immediate surrounding street network.

1.1 Scope of Work

This report addresses the following topics:

1. Existing vehicular, pedestrian and bicycle circulation on the surrounding street network.
2. Assessment of potential impacts to vehicular, pedestrian, bicycle, and transit circulation due to the Project, and recommendations to minimize or alleviate those impacts.
3. Assessment of potential cumulative traffic impacts.
4. Site access and on-site circulation assessment, including emergency access.
5. Discussion of the project's Vehicle Miles Traveled (VMT) impact based on draft Monterey County VMT policy and accompanying "VMT per Capita" heat maps.
6. Collision analysis of Susan Street and its intersection with San Juan Road.

1.2 Study Network

The AM and PM peak periods were analyzed at the following four intersections which are all under the jurisdiction of Monterey County. Their locations are indicated on **Exhibit 1**.

1. Intersection 1 – Porter Street / San Juan Road
2. Intersection 2 – Porter Street – Salinas Road / Stender Avenue – Salinas Road
3. Intersection 3 – San Juan Road / Salinas Road
4. Intersection 4 – San Juan Road / Gonda Street
5. Intersection 5 – San Juan Road / Susan Street

1.3 Analysis Scenarios

Traffic operations for the following analysis scenarios were analyzed:

1. Existing Conditions
2. Existing Plus Project Conditions
3. Cumulative Without Project Conditions
4. Cumulative Plus Project Conditions

Improvements recommended to provide acceptable traffic operations for each development scenario are recommended where warranted.

1.4 Traffic Operation Evaluation Methodologies

Intersection traffic operations were evaluated based upon the level of service (LOS) concept. LOS is a qualitative description of an intersection's operations, ranging from LOS A to LOS F. Level of Service "A" represents free flow uncongested traffic conditions. Level of Service "F" represents highly congested traffic conditions with unacceptable delay to vehicles at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. LOS descriptions for each type of existing traffic control at the study intersections (i.e., signal, all-way stop and one-/two-way stop) are included as **Appendix A**.

Intersection traffic operations were evaluated using the Synchro© traffic analysis software (Version 10) using both the 2010 and 2000 Highway Capacity Manual (HCM) methodologies. The average delay is then correlated to a level of service. For two-way stop-controlled intersections, only the vehicle delay for side street traffic is analyzed. LOS for each side street movement is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. Improvements are warranted when a side street approach reaches LOS F for two-way stop-controlled intersections.

When using the HCM 2010 and 2000 methods for the analysis of signalized and all-way stop-controlled intersections, the overall intersection delay is used to determine LOS.

1.5 Level of Service Standards - Study Network

This study assesses operations at intersections under the jurisdiction of Monterey County, which has an overall level of service (LOS) standard of LOS D.

As noted in Section 1.4, the Highway Capacity Manual does not provide overall levels of service for one-way stop-controlled intersections; rather, it only provides side-street operations for this type of traffic control. Side-street operations represent delay for the entire stop-controlled approach, regardless of the number of lanes. For the purposes of this analysis, a standard of LOS E is applied to side-street operations at these intersections, given that intersection improvements such as signalization and channelization are generally not warranted until the side street LOS is F. Also, side street traffic volumes are typically much lower than volumes on the major street and only represent a small portion of the overall intersection operations.

1.6 Significance Criteria

Two different significance criteria are used to assess the impacts and adverse effects of this project – one for environmental impacts and one for local adverse effects. The environmental impacts refer to impacts assessed per the California Environmental Quality Act (CEQA) guidelines, while the local adverse effects are assessed relative to capacity and the Monterey County General Plan

level of service standard. The following significance criteria are used in this study:

1.6.1 Environmental (CEQA)

Senate Bill (SB) 743 required that, starting July 2020, transportation impacts for projects per the California Environmental Quality Act (CEQA) be based on a project's Vehicle Miles Traveled (VMT), rather than level of service. The publication *Technical Advisory on Evaluating Transportation Impacts in CEQA,* State of California Governor's Office of Planning and Research, December 2018 (OPR Guidelines), suggests that a significant environmental (CEQA) impact for residential uses would not occur when a project VMT per capita is more than 15% below the average residential VMT per capita for the region. However, local agencies are allowed to adopt their own customized thresholds. As of this writing, Monterey County has not established either a VMT standard or significance threshold for VMT analysis. It is uncertain when the County will adopt VMT policies and standards. This report, therefore, includes a qualitative VMT analysis for the study project consistent with OPR Guidelines.

1.6.2 Local

SB 743 also allows local jurisdictions to assess local adverse effects based on their own adopted level of service (LOS) standards and General Plan policies, although the LOS analysis is not subject to CEQA.

For the purposes of this analysis, adverse effects on intersection operations are defined in the following situations:

<u>Signalized Intersection (Intersection 1):</u>

- A significant impact would occur if an intersection operating at LOS A, B, C, or D pre-Project degrades to E or F with the addition of Project traffic.
- For intersections already operating at unacceptable level E or F pre-Project, any increase (one vehicle) in traffic is considered significant.

<u>One- or Two-Way Stop-Controlled Intersection (Intersections 2-4):</u>

- A significant impact would occur if the side-street at an intersection operating at LOS A, B, C, D or E pre-Project degrades to LOS F with Project traffic; or
- If any traffic signal warrant is met with the addition of Project traffic; or
- For side-streets already operating at LOS F pre-Project, the addition of <u>any</u> Project traffic during the deficient peak hour would be considered significant, regardless of its effects on delay.

1.7 Impact Fees

1.7.1 Transportation Agency for Monterey County

The Transportation Agency for Monterey County (TAMC) and its member jurisdictions have adopted a county-wide, regional development impact fee to cover the costs for studies and construction of many roadway improvements throughout Monterey County. This impact fee, which

2060 ROCKROSE COURT, GILROY, CA 95020

T 408.201.2752 KEITH@KEITHHIGGINSTE.COM

went into effect on August 27, 2008, is applied to new development within Monterey County. The governing document for the fee is the *Regional Impact Fee Nexus Study Update* (March 26, 2008) prepared by Kimley-Horn Associates, Inc. *The Regional Impact Fee Nexus Study Update* was updated in October 2018 by Wood Rodgers.

TAMC, Monterey County and Caltrans have agreed that the payment of the TAMC fee satisfies the Project's fair share contribution to cumulative impact mitigation throughout the regional highway system. This includes highways that will operate deficiently but no capital improvement Project is programmed to correct the deficiency. Projects partially funded by the TAMC fee in North Monterey County and the vicinity of Salinas include the following.

1. TAMC Improvement 11 – County Road G12 San Miguel Canyon Improvements
2. TAMC Improvement 12 – Salinas Road Improvements

Additional funding will be provided by Measure X, the Transportation Sales Tax measure. These local funding sources are anticipated to leverage State and federal funding sources to fully fund the improvements. Toll roads are also being considered as a funding source.

1.7.2 Monterey County Traffic Impact Fee

Monterey County also has a traffic impact fee which is described the "Monterey Countywide Traffic Impact Fee Nexus Study," Kimley Horn, August 1, 2014. The only project in North Monterey County is Project Number 2 – Crazy Horse Canyon Road Improvements. This project includes adding passing lanes and Class II bike lanes from San Juan Grade Road to US 101.

2 EXISTING TRAFFIC CONDITIONS

This chapter evaluates Existing traffic conditions and includes a description of the Project setting.

2.1 Existing Traffic Network

The Project site is located in the community of Pajaro at the end of Susan Street, adjacent to the Pajaro River levee, in Pajaro, unincorporated Monterey County. Pajaro is located near the City of Watsonville, which lies just across the Pajaro River from the project site.

The key roadways in the vicinity of the proposed project include San Juan Road, Salinas Road, and Porter Drive. Direct project access to the project site is via Susan Street. These facilities are described below, in alphabetical order:

Gonda Street is a two-lane dead end local street providing access to neighborhoods north of San Juan Road. The presumed speed limit is 25 miles per hour (mph). It has a width of 26 feet curb-to-curb. Parking is prohibited on both sides of the street.

Porter Drive is a two- to four-lane roadway in Pajaro, providing through access in Pajaro and a connection into Watsonville. Porter Drive also has a two-way left turn lane in its median for its entire length. The posted speed limit is 25 mph.

Salinas Road is a two- to four-lane roadway in northern Monterey County, connecting Pajaro with State Route 1 north of Moss Landing. It also connects to both Porter Drive and Elkhorn Road, allowing travel between Watsonville and Prunedale. Salinas Road also has a two-way left turn lane in its median south of Porter Drive. The posted speed limit is 25 mph south of Porter Drive. The presumed speed between Porter Drive and San Juan Road is 25 mph.

San Juan Road is a two-lane roadway in northern Monterey County connecting Pajaro with US 101 southeast of Aromas. Within Pajaro, it also has a two-way left turn lane in its median. The posted speed limit is 35 mph in the immediate vicinity of Susan Street.

Susan Street is a two-lane local street providing access to approximately 25 existing dwelling units north of San Juan Road. It is about 660 feet in length. The presumed speed limit is 25 miles per hour (mph).

2.2 Existing Pedestrian Network

Susan Street has a continuous sidewalk along its western frontage, extending from the project site to San Juan Road with the exceptions of three missing segments, which are illustrated on **Exhibit 3**. Immediately south of the Project site, these include a 50-foot missing segment along the frontage of the existing home and about a 120-foot missing segment one lot further south. These gaps are located near the existing terminus of Susan Street, where traffic volumes and speeds are low. The third is a 50-foot section immediately north of San Juan Road that extends from the end of the curb return along an existing wooden slat fence.

Sidewalks exist on both sides of San Juan Road to the east and west, between east of Susan Street and a community park west of Porter Drive. A 50-foot section of sidewalk is missing on the north side of San Juan Road one lot west of Susan Street.

Salinas Road and Porter Street also have continuous sidewalks through Pajaro, allowing continuous travel to Pajaro Middle School in southern Pajaro and Watsonville to the north.

A marked crosswalk is present across San Juan Road at Salinas Road. Crosswalks are also present across the south, east, and west legs of the Porter Street / San Juan Road intersection.

2.3 Existing Bicycle Network

There are four types of bicycle facilities defined by Caltrans. Each type is described below:

1. Bike path (Class I) – A separate right-of-way designed for the exclusive use of bicycle and pedestrian traffic with crossflow minimized.
2. Bike lane (Class II) – A striped lane for one-way bike travel on a street or highway, typically including signs placed along the street segment.
3. Bike route (Class III) – Provides a shared use with pedestrian or motor vehicle traffic. Typically, these facilities are city streets with signage designating the segment for Bike Route without additional striping or facilities.
4. Separated Bikeways (Class IV) – A bikeway for the exclusive use of bicycles and includes a separation between the bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

A bicycle network map for Monterey County is included in **Appendix B**. This map is cited from *Transportation Agency for Monterey County Bicycle and Pedestrian Master Plan,* Alta Planning + Design, December 2011 ("TAMC Bicycle and Pedestrian Master Plan").

Bicycle facilities are provided along the following roadways in the study network:

- Bike Lane (Class II):
  a. Porter Drive: north of San Juan Road (both directions)

The shoulders present on Salinas Road south of Porter Drive are wide enough to accommodate bicycle traffic, although they are not formally striped as Class II bike lanes.

2.4 Existing Transit Service

Monterey-Salinas Transit (MST) provides fixed-route bus service in Monterey County and Peninsula cities. Two MST bus lines provides service to the study area:

- Line 28 (Watsonville – Salinas via Castroville). This line provides weekday and weekend service every two hours between roughly 6:30 AM – 10:00 PM.
- Line 29 (Watsonville – Salinas via Prunedale). This line provides weekday and weekend service every two hours 90 minutes between roughly 6:00 AM – 8:00 PM.

The nearest bus stops to the Project site (served by both Lines 28 and 29) are located on Porter Drive south of San Juan Road (both directions). These stops are located approximately 0.4 mile (about a 10- to 15-minute walk) from the project site. Additional bus stops are located on Salinas Road further south of the project site.

2.5 Existing Conditions Traffic Circulation

2.5.1 Susan Street Traffic Operations

Susan Street has a width of 36 feet measured from the back of the rolled curbs. This is the equivalent of a face of curb to face of curb width of 35 feet, which exceeds the Tertiary Street standard width of 34 feet from face of curb to face of curb on "Monterey County Standard Details," (County Standard Details) 1977, Plate 2. This same width is shown on Standard Detail Plate 3 for a Modified Tertiary Street. Plates 2 and 3 are included as **Appendix C**.

Per the County Standard Details, a Tertiary Street can accommodate up to 100 abutting residential lots and provide access to no more than 100 units. This has a corresponding range of 300 to 1,000 vehicles per day expected in 20 years. The Susan Street Apartments is proposed to include 61 apartments. There are a total of 19 existing lots. This a total of about 80 units, which is within the Tertiary Street range for number of units served. Adequate capacity is therefore provided for current traffic volumes.

2.5.2 Intersection Operations

In May 2020, the Monterey County Health Department instituted a shelter-in-place order for all of Monterey County, restricting operations and travel to/from offices, commercial businesses, and recreational activities. This order was in response to the COVID-19 pandemic occurring within the County during the Year 2020. As a result, traffic activity throughout the county was significantly reduced from typical conditions, precluding the usual collection of peak period traffic volumes at the four study intersections.

Existing peak hour traffic volumes at the four study intersections in the Year 2021 were therefore referenced from the recent "Pajaro Apartments Traffic Impact Analysis," Keith Higgins Traffic Engineer, March 25, 2021, which approximated peak hour volumes using a combination of resources, as listed below.

1. AM and PM peak hour volumes from *G12: Prunedale to Pajaro Corridor Study – Existing Conditions Report ("Existing Corridor Report"),* Omni-Means, August 2018. These volumes were collected in 2018.

2. Historical traffic growth in the study network was estimated using segment volumes in *Monterey County Public Works Annual Average 2019,* Monterey County Public Works Department, 2020. **Appendix C** contains three years (2017-2019) of annual average daily traffic (AADT) on Porter Drive and San Juan Road in Pajaro. Over that time, traffic grew an average of 2.33% per year. Hence, a growth rate of 2.33% for 2 years, or 4.66%, was applied to the Existing Corridor Report volumes to approximate Year 2021 volumes.

3. Traffic counts were also conducted at the San Juan Road / Susan Street intersection on August 28, 2021. These counts are used to confirm the accuracy of the San Juan Road volumes at the Gonda Street, Salinas Road and Porter Street intersections. The counts are also included in **Appendix D**.

The resulting Existing AM and PM peak hour volumes used in this analysis are depicted in **Exhibit 4**. Existing intersection lane configurations, traffic controls and levels of service at the study intersections are summarized in **Exhibit 5A**. Recommended intersection improvements are summarized in **Exhibit 5B**. The LOS calculation sheets for Existing conditions can be found in **Appendix E**.

All the study intersections currently operate at or better than their respective level of service standards, as shown below:

1. Intersection 1 – Porter Street / San Juan Road – LOS C (AM), LOS D (PM)
2. Intersection 2 – Porter Street – Salinas Road / Stender Avenue – Salinas Road – LOS C AM, PM)
3. Intersection 3 – San Juan Road / Salinas Road – LOS B (AM), LOS C (PM)
4. Intersection 4 – San Juan Road / Gonda Street – LOS C (AM), LOS B (PM)
5. Intersection 5 – San Juan Road / Susan Street – LOS C (AM), LOS A (PM)

2.5.3 Pedestrian Circulation

Pedestrian volumes are light in the immediate project vicinity and moderate near Salinas Road, Porter Drive and Main Street, due to the close proximity of Pajaro to downtown Watsonville and the presence of Pajaro Middle School south of the study area. Automobile ownership may also be lower than typical due to the lower income in the Pajaro community. The school population includes both residents from Pajaro and Watsonville, leading some students from Watsonville to walk to school. A total of 74 AM and 39 PM pedestrian crossings occurred at the Porter Drive / San Juan Road intersection during the study peak periods. These are adequately served by the existing pedestrian network described in Section 2.2 above.

2.5.4 Bicycle Circulation

According to the Existing Corridor Report, there are a low number of bicycles traveling through the study intersections during the peak hours. Only 7 AM and 10 PM bicyclists passed through the Porter Drive / San Juan Road intersection during the study peak periods. The Existing Corridor Report cited earlier recommends converting the existing outside southbound through/right lane on the Main Street bridge over the Pajaro River to an exclusive right turn lane to allow the provision of bike lanes on Pajaro Street between San Juan Road and Salinas Street.

2060 ROCKROSE COURT, GILROY, CA 95020
T 408.201.2752 KEITH@KEITHHIGGINSTE.COM

3 EXISTING PLUS PROJECT CONDITIONS

3.1 Project Description

This section of the report focuses on Existing Plus Project conditions with the Project conservatively utilized as standard apartments although the project will be agricultural employee housing. The Project will consist of 60 standard apartments and 1 manager apartment. This will provide as many as 480 beds if used as agricultural employee housing. No credit is given for existing agricultural operations on the Project site. The trip generation estimate for the Project is based on rates from *Trip Generation Manual,* 10th Edition, published by the Institute of Traffic Engineers in 2017 (Trip Generation Manual). This includes both the proposed apartments and manager's unit.

3.2 Project Trip Generation

Exhibit 6 provides the trip generation estimate for the Project operated as standard apartments. The Project is estimated to generate about 446 weekday daily trips, with 29 trips (6 in, 23 out) during the AM peak hour and 35 trips (22 in, 13 out) during the PM peak hour. As a worst case, the Project is analyzed as a standard apartment.

The Project is actually proposed to be used as H2A (Agricultural Worker) housing. The following is an excerpt from the "Description of Project in the "Administrative Draft Preliminary Environmental Study," pages 3 and 4, that describes the Project's proposed traffic operations as H2A housing. "The seasonal employees typically do not have their own vehicles. Instead, the employees would be bussed or carpooled to agricultural fields throughout Monterey County. All outbound bus/vanpool trips would occur by 5:00 A.M. and all inbound bus/vanpool trips would occur by 4:00 P.M. Both buses and vans would be used for employee bussing and vanpools. The buses would be stored offsite and driven to and from the site each day, while the vans would be stored onsite. During weekday evenings and weekends, bus service into Pajaro and Watsonville would be provided to the employees, as necessary, to transport employees to shopping, recreation and religious services." **Appendix F** provides information regarding the proposed buses, which are typical of agricultural operations throughout the Pajaro and Salinas Valleys. Information regarding the proposed vans is provided at the attached https://calvans.org/farmworkers. These are also typical transport vehicles used in the local agricultural community.

Most of the bus trips would be in the early morning and early afternoon before peak hour traffic times. As indicated on **Exhibit 6**, The project operated as H2A housing would generate about 145 daily trips with 4 in the morning peak hour and 36 in the evening peak hour when the Project is occupied. This includes buses and vans to transport residents to and from work sites as well as to and from local shopping and other destinations for residents' personal business.

H2A projects are only occupied during the growing season in the Pajaro and Salinas Valleys which extends from March through the middle of November, which is about 8.5 months. The Project would be unoccupied for the winter season, which lasts about 3.5 months. On an annualized basis, the Project would generate about 105 daily trips with 3 in the morning peak hour and 26 in the evening peak hour. The H2A alternative would only represent about one-fourth to one-third of the daily total, depending on whether it is considered on a peak occupancy or annual average basis. The AM peak hour would be 10% to 14% of the apartment trip generation.

3.3 Project Trip Distribution and Assignment

Exhibit 7 depicts the trip distribution for the Project. The trip distribution was combined with the Project trip generation to derive the Project trip assignment depicted in **Exhibit 7**.

3.4 Existing Plus Project Condition Traffic Circulation

3.4.1 Susan Street Traffic Operations

As discussed in Section 2.5.1 above, Susan Street exceeds the Tertiary Street width shown on the County Standard Details. Susan Street will therefore adequately accommodate up to 100 units. The addition of the Susan Street Apartments will result in about 80 units being served by Susan Street, which is within the Tertiary Street range. Susan Street will adequately accommodate Existing plus Susan Street Apartments traffic volumes.

3.4.2 Intersection Operations

The Project trip assignment (**Exhibit 8**) was added to the existing traffic volumes in **Exhibit 4** to estimate the Existing Plus Project volumes depicted in **Exhibit 9**.

Existing Plus Project condition intersection levels of service are summarized in **Exhibit 5A**. Recommended intersection improvements are summarized in **Exhibit 5B**. The LOS calculation sheets for Existing Plus Project conditions can be found in **Appendix G**.

All study intersections would continue to operate at or better than their respective level of service standards under Existing Plus Project conditions. No improvements are required.

3.4.3 Pedestrian Circulation

The Project is anticipated to generate pedestrian trips to and from commercial areas on Porter Drive as well as downtown Watsonville. There are existing sidewalks between the project site and these locations that provide adequate capacity for the additional pedestrian traffic. The exceptions are the three missing segments of sidewalk along the west side of Susan Street as well as the section along the north side of San Juan Road discussed in Section 2.2 “Existing Pedestrian Network” of this report and illustrated on **Exhibit 3**. The Project should construct the missing segments of sidewalk at the four locations, subject to coordination with the corresponding adjacent property owner.

3.4.4 Bicycle Circulation

The Project is anticipated to generate a small amount of bicycle traffic. The existing bike lanes and shoulders on the study street network will be adequate to accommodate this additional bicycle traffic. Therefore, the Project would not represent a significant impact to bicycle circulation.

2060 ROCKROSE COURT, GILROY, CA 95020

T 408.201.2752 KEITH@KEITHHIGGINSTE.COM

3.4.5 Transit Circulation

The Project is anticipated to generate minimal transit demand. Therefore, the Project would not represent a significant impact to transit service.

3.5 Impact Fees

The Project would be subject to the TAMC Regional Development Impact Fee and the Monterey County transportation impact fee. The project's fees applicable to the apartments would be different than the fees applicable for the agricultural employee housing.

4 CUMULATIVE WITHOUT PROJECT CONDITIONS

This section describes the analysis results under Cumulative Without Project traffic conditions, which forecasts traffic conditions at buildout of the Monterey County and City of Watsonville General Plans. This scenario does not include trips from the study Project. This condition represents conditions in approximately the Year 2043.

4.1 Derivation of Cumulative Without Project Condition Volumes

Traffic volumes under Cumulative Without Project conditions were estimated using growth rates derived in the report *G12: Prunedale to Pajaro Corridor Study ("G12 Corridor Study"),* GHD, June 13, 2019. This report forecasts a total volume growth rate over existing conditions of 7.4% over 22 years. This growth rate of 7.4% was applied to the Existing volumes in **Exhibit 4** to derive the Cumulative Without Project volumes shown in **Exhibit 10**.

4.2 Network Modifications under Cumulative Conditions

Cumulative Without Project and Cumulative Plus Project conditions include street network modifications on Porter Drive at San Juan Road. These modifications were recommended in the G12 Corridor Study. These improvements are funded by the TAMC Regional Development Impact Fee. The improvements include the restriping of southbound Porter Drive to convert one southbound through/right lane into a southbound right turn lane. These improvements are necessary to add bicycle lanes in each direction on Porter Drive south of the intersection.

4.3 Cumulative Without Project Traffic Conditions

4.3.1 Intersection Operations

Cumulative Without Project traffic volumes are depicted on **Exhibit 10**. Cumulative Without Project intersection levels of service are summarized in **Exhibit 5A**. Recommended intersection improvements are summarized in **Exhibit 5B**. The LOS calculation sheets for Cumulative Without Project traffic conditions can be found in **Appendix H**.

All study intersections will continue to operate at or better than their respective level of service standards under Cumulative Without Project conditions, as shown below:

1. Intersection 1 – Porter Street / San Juan Road – LOS D (AM, PM)
2. Intersection 2 – Porter Street – Salinas Road / Stender Avenue – Salinas Road – LOS D (AM), LOS C (PM)

3. Intersection 3 – San Juan Road / Salinas Road – LOS B (AM), LOS C (PM)
4. Intersection 4 – San Juan Road / Gonda Street – LOS C (AM, PM)
5. Intersection 5 - San Juan Road / Susan Street – LOS C (AM), LOS B (PM)

No improvements will be required at any of these intersections.

4.3.2 Pedestrian Circulation

The G12 Corridor Study proposes the widening of the existing sidewalks on Porter Drive and Salinas Road, including near Pajaro Middle School. There are no other planned pedestrian improvements in the study area under Cumulative Without Project conditions other than to construct sidewalks along future streets where appropriate and to close gaps in existing sidewalks along Susan Street and San Juan Road (discussed earlier in this report) as well as elsewhere in the Pajaro Community.

4.3.3 Bicycle Circulation

The TAMC bike and ped plan proposes the following future bicycle improvements in the study area.

- Bike Lane (Class II):
  a. San Juan Road: between Porter Drive and US 101 (both directions)

The Final Corridor Study also proposes the following future bicycle improvements in the study area.

- Bike Lane (Class II):
  b. Porter Drive: between Salinas Road and San Juan Road (both directions)
  c. San Juan Road: between Porter Drive and Elkhorn Road (both directions)

4.3.4 Transit Circulation

There are no anticipated transit improvements in the study area.

5 CUMULATIVE PLUS PROJECT CONDITIONS

This section describes the analysis results under Cumulative Plus Project traffic conditions, which adds Project trip to the Cumulative Without Project volumes.

5.1 Derivation of Cumulative Plus Project Condition Traffic Volumes

The Project trip assignment (**Exhibit 7**) was added to the Cumulative Without Project volumes (**Exhibit 9**) to estimate Cumulative Plus Project traffic volumes, which are depicted on **Exhibit 11.**

5.2 Cumulative Plus Project Traffic Conditions

5.2.1 Intersection Operations

Cumulative Plus Project intersection levels of service are summarized in **Exhibit 5A**. Recommended intersection improvements are summarized in **Exhibit 5B**. The LOS calculation sheets for Cumulative Plus Project traffic conditions can be found in **Appendix I**.

All study intersections would continue to operate at or better than their respective level of service standards under Cumulative Plus Project conditions. No improvements will be required.

5.2.2 Pedestrian Circulation

Pedestrian activity is not anticipated to increase significantly under Cumulative Plus Project conditions as compared to Cumulative Without Project conditions. Therefore, the Project would not represent a significant effect on pedestrian circulation under Cumulative Plus Project conditions, other than along Susan Street and San Juan Road, which has been discussed in detail earlier in this report

5.2.3 Bicycle Circulation

Bicycle activity is not anticipated to increase significantly under Cumulative Plus Project conditions as compared to Cumulative Without Project conditions. Therefore, the Project would not represent a significant effect on bicycle circulation under Cumulative Plus Project conditions.

5.2.4 Transit Circulation

Transit demand from the Project is not anticipated to increase significantly under Cumulative Plus Project conditions. As such, the Project would not represent a significant cumulative effect on transit circulation.

6 SITE ACCESS AND INTERNAL CIRCULATION

This section summarizes the site access and internal circulation analysis, including Project driveway operations, based on the site plan included as **Exhibit 2**.

6.1 Vehicle Circulation

The onsite parking area has direct access to Susan Street. All project site traffic would travel on Susan Street to and from San Juan Road. This intersection will operate acceptably through Cumulative Plus Project conditions without any improvements.

The project driveway on Susan Street will operate acceptably through Cumulative Plus Project conditions. This is because the project is located at the existing terminus of Susan Street, where there is little to no cross traffic on Susan Street.

The on-site bus loading area will be located along the northernmost building on the project site. Passenger vehicles and buses will be able to circulate on the loop circulation aisle that will provided around the Project's building complex. This will provide alternate internal access for the entire project and eliminate the need for buses to turn around within the Project site. Project access and internal circulation is adequate as proposed.

6.2 Pedestrian Circulation

Sidewalks are proposed around all on-site buildings. A crosswalk is proposed across the onsite driveway for easy access to both ADA parking and Susan Street. No additional on-site pedestrian circulation improvements are required. Off-site pedestrian improvements along Susan Street and San Juan Road are discussed elsewhere in this report.

6.3 Bicycle Circulation

Bicycle racks are located adjacent to each building, plus in the far southwest corner of the site plan. In total, approximately 24 bike racks are provided, which is double the 12 racks required per Monterey County standards. No bicycle improvements are required.

6.4 Emergency Access

Emergency access to the Project site is provided by Susan Street. According to the North County Fire District email included as **Appendix J** emergency access is acceptable to serve the Project.

7 VEHICLE MILES TRAVELED

This section summarizes the calculation of the total vehicle miles traveled by Project traffic.

Vehicle Miles Traveled (VMT) represents the total number of miles traveled per weekday by all vehicles while traveling to and from a Project site. Monterey County is in the process of establishing a VMT standard with significance criteria for VMT evaluations in the unincorporated areas of the county. The draft policy has been reviewed by the Monterey County Planning Commission which has recommended it for approval by the Board of Supervisors. The schedule for the Board to consider this policy has not been established as of the date of this report. However, it is assumed to occur in the next several months. **Exhibit 12** provides the heat map, which indicates by color code the areas of North Monterey County where residences generate vehicle miles per capita below (in green) or above (orange or red) the significance threshold. The threshold is 15% below the County-wide average VMT per capita.

Residential development in the entire Pajaro area, including the Project site, has been determined to generate VMT below the County threshold. No additional analysis is required. The discussion below is therefore superseded. However, it explains why Pajaro residential development has low VMT per capita relative to the County average. It also discusses why the H2A project alternative also would have VMT per capita below the County average and may reduce regional VMT by providing bus transportation for Project residents to and from work as well as personal trips during non-work hours.

7.1 Apartments

Assuming the worst-case apartment use, the project will generate about 454 weekday daily trips, which is greater than the default threshold of 110 daily trips above which a VMT analysis is recommended according to the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, State of California Governor's Office of Planning and Research, December 2018. The project generally fits the following generic criteria per Proposed CEQA Guideline Section 15064.3, subdivision (b)(1).

1. Projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT.

   The project is located about ¾ mile from the Watsonville Transit Center, located at the southerly corner of the Rodriquez Street / East Lake Street intersection in Watsonville as well. A total of nine Santa Cruz Metro Transit District and Monterey Salinas Transit (MST) routes converge. MST Routes 28 and 29 operate along Pajaro Street and Main Street within 0.30 miles of the site. They each operate on a 2-hour headway between the City of Salinas and the Watsonville Transit Center.

2. Adding affordable housing to infill locations generally improves the jobs-housing match, in turn shortening commutes and reducing VMT. Further, according to "… low-wage workers in particular would be more likely to choose a residential location close to their workplace, if

> one is available." In areas where existing jobs-housing match is closer to optimal, low-income housing nevertheless generates less VMT than market-rate housing. Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations.

The project nearly meets the exemption based on transit service. If used as standard apartments it would qualify as affordable housing given its location in Pajaro as well as being multi-family housing. It would also be infill because it is one of the only remaining vacant developable parcels

within the Pajaro Community.

7.2 Agricultural Worker Housing

The project will house up to 480 workers. They will be transported to and from a variety of agricultural fields throughout the Pajaro Valley by buses and vans. Workers will also be provided with shuttles or walk and bicycle to local businesses within Pajaro and Watsonville for personal trips. The use of buses and vans to transport these workers with vehicle occupancy ranging from 9 to 30 or more workers per vehicle will significantly reduce VMT compared to the workers driving themselves to the fields from existing housing in the region. The H2A housing project will therefore have a beneficial effect on VMT. There is therefore no need for further VMT analysis for the H2A Project alternative.

8 COLLISION ANALYSIS

California Statewide Integrated Traffic Records System (SWTRS) was obtained for the intersection of Susan Street and San Juan Road and Susan Street (from end to San Juan Road) between January 1, 2011, and October 21, 2021 through the Transportation Injury Mapping System (TIMS) platform provided by the University of California at Berkeley. The summary data is included as **Appendix K**. **Exhibit 13** tabulates this data.

According to TIMS records, a total of 12 collisions were reported along San Juan Road that were located by their distance from the San Juan Road / Susan Street intersection during the past 10.8 years. It will be noted that the collisions occurred along a segment of San Juan Road extending from about 50 feet west of Susan Street to 1,584 feet east of Susan Street. Susan Street was used as the reference point for identifying the location of these collisions because this is the most easterly public street intersection along San Juan Road in the area. Six of the collisions involved parked cars. Seven were caused by unsafe lane changes including passing in the two way left turn lane, two were due to unsafe speed. None were at the Susan Street intersection.

Only one collision was associated directly or indirectly with the Susan Street intersection. It involved a vehicle that was hit broadside exiting a private residential driveway about 60 feet west of Susan

Street. Although in relatively close proximity, this collision was not associated with traffic operations at the San Juan Road / Susan Street intersection.

No collisions were reported along Susan Street in the last 10.8 years.

There are no apparent traffic safety issues thus no remedial measures are required at the San Juan Road / Susan Street intersection or along Susan Street.

9 SUMMARY OF PROJECT RESPONSIBILITIES

The following is a summary of the Project responsibilities regarding traffic issues and impacts, based upon the recommendations discussed earlier in this report.

1. The Project should construct sidewalks at the three missing segments along the west side of Susan Street to provide a continuous sidewalk between the Project and San Juan Road, subject to the approval of, and in coordination with, the corresponding adjacent property owners. This is discussed in Section 2.2 “Existing Pedestrian Network” of this report.
2. The Project should construct sidewalk at the missing segment along the north side of San Juan Road to provide a continuous sidewalk along San Juan Road west of Susan Street, subject to the approval of, and in coordination with, the corresponding adjacent property owners. This is discussed in Section 2.2 “Existing Pedestrian Network” of this report.
3. Pay the TAMC Regional Development Impact Fee. Monterey County staff will calculate the applicable fees to the Project at the time of development.
4. Pay the County of Monterey Traffic Impact Fee. Monterey County staff will calculate the applicable fee to the Project at the time of development.

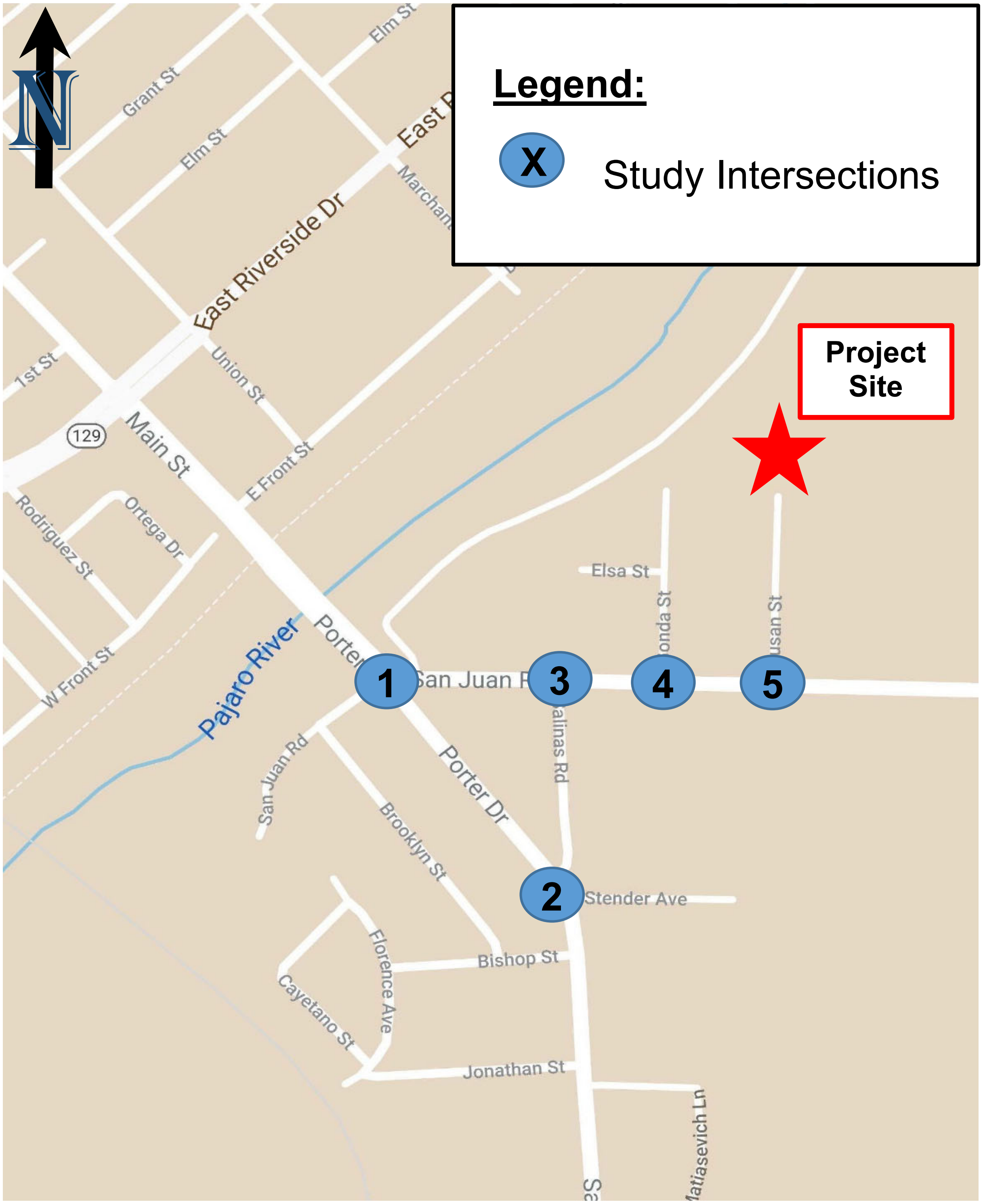
10 REFERENCES

10.1 List of References

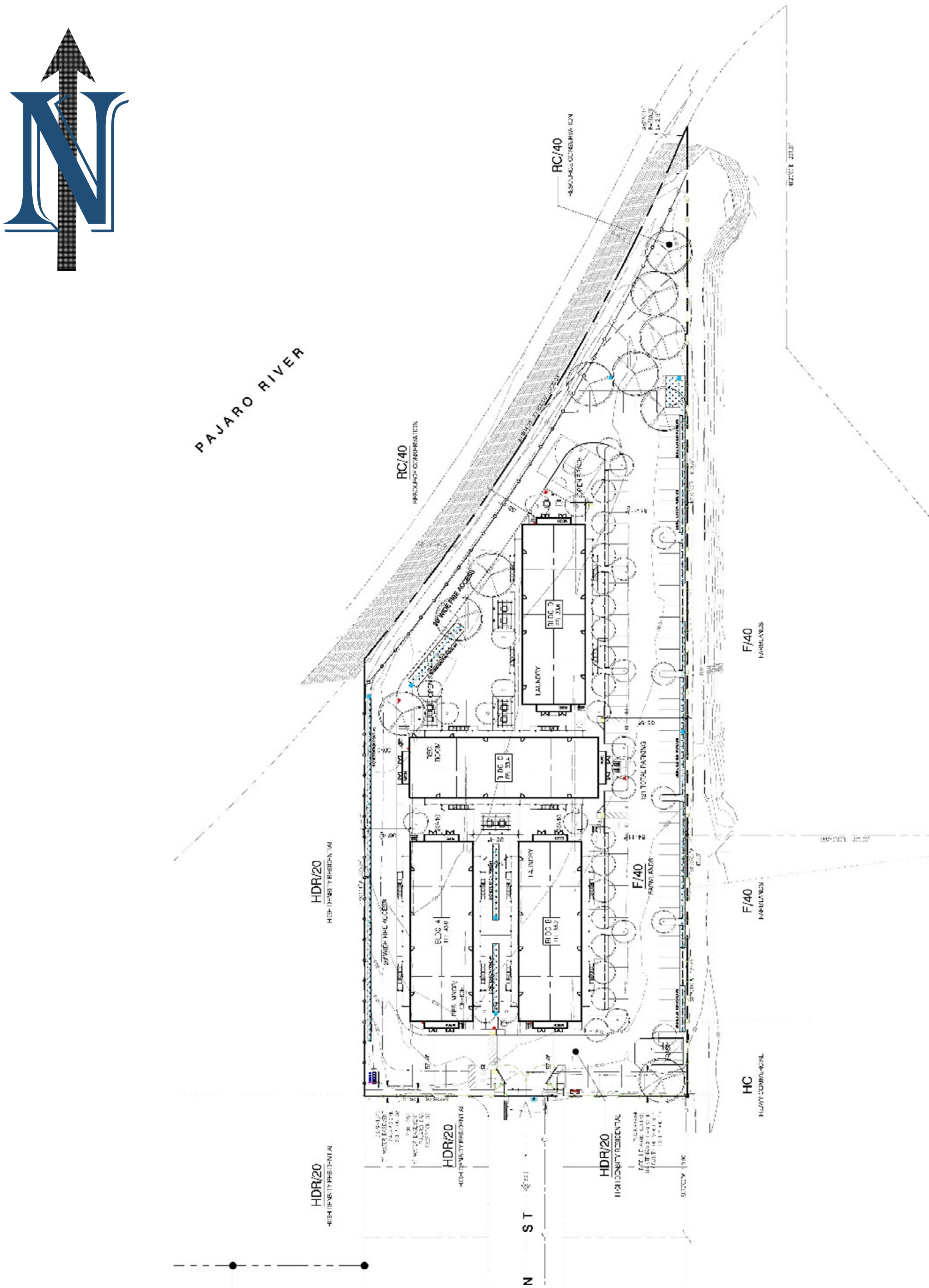
1. *2010 Highway Capacity Manual,* Transportation Research Board, 2010.
2. *2000 Highway Capacity Manual,* Transportation Research Board, 2000.
3. *Guide for the Preparation of Traffic Impact Studies,* Monterey County Resource Management Agency – Department of Public Works, March 2014.
4. *2007 Monterey County General Plan Draft Environmental Impact Report,* ICF Jones & Stokes, September 2008.
5. *The Regional Impact Fee Program Nexus Study Update 2018,* Wood Rodgers, October 2018.
6. *Highway Design Manual,* 6th Edition, California Department of Transportation (Caltrans), November 20, 2017.
7. *Transportation Agency for Monterey County Bicycle and Pedestrian Master Plan,* Alta Planning + Design, December 2011.
8. Monterey-Salinas Transit web site, http://www.mst.org. Accessed February 26, 2021.
9. *G12: Prunedale to Pajaro Corridor Study – Existing Conditions Report,* Omni-Means, August 2018.
10. *Monterey County Public Works Annual Average 2019,* Monterey County Public Works Department, 2020.
11. *Trip Generation Manual,* 10th Edition, Institute of Transportation Engineers, 2017.
12. *G12: Prunedale to Pajaro Corridor Study,* GHD, June 13, 2019.
13. *Technical Advisory on Evaluating Transportation Impacts in CEQA,* State of California Governor's Office of Planning and Research, December 2018
14. *Statewide Integrated Traffic Records System (SWITRS)*, California Highway Patrol, 2021

10.2 List of Contacts

1. Jeff Nohr, Project Manager, Avila Construction, Monterey, California.
2. Paul Davis, Project Architect, The Paul Davis Partnership, Monterey, California.
3. Juan Hernandez, Monterey County Public Works Department, Salinas, California.
4. Fernando Armendariz, Monterey County Public Works Department, Salinas, California.
5. Garrett Kaprielian, Project Civil Engineer, Whitson Engineers, Monterey, Californiat.



Basemap Source: Google Maps, 2021.



Source: The Paul Davis Partnership, 10/14/21.

Keith Higgins
Traffic Engineer

Exhibit 2
Project SIte Plan

Project / Owner:
Susan Street
Agricultural
Employee Housing

51, 53, 55, & 57 SUSAN ST
PAJARO, CA 95076

APN.: 117-361-016-000

Whitson ENGINEERS
Civil Engineering
Land Surveying
6 Harris Court
Monterey, California
831.649.5225
whitsonengineers.com

THE PAUL DAVIS PARTNERSHIP
ARCHITECTS & PLANNERS

The Paul Davis Partnership, LLP
286 Eldorado Street
Monterey, CA 93940
(831) 373-2784 FAX (831) 373-7459
EMAIL: info@pauldavispartnership.com

REGISTERED PROFESSIONAL ENGINEER
RICHARD P. WEBER
No. 55219
CIVIL
STATE OF CALIFORNIA

Drawn By: GK
Drawing Date: 11/23/21
Project Number: 4409.00

Revisions:
Planning Submittal 10-14-2021
Planning Resubmittal 11-23-2021

PLANNING REVIEW ONLY
SUBJECT TO REVISION

The use of these plans and specifications is restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Re-use, reproduction or publication by any method in whole or in part is prohibited. Title to the plans and specifications remains with the architect, and visual contact with them constitutes prima facie evidence of the acceptance of the restrictions.

Sheet Title:
OFF-SITE IMPROVEMENT
PLAN - SUSAN STREET

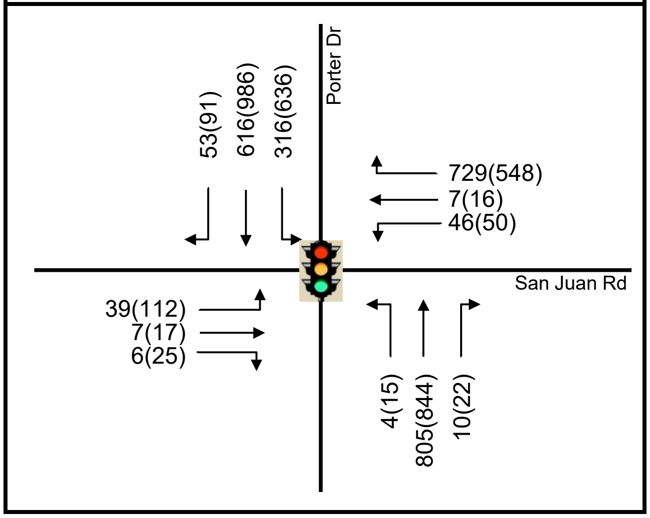
Exhibit 3
Susan Street Sidewalk Improvements

Keith Higgins
Traffic Engineer

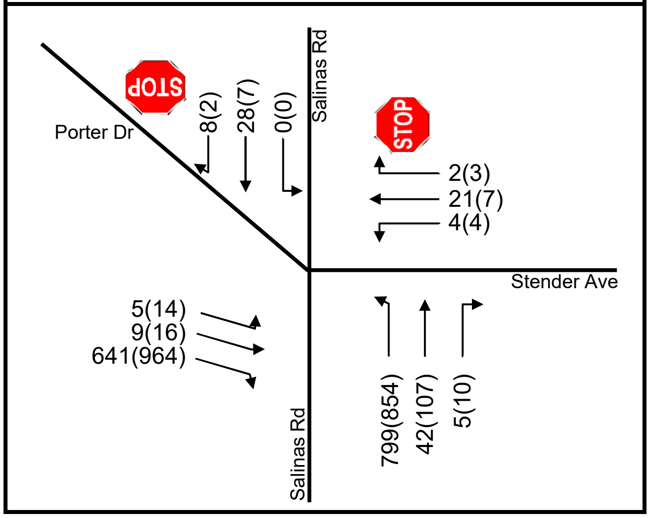
Source: Whitson Engineers, 11/23/21
Note 1 - Proposed sidewalk improvements are noted in dotted areas along west side of Susan Street.

T:\Monterey Projects\4409 - Pajaro AG Housing\CAD\PLANSET\4409-CIVIL C1.8 OFFSITE.dwg Nov 23, 2021 - 10:05am

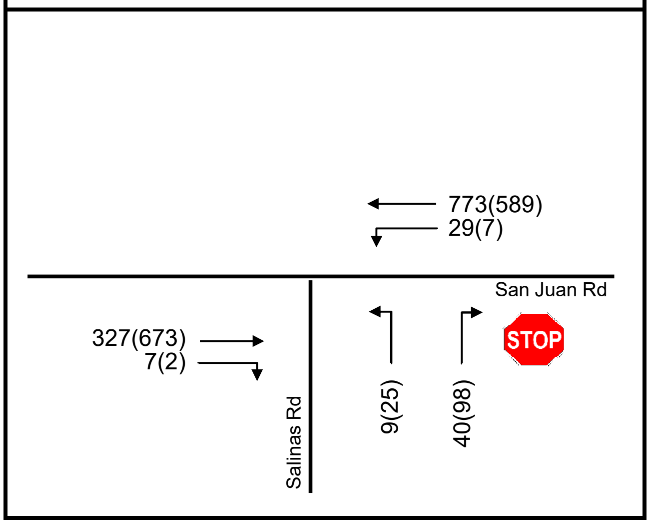
1. Porter Drive / San Juan Road



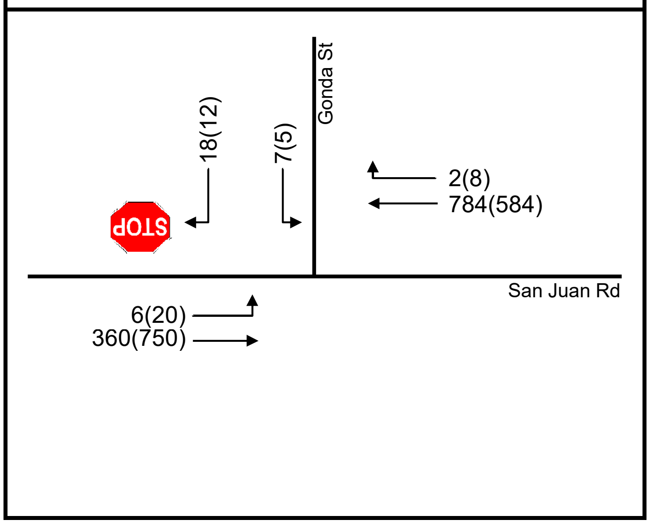
2. Porter Drive - Salinas Road / Stender Avenue - Salinas Road



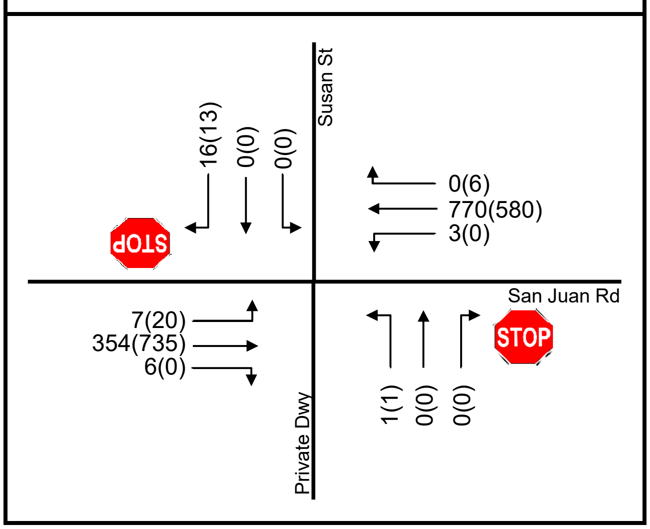
3. San Juan Road / Salinas Road



4. San Juan Road / Gonda Street



5. San Juan Road / Susan Street



Keith Higgins
Traffic Engineer

Exhibit 4
Existing Conditions
AM & PM Peak Hour Volumes

#	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Peak Hour	Existing Conditions Delay	Existing Conditions LOS	Existing Plus Project Conditions Delay	Existing Plus Project Conditions LOS	Cumulative Without Project Conditions Delay	Cumulative Without Project Conditions LOS	Cumulative Plus Project Conditions Delay	Cumulative Plus Project Conditions LOS
1	Porter Drive	San Juan Road	NB 1-L, 1-T, 1-T/R SB 2-L, 1-T, 1-T/R EB 1-L, 1-T, 1-R WB 1-L/T, 2-R	Signal	D	AM	27.3	C	27.5	C	38.9	D	39.0	D
						PM	44.4	D	44.8	D	51.7	D	52.0	D
				With Improvement		*AM*								
						PM								
2	Salinas Road	Porter Drive - Stender Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T, 1-R WB 1-L/T/R	One-Way Stop*	E	AM	23.4	C	23.5	C	26.7	D	26.7	D
						PM	21.8	C	21.9	C	24.0	C	24.1	C
				With Improvement		*AM*								
						PM								
3	Salinas Road	San Juan Road	NB 1-L/R EB 1-T/R WB 1-L, 1-T	One-Way Stop	E	AM	12.2	B	12.2	B	12.7	B	12.7	B
						PM	15.9	C	16.3	C	17.4	C	17.7	C
				With Improvement		*AM*								
						PM								
4	Gonda Street	San Juan Road	SB 1-L/R EB 1-L, 1-T WB 1-T/R	One-Way Stop	E	AM	17.2	C	17.5	C	19.3	C	19.7	C
						PM	14.2	B	14.4	B	15.1	B	15.3	C
				With Improvement		*AM*								
						PM								
5	Susan Street	San Juan Road	NB 1-L/T/R SB L/T/R EB 1-L, 1-T/R WB 1-L, 1-T/R	One-Way Stop	E/E	AM	29.3/15.0	D/C	31.3/18.8	D/C	32.1/15.6	D/C	34.5/20.1	D/C
						PM	38.3/8.9	E/A	41.4/17.4	E/C	41.4/12.8	E/B	46.4/18.6	E/C
				With Improvement		*AM*								
						PM								

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Left, Through, Right, Northbound, Southbound, Eastbound, Westbound.
3. Monterey County overall levels of service standard is LOS D. Side-street standard is assumed as LOS E.
4. For signalized intersection analysis, delay is average overall delay in seconds per vehicle (sec/veh). For one- and two-way stop intersections, delays are side-street approach operations, also in seconds per vehicle (sec/veh).
5. Analysis performed using 2010 and 2000 Highway Capacity Manual methodologies.
6. Level of service calculations can be found in **Appendices D through G**.
7. LOS highlighted in **red** indicates intersection operating below level of service standard.
8. LOS with a thick black border represents a significant impact. Resulting levels of service with recommended improvements noted under "With Improvements". A list of applied improvements can be found on **Exhibit 4B**.
9. * = This intersection has both cross streets on the same side of the street. Analysis models this intersection by combining both the south and east approaches to the intersection into a single approach.

Keith Higgins
Traffic Engineer

Exhibit 5A
Intersection
Levels of Service

	N-S Street	E-W Street	Existing Intersection Control	Existing Conditions	Existing Plus Project Conditions	Cumulative Without Project Conditions	Cumulative Plus Project Conditions
1	Porter Drive	San Juan Road	Signal	None Required	None Required	None Required	None Required
2	Salinas Road	Porter Drive - Stender Avenue	One-Way Stop*	None Required	None Required	None Required	None Required
3	Salinas Road	San Juan Road	One-Way Stop	None Required	None Required	None Required	None Required
4	Gonda Street	San Juan Road	One-Way Stop	None Required	None Required	None Required	None Required
5	Susan Street	San Juan Road	One-Way Stop	None Required	None Required	None Required	None Required

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. * = This intersection has both cross streets on the same side of the street. Analysis models this intersection by combining both the south and east approaches to the intersection into a single approach.

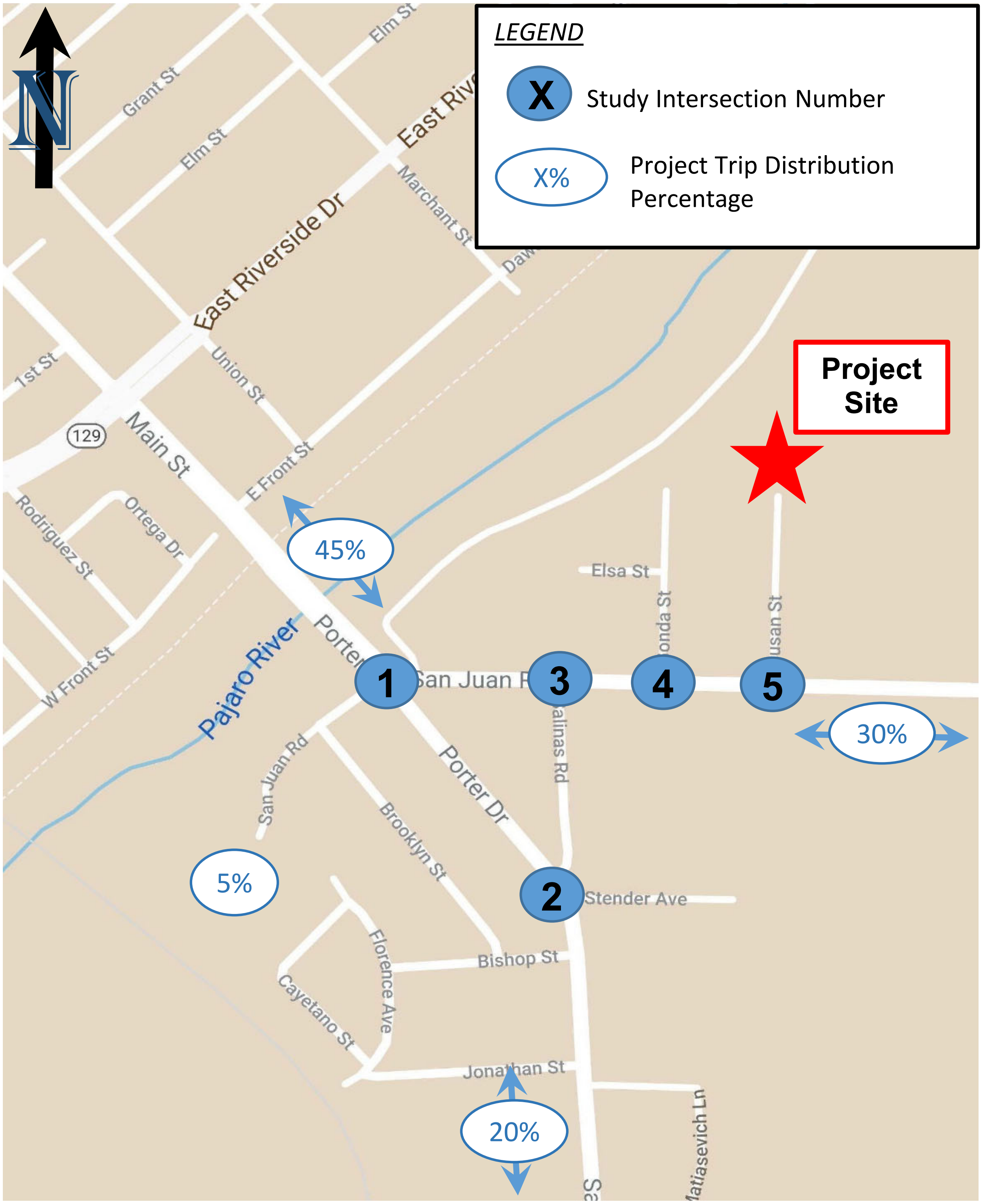
Keith Higgins
Traffic Engineer

Exhibit 5B
Recommended
Intersection Improvements

PROPOSED PROJECT - APARTMENTS										
A. Project Trip Rates										
			AM PEAK HOUR				**PM PEAK HOUR**			
TRIP GENERATION RATES	**ITE LAND USE CODE**	**DAILY TRIP RATE**	PEAK HOUR RATE	% OF ADT	% IN	% OUT	PEAK HOUR RATE	% OF ADT	% IN	% OUT
Multifamily Housing (Low-Rise) (per unit)	220	7.32	0.46	6%	23%	77%	0.56	8%	63%	37%
B. Project Trip Generation										
			AM PEAK HOUR				**PM PEAK HOUR**			
PROPOSED USE	**PROJECT SIZE**	**DAILY TRIPS**	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Apartments	60 units	439	28	6%	6	22	34	8%	21	13
Apartment - Manager's Unit	1 unit	7	1	14%	0	1	1	14%	1	0
Total:		**446**	**29**		**6**	**23**	**35**		**22**	**13**

PROPOSED PROJECT - AGRICULTURAL EMPLOYEE HOUSING										
A. Project Trip Rates										
			AM PEAK HOUR				**PM PEAK HOUR**			
REFERENCE USE	**EXISTING SIZE**	**DAILY TRIPS**	**PEAK HOUR TRIPS**	**% OF ADT**	**% IN**	**% OUT**	**PEAK HOUR TRIPS**	**% OF ADT**	**% IN**	**% OUT**
Casa Boronda Ag. Employee Housing Driveway Count[1]	600 beds	N.A.	4		3	1	43		22	21
Trip Rates (per employee):[2]		**0.288**	**0.007**		**75%**	**25%**	**0.072**		**51%**	**49%**
B. Project Trip Generation										
			AM PEAK HOUR				**PM PEAK HOUR**			
PROPOSED USE	**PROJECT SIZE**	**DAILY TRIPS**	**PEAK HOUR TRIPS**	**% OF ADT**	**TRIPS IN**	**TRIPS OUT**	**PEAK HOUR TRIPS**	**% OF ADT**	**TRIPS IN**	**TRIPS OUT**
Agricultural Employee Housing	480 beds	138	3	2%	2	1	35	25%	18	17
Apartment - Manager's Unit	1 unit	7	1	14%	0	1	1	14%	1	0
Raw (Peak Hour) Total (used in analysis):		**145**	**4**	**3%**	**2**	**2**	**36**	**25%**	**19**	**17**
Percent of Apartment Trip Generation		**33%**	**14%**				**103%**			
Annual Average Total:		**103**	**3**		**1**	**2**	**26**		**13**	**13**
Percent of Apartment Trip Generation		**23%**	**10%**				**74%**			

Notes:
1. Trip generation rates published by Institute of Transportation Engineers (ITE), *Trip Generation Manual,* 10th Edition, 2017
2. AM and PM peak hour traffic at Casa Boronda was collected Tuesday, April 16, 2019. This data can be found in **Appendix C**.
3. Daily trip rate derived by assuming that PM peak rate is 25% of the daily trip rate.
4. Estimated trip generation for Casa Boronda project cited from *Casa Boronda Agricultural Employee Housing Project Traffic Impact Analysis,* Keith Higgins Traffic Engineer, July 3, 2017.
5. Seasonal adjustment reflects that project is open for just 8.5 months of the year (i.e., approximately 71% of a year).

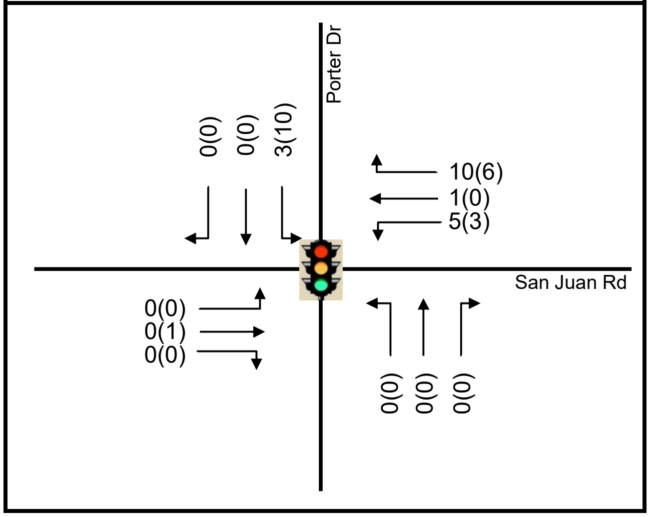


Basemap Source: Google Maps, 2021.

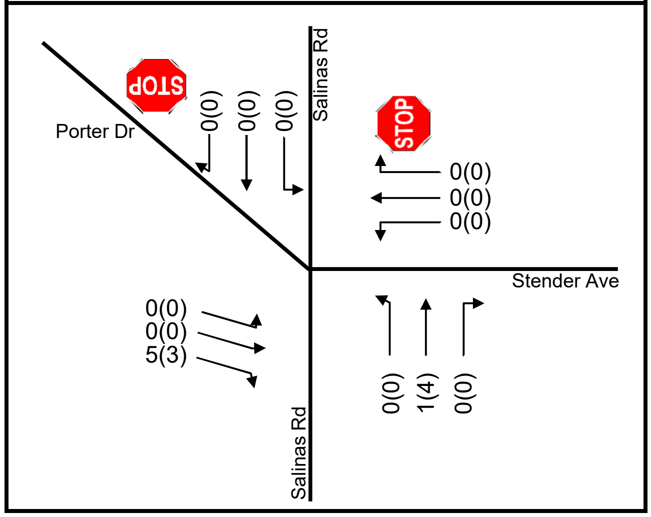
Keith Higgins
Traffic Engineer

Exhibit 7
Project Trip Distribution

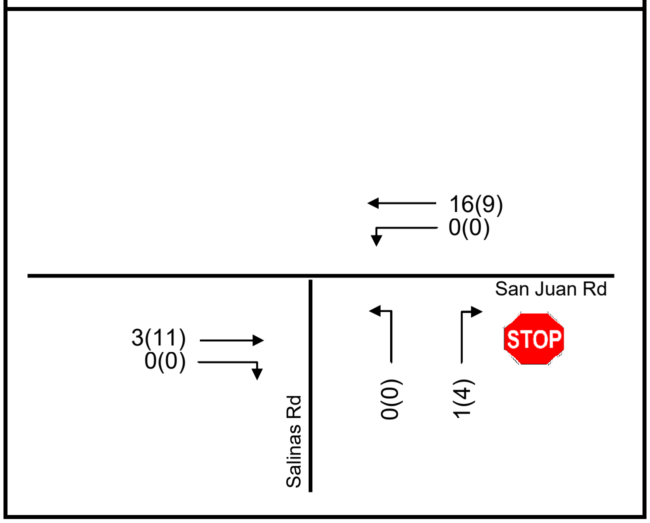
1. Porter Drive / San Juan Road



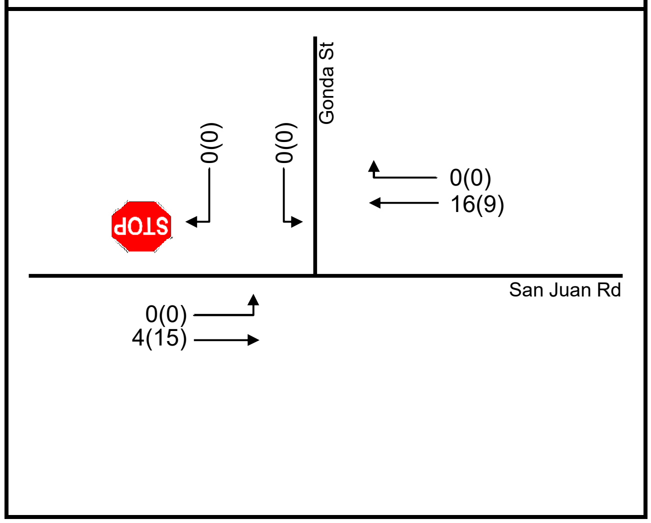
2. Porter Drive - Salinas Road / Stender Avenue - Salinas Road



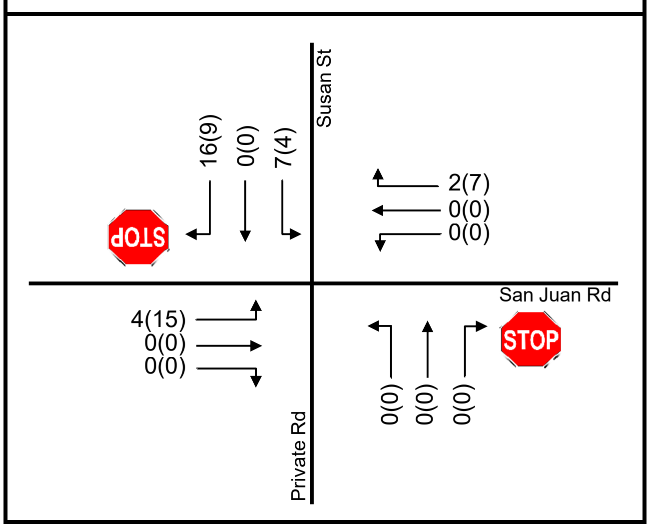
3. San Juan Road / Salinas Road



4. San Juan Road / Gonda Street

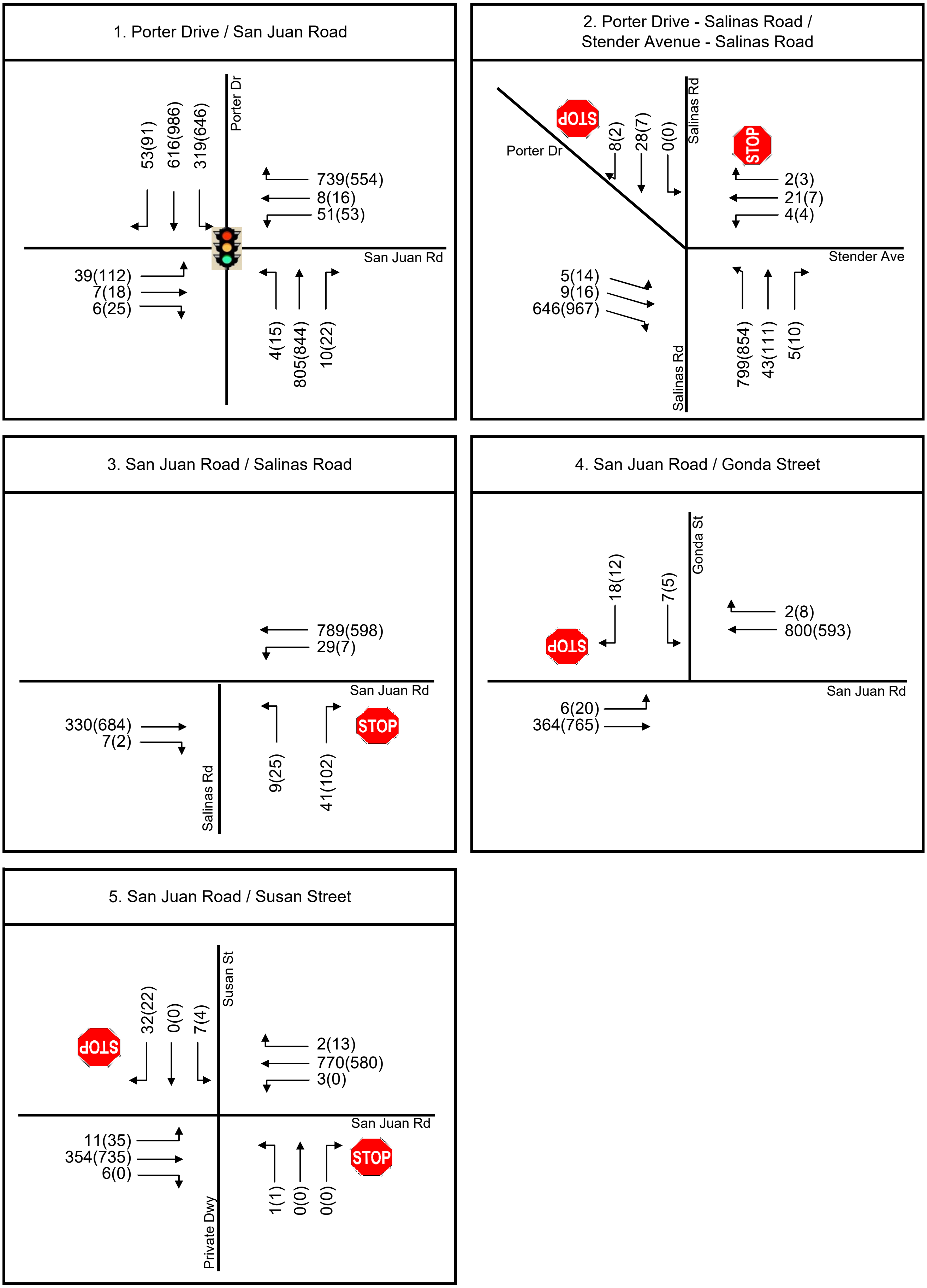


5. San Juan Road / Susan Street



Keith Higgins
Traffic Engineer

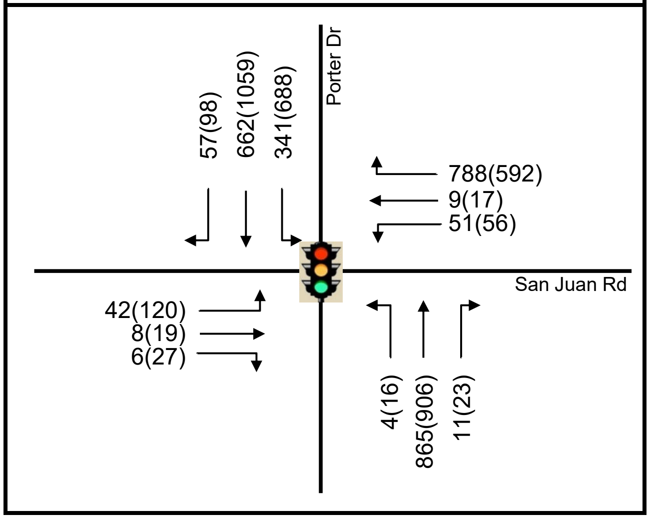
Exhibit 8
Project Trip Assignment
AM & PM Peak Hour Volumes



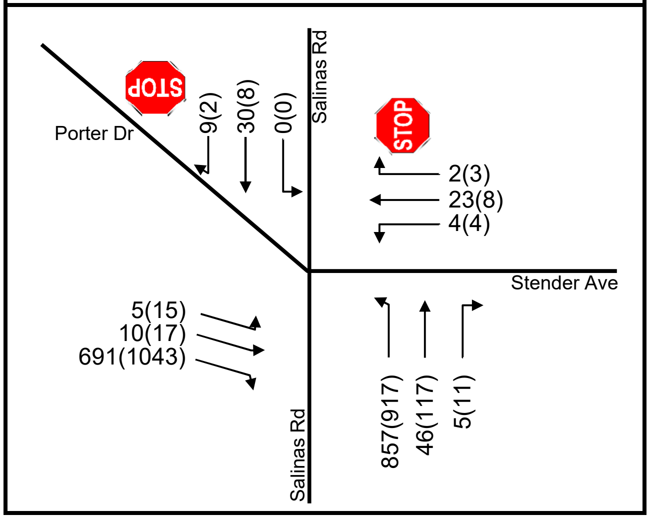
Keith Higgins
Traffic Engineer

Exhibit 9
Existing Plus Project Conditions
AM & PM Peak Hour Volumes

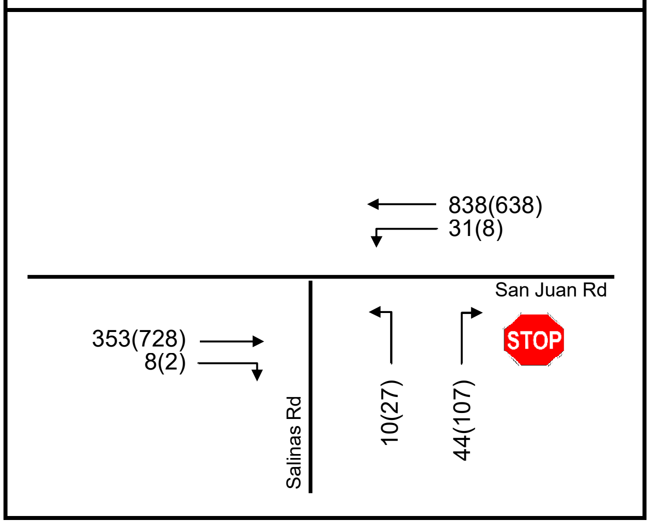
1. Porter Drive / San Juan Road



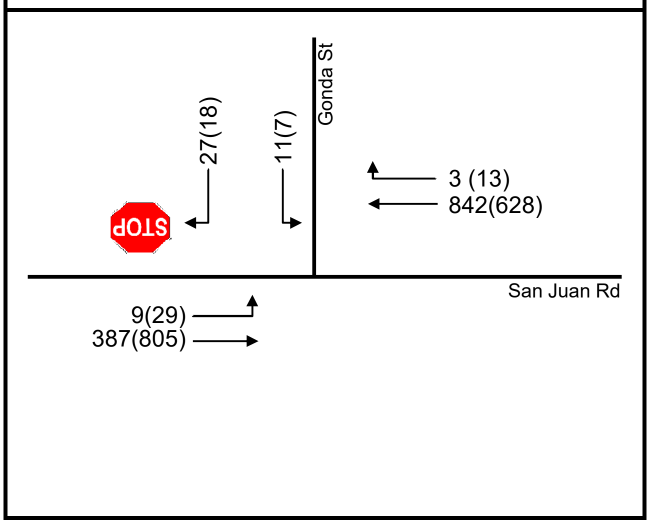
2. Porter Drive - Salinas Road / Stender Avenue - Salinas Road



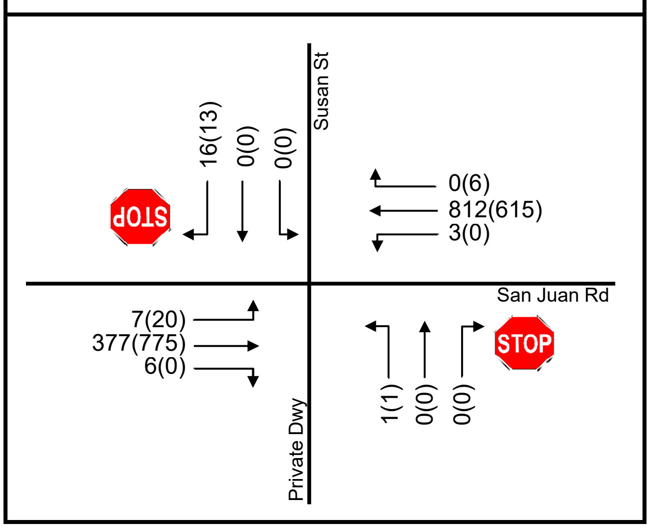
3. San Juan Road / Salinas Road



4. San Juan Road / Gonda Street



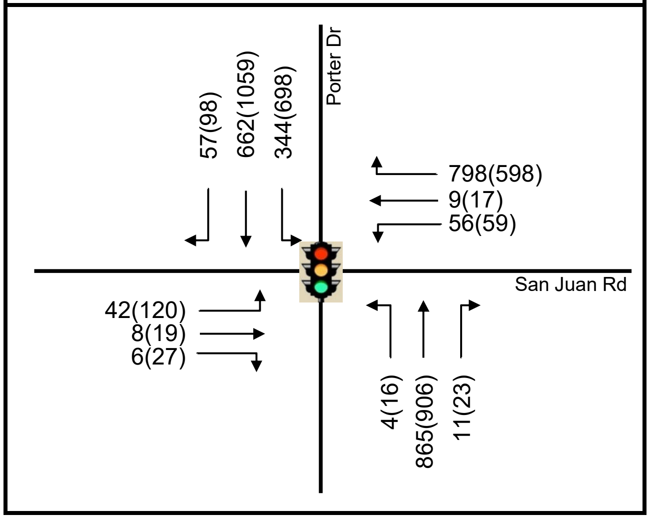
5. San Juan Road / Susan Street



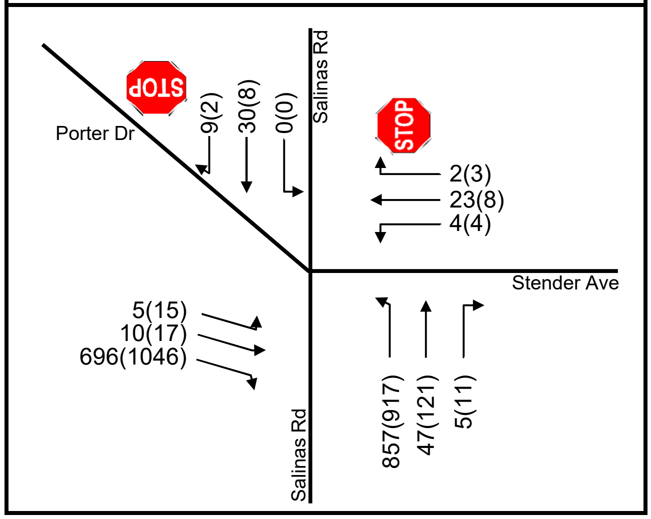
Keith Higgins
Traffic Engineer

Exhibit 10
Cumulative Without Project Conditions
AM & PM Peak Hour Volumes

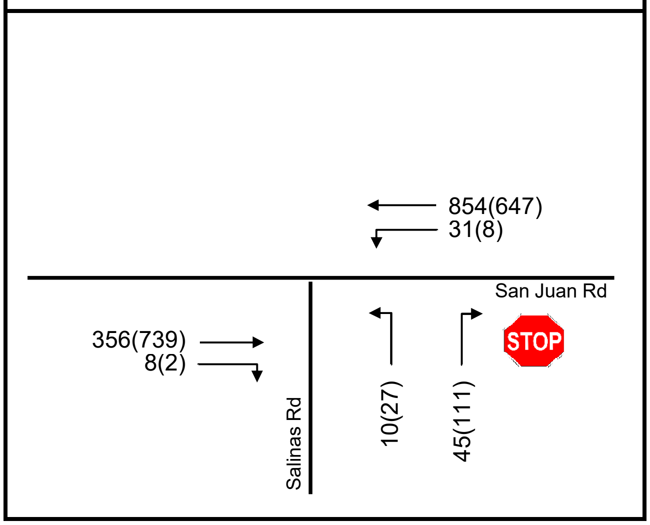
1. Porter Drive / San Juan Road



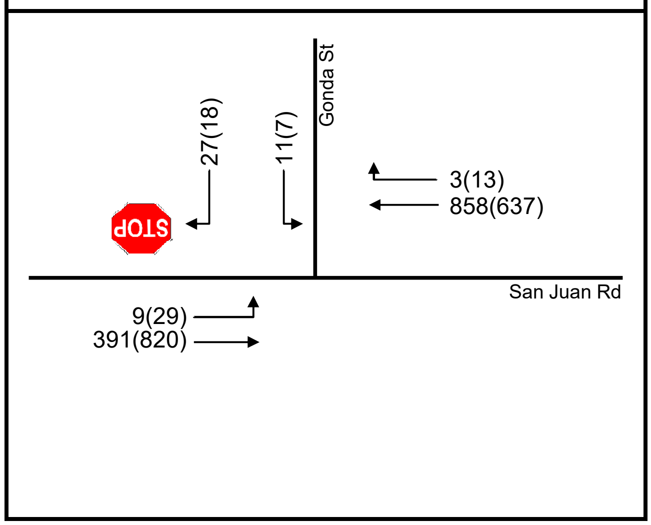
2. Porter Drive - Salinas Road / Stender Avenue - Salinas Road



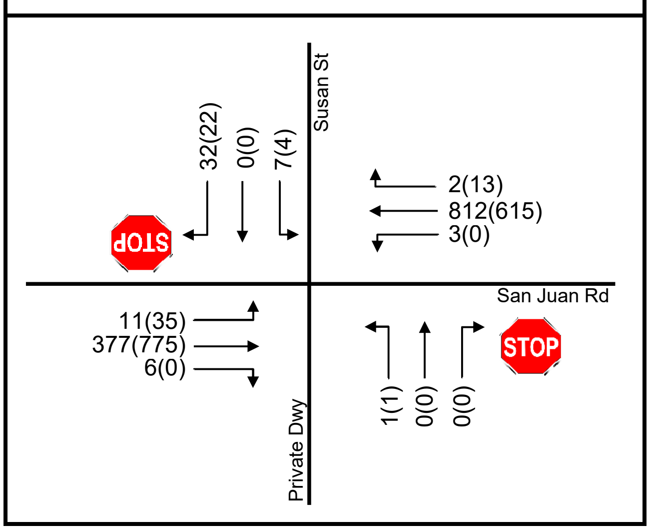
3. San Juan Road / Salinas Road



4. San Juan Road / Gonda Street

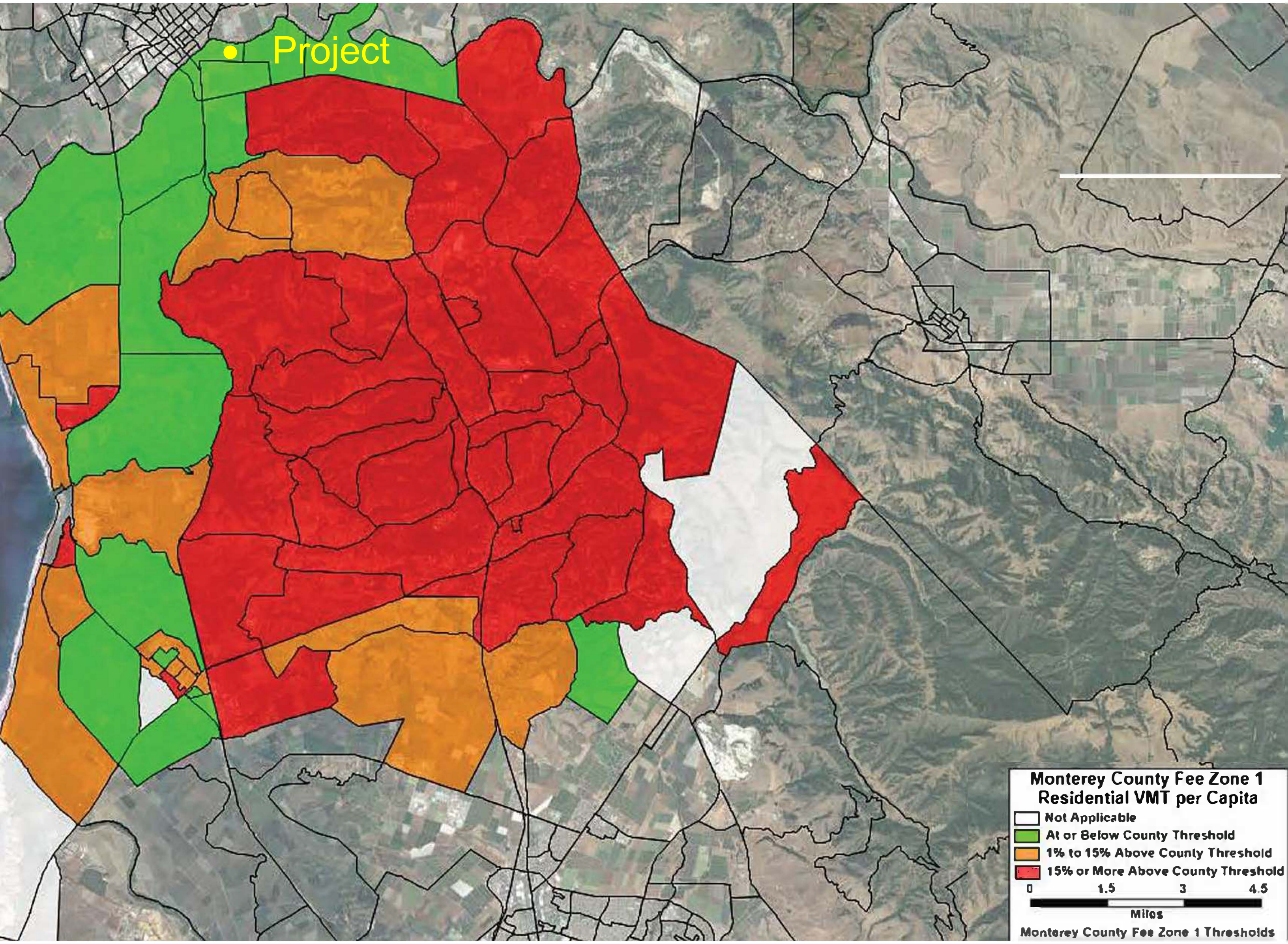


5. San Juan Road / Susan Street



Keith Higgins
Traffic Engineer

Exhibit 11
Cumulative Plus Project Conditions
AM & PM Peak Hour Volumes



Source: Draft Monterey County Vehicle Miles Traveled Policy - "Monterey County Fee Zone 1 Residential VMT per Capita," Heat Map, approved by Monterey County Planning Commission, June 30, 2021

Keith Higgins
Traffic Engineer

Exhibit 12
North County VMT
Heat Map

No.	Date	Collision Type	Violation	Primary Collision Factor	When Ocurred		Party 1 Direction of Travel	Distance from Intersection	Number of		In Proximity to Intersection	Comment
					Day	*Time*			*Fatalities*	*Injuries*		
None in 2011												
None in 2012												
None in 2013												
1	3/20/2014	Sideswipe	22107	Unsafe Lane Change	Thursday	2:50 PM	EB	150 ft. East	0	0	No	Hit EB Parked Car
2	8/19/2014	Sideswipe	21460.5	Passing in TWLTL	Tuesday	2:30 PM	WB	528 ft. East	0	0	No	WB Passing
3	9/10/2014	Hit Object	None	Not Driver	Wednesday	8:15 PM	NB	300 ft. East	0	0	No	Exit Driveway
4	10/11/2016	Broadside	22107	Unsafe Lane Change	Tuesday	2:30 AM	EB	50 ft. West	0	1	No	Hit EB Parked Car
5	12/18/2017	Sideswipe	22107	Unsafe Lane Change	Monday	8:15 PM	EB	1150 ft. East	0	1	No	Hit EB Parked Car
6	10/21/2017	Broadside	21804a	Failure to Yield	Thursday	10:40 AM	NB	60 ft. West	0	0	No	Exit Driveway
7	11/27/2017	Rear End	22350	Unsafe Speed	Sunday	1:00 PM	WB	528 ft. East	0	1	No	
8	9/22/2019	Rear End	22107	Unsafe Lane Change	Sunday	7:45 AM	WB	40 ft. East	0	0	No	Hit WB Parked Car
9	2/8/2019	Hit Object	22106	Start/Backing	Friday	12:50 PM	EB	60 ft. East	0	0	No	Backing into Traffic at Driveway
10	1/29/2020	Hit Object	22107	Unsafe Lane Change	Wednesday	12:45 PM	EB	1584 ft. East	1	0	No	Hit NB Parked Car
11	8/1/2020	Sideswipe	22350	Unsafe Speed	Saturday	6:35 AM	WB	475 ft. East	0	0	No	Hit EB Left Turn
12	10/21/2021	Sideswipe	22107	Unsafe Lane Change	Thursday	8:05 PM	WB	200 ft. East	0	1	No	Hit WB Parked Car

Notes:

1. Collision data obtained from California Highway Patrol web site: https://iswitrs.chp.ca.gov/ from January 1, 2011 through Ocotber 21, 2021.
2. Intersection collisions are defined as within approximately 200 feet of the intersection and associated with intersection traffic operations.
3. No collisions were reported in 2011, 2012, 2013, 2015 and 2018.
4. 12 Collisions in 10.8 Years at locations along San Juan Road measured from Susan Street, although none appear to be associated with traffic movements to or from Susan Street.
5. One (Collision 6) apparently was a broadside involving a vehicle exiting a private residential driveway about 60 feet west of Susan Street. This is the only collision that is the type typically associated with conflicts occurring at an intersection. However, this appears to have no relationship with the Susan Street intersection.
6. 6 collisions were with parked cars; 7 were unsafe lane changes or passing; 2 were unsafe speed; 1 was failure to yield; 1 was start or backing in the roadway.

Keith Higgins
Traffic Engineer

Exhibit 13
Collision History
on San Juan Road
near Susan Street

Appendix A

Level of Service

Descriptions

APPENDIX A1

LEVEL OF SERVICE (LOS) DESCRIPTION
SIGNALIZED INTERSECTIONS

The capacity of an urban street is related primarily to the signal timing and the geometric characteristics of the facility as well as to the composition of traffic on the facility. Geometrics are a fixed characteristic of a facility. Thus, while traffic composition may vary somewhat over time, the capacity of a facility is generally a stable value that can be significantly improved only by initiating geometric improvements. A traffic signal essentially allocates time among conflicting traffic movements that seek to use the same space. The way in which time is allocated significantly affects the operation and the capacity of the intersection and its approaches.

The methodology for signalized intersection is designed to consider individual intersection approaches and individual lane groups within approaches. A lane group consists of one or more lanes on an intersection approach. The outputs from application of the method described in the HCM 2000 and 2010 are reported on the basis of each lane. For a given lane group at a signalized intersection, three indications are displayed: green, yellow and red. The red indication may include a short period during which all indications are red, referred to as an all-red interval and the yellow indication forms the change and clearance interval between two green phases.

The methodology for analyzing the capacity and level of service must consider a wide variety of prevailing conditions, including the amount and distribution of traffic movements, traffic composition, geometric characteristics, and details of intersection signalization. The methodology addresses the capacity, LOS, and other performance measures for lane groups and the intersection approaches and the LOS for the intersection as a whole.

Capacity is evaluated in terms of the ratio of demand flow rate to capacity (v/c ratio), whereas LOS is evaluated on the basis of control delay per vehicle (in seconds per vehicle). The methodology does not take into account the potential impact of downstream congestion on intersection operation, nor does the methodology detect and adjust for the impacts of turn-pocket overflows on through traffic and intersection operation.

LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS

(Reference 2000 and 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	<10
B	>10 - 20
C	>20 - 35
D	>35 - 55
E	>55 - 80
F	>80

APPENDIX A2

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgment. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:

- the distribution of gaps in the major street traffic stream;
- driver judgment in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, 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, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS

(Reference 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

Appendix B

Existing and Proposed

Bicycle Facilities

near Project Site

Basemap Source: *Transportation Agency for Monterey County Bicycle and Pedestrian Master Plan,* Alta Planning + Design, December 2011.

Appendix C
Monterey County Public Works
Tertiary Street Standard Cross Section

MON/PUBLIC WORKS

1 MON M 20.04
(2 copies)

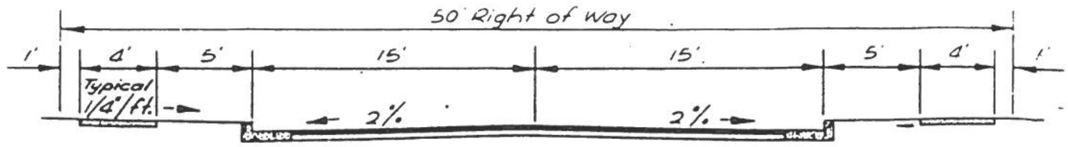
STANDARD DETAILS

COUNTY OF MONTEREY, CALIFORNIA

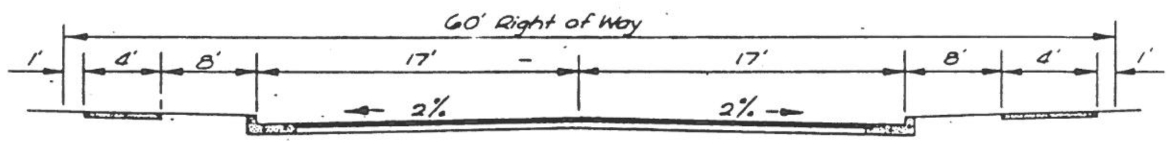
OCTOBER 1977

STANDARD STREET CLASSIFICATIONS

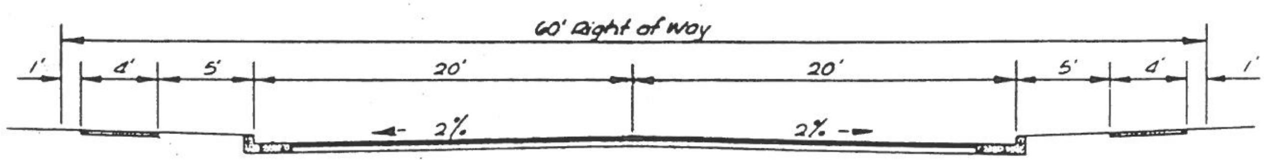
TRAFFIC	STREET TYPE
10,000 vehicles expected in 20 years 1,500 left turning movements per day	Major Divided Street
This street is so designated by a Master Plan, Precise Plan or Road Classification Plan adopted by the Board of Supervisors. 5,000 vehicles or more, but less than 15,000 vehicles expected in 20 years	Major Street
Collect or carry vehicular traffic through a subdivision and that is not expected to serve in the future as a major street. 400 units with two or more entrances or 200 units 800 to 3,000 vehicles expected in 20 years	Secondary Street .
100 units - abutted by residential lots and provide access to not more than 100 units. 300 to 1,000 vehicles expected in 20 years	Tertiary Street
30 units or less - begins and terminates on the same cross street and provides access to not more than 30 abutted units Maximum 300 vehicles expected in 20 years	Loop Street
16 units or less on dead-end street to provide access to a limited number of abutting units and cannot be extended to serve a greater number of dwelling units Maximum 200 vehicles expected in 20 years	Cul-de-sac Street
Special purpose street types	Industrial Street - Half-width Street - Frontage Road - Alley - Split-level



LOOP OR CUL-DE-SAC STREET

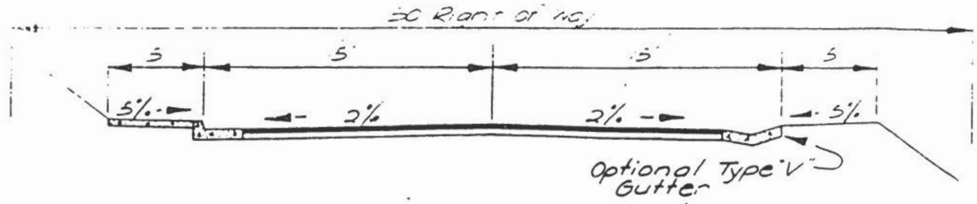


TERTIARY STREET

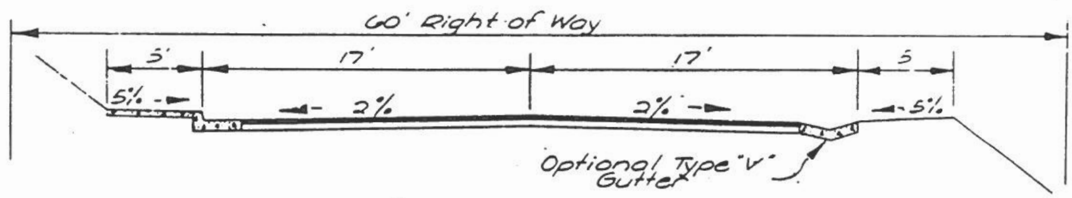


SECONDARY STREET

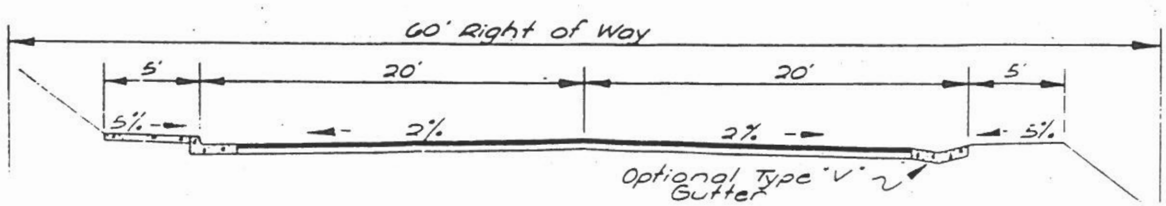
MONTEREY COUNTY	DEPT. OF PUBLIC WORKS	
STANDARD DETAILS		
FLAT TERRAIN STREET SECTION		
APPROVED [illegible]	DATE 10-24-77	
REVISED	DATE	PLATE NO.



MODIFIED STANDARD
LOOP OR CUL-DE-SAC ST.



MODIFIED STANDARD
TERTIARY STREET



MODIFIED STANDARD
SECONDARY STREET

MONTEREY COUNTY	DEPT. OF PUBLIC WORKS
STANDARD DETAILS MODIFIED STANDARD STREET SECTIONS	
APPROVED Bruce H. McClain	DATE 10-24-77
REVISED / DATE	PLATE NO. 3

Appendix D

Historical

Traffic Growth

in Pajaro

and

Intersection

Traffic Counts

Volume Growth
Existing Volumes

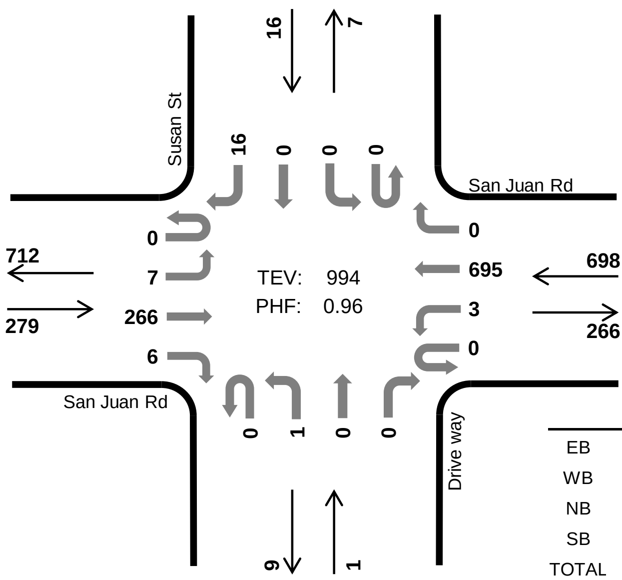
Porter Drive / San Juan Road
Growth Rates

Location	ADT Volumes (Two-Way)					
	2017	2018	2019	Net Dif.	% Growth	% per year
Porter, north	26,900	27,100	28,500	1,600	5.95%	1.98%
Porter, south	18,300	18,600	19,100	800	4.37%	1.46%
San Juan, east	13,100	13,500	14,500	1,400	10.69%	3.56%
				Average:	7.00%	2.33%

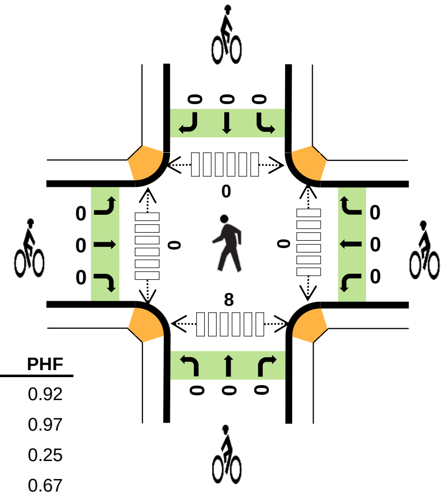
<u>Volume Source:</u> *Monterey County Public Works Annual Average 2019,* Monterey County Public Works Department, 2020.

Susan St
San Juan Rd

Date: 08-26-2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	10.4%	0.92
WB	7.2%	0.97
NB	0.0%	0.25
SB	6.3%	0.67
TOTAL	8.0%	0.96



Two-Hour Count Summaries

Interval Start	San Juan Rd Eastbound UT	LT	TH	RT	San Juan Rd Westbound UT	LT	TH	RT	Drive way Northbound UT	LT	TH	RT	Susan St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	**0**	**1**	**61**	**0**	**0**	**0**	**166**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**232**	0
7:15 AM	**0**	**2**	**64**	**5**	**0**	**3**	**174**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**254**	0
7:30 AM	**0**	**1**	**68**	**1**	**0**	**0**	**175**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**250**	0
7:45 AM	**0**	**3**	**73**	**0**	**0**	**0**	**180**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**258**	**994**
8:00 AM	0	2	73	1	0	0	111	0	0	0	0	0	0	0	0	1	188	950
8:15 AM	0	2	65	0	0	0	138	0	0	1	0	4	0	1	0	2	213	909
8:30 AM	0	3	67	0	0	0	80	0	0	2	0	0	0	0	0	1	153	812
8:45 AM	1	1	59	0	0	0	92	0	0	0	0	0	0	0	0	1	154	708
Count Total	1	15	530	7	0	3	1,116	0	0	4	0	4	0	1	0	21	1,702	0
Peak Hour All	**0**	**7**	**266**	**6**	**0**	**3**	**695**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**16**	**994**	**0**
Peak Hour HV	**0**	**1**	**28**	**0**	**0**	**0**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**80**	**0**
Peak Hour HV%	**-**	**14%**	**11%**	**0%**	**-**	**0%**	**7%**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**6%**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	**7**	**11**	**0**	**0**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	*3*
7:15 AM	**3**	**17**	**0**	**0**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	*3*
7:30 AM	**11**	**14**	**0**	**1**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
7:45 AM	**8**	**8**	**0**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
8:00 AM	4	13	0	0	*17*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	9	11	0	0	*20*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	10	10	0	0	*20*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	11	8	0	0	*19*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	63	92	0	1	*156*	0	0	0	0	*0*	0	0	0	8	*8*
Peak Hour	**29**	**50**	**0**	**1**	***80***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**8**	***8***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	San Juan Rd Eastbound UT	LT	TH	RT	San Juan Rd Westbound UT	LT	TH	RT	Drive way Northbound UT	LT	TH	RT	Susan St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	**0**	**0**	**7**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	0
7:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	0
7:30 AM	**0**	**1**	**10**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**26**	0
7:45 AM	**0**	**0**	**8**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**80**
8:00 AM	0	0	4	0	0	0	13	0	0	0	0	0	0	0	0	0	17	79
8:15 AM	0	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	20	79
8:30 AM	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	20	73
8:45 AM	0	0	11	0	0	0	8	0	0	0	0	0	0	0	0	0	19	76
Count Total	0	1	62	0	0	0	92	0	0	0	0	0	0	0	0	1	156	0
Peak Hour	**0**	**1**	**28**	**0**	**0**	**0**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**80**	**0**

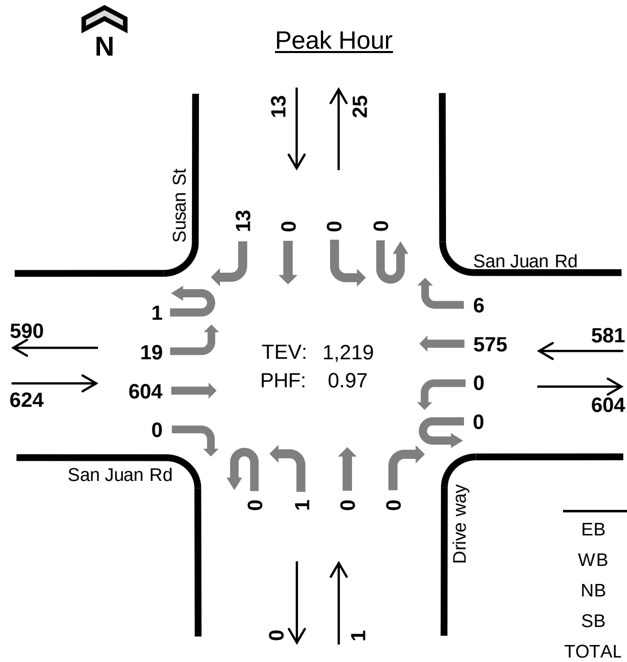
Two-Hour Count Summaries - Bikes

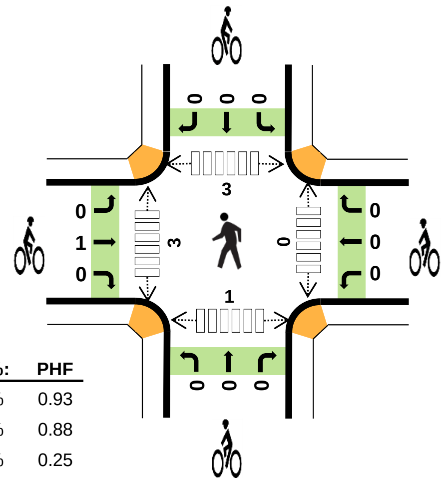
Interval Start	San Juan Rd Eastbound LT	TH	RT	San Juan Rd Westbound LT	TH	RT	Drive way Northbound LT	TH	RT	Susan St Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Susan St
San Juan Rd

Date: 08-26-2021
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	5.1%	0.93
WB	3.8%	0.88
NB	0.0%	0.25
SB	0.0%	0.65
TOTAL	4.4%	0.97

Two-Hour Count Summaries

Interval Start	San Juan Rd Eastbound				San Juan Rd Westbound				Drive way Northbound				Susan St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**6**	**162**	**0**	**0**	**0**	**139**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**311**	0
4:15 PM	**0**	**5**	**127**	**0**	**0**	**0**	**165**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**300**	0
4:30 PM	**1**	**4**	**158**	**0**	**0**	**0**	**125**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**294**	0
4:45 PM	**0**	**4**	**157**	**0**	**0**	**0**	**146**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**314**	**1,219**
5:00 PM	0	8	178	0	0	0	107	1	0	0	0	0	0	1	0	1	296	1,204
5:15 PM	0	1	151	0	0	0	84	1	0	0	0	0	0	0	0	2	239	1,143
5:30 PM	0	2	158	0	0	0	82	0	0	0	0	0	0	1	0	6	249	1,098
5:45 PM	1	2	116	0	0	0	64	0	0	0	0	0	0	0	0	2	185	969
Count Total	2	32	1,207	0	0	0	912	8	0	1	0	0	0	2	0	24	2,188	0
Peak Hour All	**1**	**19**	**604**	**0**	**0**	**0**	**575**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**13**	**1,219**	**0**
Peak Hour HV	**0**	**0**	**32**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54**	**0**
Peak Hour HV%	**0%**	**0%**	**5%**	**-**	**-**	**-**	**4%**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**15**	**9**	**0**	**0**	***24***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**1**	**0**	*4*
4:15 PM	**7**	**3**	**0**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**0**	*2*
4:30 PM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
4:45 PM	**6**	**5**	**0**	**0**	***11***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
5:00 PM	8	7	0	0	*15*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	6	1	0	0	*7*	1	0	0	0	*1*	1	0	0	0	*1*
5:30 PM	6	7	0	0	*13*	0	0	0	0	*0*	0	0	0	2	*2*
5:45 PM	5	6	0	0	*11*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	57	43	0	0	*100*	2	0	0	0	*2*	1	3	3	3	*10*
Peak Hour	**32**	**22**	**0**	**0**	***54***	**1**	**0**	**0**	**0**	***1***	**0**	**3**	**3**	**1**	***7***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	San Juan Rd Eastbound UT	LT	TH	RT	San Juan Rd Westbound UT	LT	TH	RT	Drive way Northbound UT	LT	TH	RT	Susan St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	0
4:15 PM	**0**	**0**	**7**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	0
4:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	0
4:45 PM	**0**	**0**	**6**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**54**
5:00 PM	0	0	8	0	0	0	7	0	0	0	0	0	0	0	0	0	15	45
5:15 PM	0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	0	7	42
5:30 PM	0	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	13	46
5:45 PM	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	11	46
Count Total	0	0	57	0	0	0	43	0	0	0	0	0	0	0	0	0	100	0
Peak Hour	**0**	**0**	**32**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	San Juan Rd Eastbound LT	TH	RT	San Juan Rd Westbound LT	TH	RT	Drive way Northbound LT	TH	RT	Susan St Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix E

Level of Service

Calculations

Existing

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	7	6	46	7	729	4	805	10	316	616	53
Future Volume (vph)	39	7	6	46	7	729	4	805	10	316	616	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.70	
Frpb, ped/bikes	1.00	1.00	0.95		1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		0.96	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1644	1731	1395		1601	2589	1644	2417		3190	2389	
Flt Permitted	0.72	1.00	1.00		0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1241	1731	1395		1303	2589	1644	2417		3190	2389	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	45	8	7	53	8	838	5	925	11	363	708	61
RTOR Reduction (vph)	0	0	5	0	0	65	0	1	0	0	4	0
Lane Group Flow (vph)	45	8	2	0	61	773	5	935	0	363	765	0
Confl. Peds. (#/hr)			32	32					38			4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	24.7	24.7	24.7		24.7	39.9	0.8	47.5		15.2	61.7	
Effective Green, g (s)	24.7	24.7	24.7		24.7	39.9	0.8	47.5		15.2	61.7	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.39	0.01	0.47		0.15	0.61	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	
Lane Grp Cap (vph)	300	419	338		315	1013	12	1126		475	1446	
v/s Ratio Prot		0.00				c0.11	0.00	c0.39		c0.11	0.32	
v/s Ratio Perm	0.04		0.00		0.05	0.18						
v/c Ratio	0.15	0.02	0.01		0.19	0.76	0.42	0.83		0.76	0.53	
Uniform Delay, d1	30.3	29.4	29.3		30.7	26.9	50.3	23.7		41.6	11.7	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.0	0.0		0.1	3.1	8.3	5.1		6.5	0.2	
Delay (s)	30.4	29.4	29.3		30.8	30.0	58.6	28.8		48.1	11.8	
Level of Service	C	C	C		C	C	E	C		D	B	
Approach Delay (s)		30.2			30.1			29.0			23.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	101.9	Sum of lost time (s)	14.7
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	31	799	47	14	641
Future Vol, veh/h	32	31	799	47	14	641
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	37	36	918	54	16	737

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1714	945	0	0	972	0
Stage 1	945	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	99	318	-	-	701	-
Stage 1	378	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	318	-	-	701	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.4	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	267	701	-
HCM Lane V/C Ratio	-	-	0.271	0.023	-
HCM Control Delay (s)	-	-	23.4	10.3	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	327	7	29	773	9	40
Future Vol, veh/h	327	7	29	773	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	376	8	33	889	10	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	384	0	1335	380
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	955	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1164	-	169	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	374	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1164	-	164	667
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	364	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	282	667	-	-	1164	-
HCM Lane V/C Ratio	0.037	0.069	-	-	0.029	-
HCM Control Delay (s)	18.3	10.8	-	-	8.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	360	784	2	7	18
Future Vol, veh/h	6	360	784	2	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	7	414	901	2	8	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	903	0	-	0	1330	902
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	428	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	745	-	-	-	171	336
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	745	-	-	-	169	336
Mov Cap-2 Maneuver	-	-	-	-	294	-
Stage 1	-	-	-	-	392	-
Stage 2	-	-	-	-	657	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	745	-	-	-	323
HCM Lane V/C Ratio	0.009	-	-	-	0.089
HCM Control Delay (s)	9.9	-	-	-	17.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	354	6	3	770	0	1	0	0	0	0	16
Future Vol, veh/h	7	354	6	3	770	0	1	0	0	0	0	16
Conflicting Peds, #/hr	0	0	8	8	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	10	10	10	7	7	7	2	2	2	6	6	6
Mvmt Flow	7	369	6	3	802	0	1	0	0	0	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	802	0	0	383	0	0	1211	1202	380	1194	1205	802
Stage 1	-	-	-	-	-	-	394	394	-	808	808	-
Stage 2	-	-	-	-	-	-	817	808	-	386	397	-
Critical Hdwy	4.2	-	-	4.17	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.29	-	-	2.263	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	787	-	-	1149	-	-	159	185	667	160	181	378
Stage 1	-	-	-	-	-	-	631	605	-	369	388	-
Stage 2	-	-	-	-	-	-	370	394	-	629	596	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	787	-	-	1140	-	-	149	181	662	159	177	378
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	181	-	159	177	-
Stage 1	-	-	-	-	-	-	621	595	-	366	387	-
Stage 2	-	-	-	-	-	-	353	393	-	623	586	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	29.3	15
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	149	787	-	-	1140	-	-	378
HCM Lane V/C Ratio	0.007	0.009	-	-	0.003	-	-	0.044
HCM Control Delay (s)	29.3	9.6	-	-	8.2	-	-	15
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	17	25	50	16	548	15	844	22	636	986	91
Future Volume (vph)	112	17	25	50	16	548	15	844	22	636	986	91
Ideal Flow (vphpl)	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.65	
Frpb, ped/bikes	1.00	1.00	0.95		1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		0.97	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1397	1471	1193		1380	2200	1397	2049		2710	1883	
Flt Permitted	0.71	1.00	1.00		0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1048	1471	1193		1122	2200	1397	2049		2710	1883	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	115	18	26	52	16	565	15	870	23	656	1016	94
RTOR Reduction (vph)	0	0	21	0	0	82	0	1	0	0	3	0
Lane Group Flow (vph)	115	18	5	0	68	483	15	892	0	656	1107	0
Confl. Peds. (#/hr)			22	22					14			4
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	24.2	24.2	24.2		24.2	55.4	2.5	56.2		31.2	84.7	
Effective Green, g (s)	24.2	24.2	24.2		24.2	55.4	2.5	56.2		31.2	84.7	
Actuated g/C Ratio	0.19	0.19	0.19		0.19	0.44	0.02	0.45		0.25	0.67	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	
Lane Grp Cap (vph)	201	282	228		215	966	27	913		670	1264	
v/s Ratio Prot		0.01				0.12	0.01	c0.44		c0.24	0.59	
v/s Ratio Perm	c0.11		0.00		0.06	0.10						
v/c Ratio	0.57	0.06	0.02		0.32	0.50	0.56	0.98		0.98	0.88	
Uniform Delay, d1	46.3	41.7	41.3		43.8	25.4	61.2	34.3		47.1	16.5	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.0	0.0		0.3	0.1	13.3	23.9		29.1	6.8	
Delay (s)	48.7	41.7	41.4		44.1	25.5	74.5	58.2		76.2	23.3	
Level of Service	D	D	D		D	C	E	E		E	C	
Approach Delay (s)		46.7			27.5			58.5			43.0	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	126.1	Sum of lost time (s)	14.7
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	12	854	117	30	964
Future Vol, veh/h	11	12	854	117	30	964
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	12	880	121	31	994

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1997	941	0	0	1001	0
Stage 1	941	-	-	-	-	-
Stage 2	1056	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	66	319	-	-	692	-
Stage 1	380	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	63	319	-	-	692	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	380	-	-	-	-	-
Stage 2	320	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	238	692	-
HCM Lane V/C Ratio	-	-	0.1	0.045	-
HCM Control Delay (s)	-	-	21.8	10.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	673	2	7	589	25	98
Future Vol, veh/h	673	2	7	589	25	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	694	2	7	607	26	101

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	696	0	1316	695
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	621	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	900	-	174	442
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	900	-	173	442
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	532	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	313	442	-	-	900	-
HCM Lane V/C Ratio	0.082	0.229	-	-	0.008	-
HCM Control Delay (s)	17.5	15.5	-	-	9	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.9	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	750	584	8	5	12
Future Vol, veh/h	20	750	584	8	5	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	773	602	8	5	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	610	0	-	0	1421	606
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	969	-	-	-	150	497
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	969	-	-	-	147	497
Mov Cap-2 Maneuver	-	-	-	-	285	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	435	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	969	-	-	-	408
HCM Lane V/C Ratio	0.021	-	-	-	0.043
HCM Control Delay (s)	8.8	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	735	0	0	580	6	1	0	0	0	0	13
Future Vol, veh/h	20	735	0	0	580	6	1	0	0	0	0	13
Conflicting Peds, #/hr	3	0	2	2	0	3	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	5	5	5	4	4	4	2	2	2	2	2	2
Mvmt Flow	21	758	0	0	598	6	1	0	0	0	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	607	0	0	760	0	0	1413	1409	760	1404	1406	607
Stage 1	-	-	-	-	-	-	802	802	-	604	604	-
Stage 2	-	-	-	-	-	-	611	607	-	800	802	-
Critical Hdwy	4.15	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	957	-	-	843	-	-	115	139	406	117	139	496
Stage 1	-	-	-	-	-	-	378	396	-	485	488	-
Stage 2	-	-	-	-	-	-	481	486	-	379	396	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	954	-	-	841	-	-	109	135	405	115	135	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	135	-	115	135	-
Stage 1	-	-	-	-	-	-	369	386	-	473	487	-
Stage 2	-	-	-	-	-	-	467	485	-	371	386	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	38.3	12.5
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	109	954	-	-	841	-	-	493
HCM Lane V/C Ratio	0.009	0.022	-	-	-	-	-	0.027
HCM Control Delay (s)	38.3	8.9	-	-	0	-	-	12.5
HCM Lane LOS	E	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Appendix F

Project Bus Information

BLUE BIRD VISION®

Technical Specification Highlights

CAPACITY	Multiple floor plans available with passenger seating up to 78
EXTERIOR WIDTH	96"
INTERIOR WIDTH	90 3/4"
AISLE WIDTH	Varies by floor plan
SKIRT LENGTH	16 1/4"
INTERIOR HEADROOM	77"
OVERALL HEIGHT	122" - 128"
WHEELBASE	169" /189" / 217" / 238" / 252"/ 273" / 280"
OVERHANG	45" front overhang with standard steel bumper Rear overhang varies by body length/ wheelbase
FUEL TANK	60-gallon between the frame rails in rear overhang
ENTRANCE DOOR	27" wide x 78" high / double manual operated, outward opening
REAR DOOR	37" wide x 52" high

TRANSMISSION	Allison® 2500 PTS - 5 speed automatic
ENGINE	Cummins® ISB 6.7-'13, 200-260hp
TIRE SIZE	11R22.5 (G) all-position radials
ALTERNATOR	240-amp, 12 volts
BRAKES	4-wheel hydraulic disc brakes with 4-channel anti-lock brake system
SUSPENSION	Soft ride front leaf spring suspension (rating varies by capacity); Two-stage steel leaf rear spring suspension system (rating varies by capacity)
STEERING	Tilting & telescoping steering
FRONT AXLE	Front axle (rating varies by capacity)
REAR AXLE	Rear axle with hypoid, single reduction gears with broad range of ratios available to optimize powertrain performance (rating varies by capacity)
WHEEL CUT	50°
GVWR	Up to 33,000 lbs.

BLUE BIRD VISION® SPECIFICATIONS

Chassis

- Type C design
- Cummins® ISB 6.7 - ‘13 diesel engine
- 15-gallon diesel exhaust fluid reservoir
- Engine fan clutch
- Exhaust tailpipe routed to left side before rear wheels (depending on chassis wheelbase)
- Automatic Transmission
- Driveline guard at each shaft section
- Six (6) all-position radial tires
- Six (6) 22.5in. disc, hub-piloted steel wheels
- Front axle (rating varies by capacity)
- Soft ride front leaf spring suspension (rating varies by capacity)
- Rear axle with hypoid (rating varies by capacity), single reduction gears with broad range of ratios to optimize powertrain performance
- Two-stage steel leaf rear spring suspension system (rating varies by capacity)
- 4-wheel hydraulic disc brake system
- 4-channel anti-lock brake system
- 50,000 PSI C-channel steel frame rails
- Diesel fuel tank located between frame rails in rear overhang
- Large, easy to read instrumentation panel with Drivers Information Display (DID)
- 240-amp alternator, 12 volts
- Group-31 batteries secured to slide-out tray in compartment
- Chassis multiplex wiring

Durability

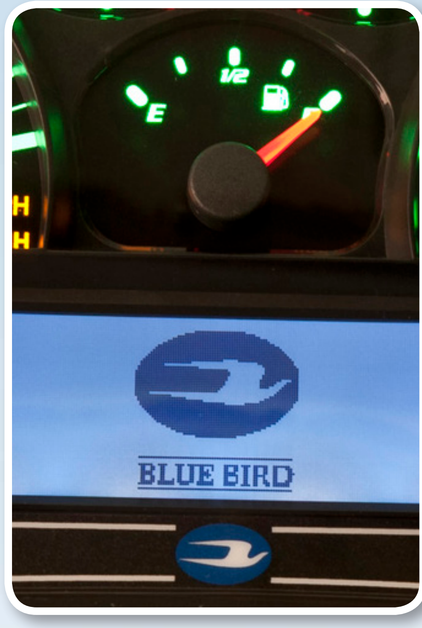
- Entire underbody (body skirt and floor) is undercoated before mounting on chassis
- Exterior surfaces are finished with heat-cured, ultra durable urethane paint for gloss and color retention
- Interior surfaces are finished with high-quality paint

Strength

- 50,000 PSI C-channel steel frame rails
- Steel front bumper
- Steel rear bumper
- Blue Bird’s legendary unitized construction creates a “mighty safety cage“ around the passenger compartment
- Steel exterior body side rub rails applied at bottom of window, seat cushion, above floor level and at bottom of skirt

Safety

- Superior driver visibility
- Superior maneuverability achieved by optimized steering component geometry
- 4-wheel hydraulic disc brake system
- 4-channel anti-lock brake system
- Diesel fuel tank located between frame rails in rear overhang
- Blue Bird’s legendary unitized construction creates a “mighty safety cage“ around the passenger compartment
- Steel exterior body side rub rails applied at bottom of window, seat cushion, above floor level and at bottom of skirt
- Rearview mirrors, split design flat and convex
- Crossview mirrors, convex
- Electric intermittent single switch windshield wipers



Serviceability

- Easy hood opening with retainer
- Halogen headlights, high/low beam
- Easy access to front headlights
- Easy access to fluids
- Chassis warning indiactor lamps
- Body wiring circuits accessible through exterior electrical compartment
- Fused electrical circuit protection throughout body and chassis
- Wiring is color coded throughout harness for easy circuit identification

Comfort & Convenience

- Soft ride front leaf spring suspension (rating varies by capacity)
- Tilting & telescoping steering column
- Large, easy to read instrumentation panel with Drivers Information Display (DID)
- Entrance door, manually operated, outward opening with upper and lower glass
- Windshield, tinted laminated glass
- Split-sash passenger windows with easily servicable lockrail latch
- Ergonomically designed driver’s cockpit with switches and controls placed for drivers from 5th percentile female to 95th percentile male
- Driver’s seat with fore/aft and up/down adjustments
- 3-point lap & shoulder belt with 7” vertical adjustment
- 90,000 btu/hr front heater and defroster
- Backlit, easy to reach switch panel with rocker switches
- Dome lights in passenger compartment

Optional Features

- Diesel engine horsepower choices
- Rear air ride suspension
- 4-wheel air drum brake system
- 100-gallon diesel fuel tank
- Wheelchair lift door and power lift
- Wheelchair securement option for special-needs passengers
- Extended service coverage
- Lease/Purchse services
- Engine block heater
- Exhaust tailpipe routing option
- Tire size, load range, and tread design
- Stainless steel wheel inserts
- Alumium wheels
- Front steel leaf spring suspension ratings
- Rear axle ratios
- Front air ride suspension

Dimensions

Headroom	77″
Width Exterior	96″
Width Interior	90 3/4″
Skirt Length	16 1/4″
Overall Length	309″ - 499″
Overall Height	122″ - 128″ excluding options
Wheelbase/Passenger Capacity	169″= 36 189″= 48 217″= 54 238″= 60 252″= 66 273″= 72/77 280″=78

COUNT ON BLUE BIRD

BLUE-BIRD.COM

BLUE BIRD®

Appendix G

Level of Service

Calculations

Existing Plus Project

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	7	6	51	8	739	4	805	10	319	616	53
Future Volume (vph)	39	7	6	51	8	739	4	805	10	319	616	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.70	
Frpb, ped/bikes	1.00	1.00	0.95		1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		0.96	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1644	1731	1394		1601	2589	1644	2417		3190	2389	
Flt Permitted	0.71	1.00	1.00		0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1234	1731	1394		1293	2589	1644	2417		3190	2389	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	45	8	7	59	9	849	5	925	11	367	708	61
RTOR Reduction (vph)	0	0	5	0	0	65	0	1	0	0	4	0
Lane Group Flow (vph)	45	8	2	0	68	784	5	935	0	367	765	0
Confl. Peds. (#/hr)			32	32					38			4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	24.7	24.7	24.7		24.7	40.2	0.8	47.7		15.5	62.2	
Effective Green, g (s)	24.7	24.7	24.7		24.7	40.2	0.8	47.7		15.5	62.2	
Actuated g/C Ratio	0.24	0.24	0.24		0.24	0.39	0.01	0.47		0.15	0.61	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	
Lane Grp Cap (vph)	297	417	336		311	1016	12	1125		482	1451	
v/s Ratio Prot		0.00				c0.12	0.00	c0.39		0.12	0.32	
v/s Ratio Perm	0.04		0.00		0.05	0.19						
v/c Ratio	0.15	0.02	0.01		0.22	0.77	0.42	0.83		0.76	0.53	
Uniform Delay, d1	30.6	29.6	29.5		31.1	27.1	50.6	23.8		41.7	11.6	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.0	0.0		0.1	3.4	8.3	5.1		6.3	0.2	
Delay (s)	30.7	29.6	29.5		31.2	30.5	58.9	29.0		48.0	11.8	
Level of Service	C	C	C		C	C	E	C		D	B	
Approach Delay (s)		30.4			30.5			29.1			23.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	102.4	Sum of lost time (s)	14.7
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	31	799	48	14	646
Future Vol, veh/h	32	31	799	48	14	646
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	37	36	918	55	16	743

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1721	946	0	0	973	0
Stage 1	946	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	98	317	-	-	701	-
Stage 1	377	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	96	317	-	-	701	-
Mov Cap-2 Maneuver	230	-	-	-	-	-
Stage 1	377	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.5	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	266	701	-
HCM Lane V/C Ratio	-	-	0.272	0.023	-
HCM Control Delay (s)	-	-	23.5	10.3	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	330	7	29	789	9	41
Future Vol, veh/h	330	7	29	789	9	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	379	8	33	907	10	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	387	0	1356	383
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	973	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1161	-	165	664
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	366	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1161	-	160	664
Mov Cap-2 Maneuver	-	-	-	-	277	-
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	356	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	277	664	-	-	1161	-
HCM Lane V/C Ratio	0.037	0.071	-	-	0.029	-
HCM Control Delay (s)	18.5	10.8	-	-	8.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	364	800	2	7	18
Future Vol, veh/h	6	364	800	2	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	7	418	920	2	8	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	922	0	-	0	1353	921
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	732	-	-	-	165	328
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	732	-	-	-	163	328
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	655	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	732	-	-	-	316
HCM Lane V/C Ratio	0.009	-	-	-	0.091
HCM Control Delay (s)	10	-	-	-	17.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	354	6	3	770	2	1	0	0	7	0	32
Future Vol, veh/h	11	354	6	3	770	2	1	0	0	7	0	32
Conflicting Peds, #/hr	0	0	8	8	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	10	10	10	7	7	7	2	2	2	6	6	6
Mvmt Flow	11	369	6	3	802	2	1	0	0	7	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	804	0	0	383	0	0	1228	1212	380	1203	1214	803
Stage 1	-	-	-	-	-	-	402	402	-	809	809	-
Stage 2	-	-	-	-	-	-	826	810	-	394	405	-
Critical Hdwy	4.2	-	-	4.17	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.29	-	-	2.263	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	786	-	-	1149	-	-	155	182	667	158	178	377
Stage 1	-	-	-	-	-	-	625	600	-	368	388	-
Stage 2	-	-	-	-	-	-	366	393	-	623	592	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	786	-	-	1140	-	-	138	177	662	156	174	377
Mov Cap-2 Maneuver	-	-	-	-	-	-	138	177	-	156	174	-
Stage 1	-	-	-	-	-	-	611	587	-	363	387	-
Stage 2	-	-	-	-	-	-	333	392	-	614	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	31.3	18.8
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	138	786	-	-	1140	-	-	301
HCM Lane V/C Ratio	0.008	0.015	-	-	0.003	-	-	0.135
HCM Control Delay (s)	31.3	9.6	-	-	8.2	-	-	18.8
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	18	25	53	16	554	15	844	22	641	986	91
Future Volume (vph)	112	18	25	53	16	554	15	844	22	641	986	91
Ideal Flow (vphpl)	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.65	
Frpb, ped/bikes	1.00	1.00	0.95		1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		0.97	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1397	1471	1192		1379	2200	1397	2049		2710	1883	
Flt Permitted	0.71	1.00	1.00		0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1045	1471	1192		1114	2200	1397	2049		2710	1883	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	115	19	26	55	16	571	15	870	23	661	1016	94
RTOR Reduction (vph)	0	0	21	0	0	82	0	1	0	0	3	0
Lane Group Flow (vph)	115	19	5	0	71	489	15	892	0	661	1107	0
Confl. Peds. (#/hr)			22	22					14			4
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	24.2	24.2	24.2		24.2	55.5	2.5	56.3		31.3	84.9	
Effective Green, g (s)	24.2	24.2	24.2		24.2	55.5	2.5	56.3		31.3	84.9	
Actuated g/C Ratio	0.19	0.19	0.19		0.19	0.44	0.02	0.45		0.25	0.67	
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	
Lane Grp Cap (vph)	200	281	228		213	966	27	913		671	1265	
v/s Ratio Prot		0.01				0.13	0.01	c0.44		c0.24	0.59	
v/s Ratio Perm	c0.11		0.00		0.06	0.10						
v/c Ratio	0.57	0.07	0.02		0.33	0.51	0.56	0.98		0.99	0.87	
Uniform Delay, d1	46.4	41.8	41.4		44.1	25.5	61.3	34.4		47.3	16.5	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.5	0.0	0.0		0.3	0.2	13.3	23.9		30.7	6.8	
Delay (s)	48.9	41.8	41.5		44.4	25.7	74.6	58.3		77.9	23.3	
Level of Service	D	D	D		D	C	E	E		E	C	
Approach Delay (s)		46.8			27.7			58.5			43.7	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	44.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	126.3	Sum of lost time (s)	14.7
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	12	854	121	30	967
Future Vol, veh/h	11	12	854	121	30	967
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	12	880	125	31	997

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2002	943	0	0	1005	0
Stage 1	943	-	-	-	-	-
Stage 2	1059	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	66	318	-	-	689	-
Stage 1	379	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	63	318	-	-	689	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	318	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.9	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	237	689	-
HCM Lane V/C Ratio	-	-	0.1	0.045	-
HCM Control Delay (s)	-	-	21.9	10.5	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	684	2	7	598	25	102
Future Vol, veh/h	684	2	7	598	25	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	705	2	7	616	26	105

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	707	0	1336	706
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	630	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	891	-	169	436
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	891	-	168	436
Mov Cap-2 Maneuver	-	-	-	-	308	-
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	308	436	-	-	891	-
HCM Lane V/C Ratio	0.084	0.241	-	-	0.008	-
HCM Control Delay (s)	17.8	15.9	-	-	9.1	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.9	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	765	593	8	5	12
Future Vol, veh/h	20	765	593	8	5	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	789	611	8	5	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	619	0	-	0	1446	615
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	831	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	961	-	-	-	145	491
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	428	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	961	-	-	-	142	491
Mov Cap-2 Maneuver	-	-	-	-	279	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	428	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	961	-	-	-	401
HCM Lane V/C Ratio	0.021	-	-	-	0.044
HCM Control Delay (s)	8.8	-	-	-	14.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	735	0	0	580	13	1	0	0	4	0	22
Future Vol, veh/h	35	735	0	0	580	13	1	0	0	4	0	22
Conflicting Peds, #/hr	3	0	2	2	0	3	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	5	5	5	4	4	4	2	2	2	2	2	2
Mvmt Flow	36	758	0	0	598	13	1	0	0	4	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	614	0	0	760	0	0	1451	1446	760	1438	1440	611
Stage 1	-	-	-	-	-	-	832	832	-	608	608	-
Stage 2	-	-	-	-	-	-	619	614	-	830	832	-
Critical Hdwy	4.15	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	951	-	-	843	-	-	109	132	406	111	133	494
Stage 1	-	-	-	-	-	-	363	384	-	483	486	-
Stage 2	-	-	-	-	-	-	476	483	-	364	384	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	948	-	-	841	-	-	100	126	405	107	127	491
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	126	-	107	127	-
Stage 1	-	-	-	-	-	-	348	369	-	463	485	-
Stage 2	-	-	-	-	-	-	453	482	-	350	369	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	41.4	17.4
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	100	948	-	-	841	-	-	316
HCM Lane V/C Ratio	0.01	0.038	-	-	-	-	-	0.085
HCM Control Delay (s)	41.4	8.9	-	-	0	-	-	17.4
HCM Lane LOS	E	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.3

Appendix H

Level of Service

Calculations

Cumulative Without Project

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	8	6	51	9	788	4	865	11	341	662	57
Future Volume (vph)	42	8	6	51	9	788	4	865	11	341	662	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.70	1.00
Frpb, ped/bikes	1.00	1.00	0.91		1.00	1.00	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		0.94	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1731	1334		1556	2589	1644	2417		3190	1212	1431
Flt Permitted	0.71	1.00	1.00		0.77	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1232	1731	1334		1250	2589	1644	2417		3190	1212	1431
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	48	9	7	59	10	906	5	994	13	392	761	66
RTOR Reduction (vph)	0	0	5	0	0	54	0	1	0	0	0	24
Lane Group Flow (vph)	48	9	2	0	69	852	5	1006	0	392	761	42
Confl. Peds. (#/hr)			32	32					38			4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	24.4	24.4	24.4		24.4	42.5	0.9	54.6		18.1	71.6	71.6
Effective Green, g (s)	24.4	24.4	24.4		24.4	42.5	0.9	54.6		18.1	71.6	71.6
Actuated g/C Ratio	0.22	0.22	0.22		0.22	0.38	0.01	0.49		0.16	0.64	0.64
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	1.6
Lane Grp Cap (vph)	269	378	291		273	985	13	1182		517	777	918
v/s Ratio Prot		0.01				c0.14	0.00	0.42		0.12	c0.63	
v/s Ratio Perm	0.04		0.00		0.06	0.19						0.03
v/c Ratio	0.18	0.02	0.01		0.25	0.87	0.38	0.85		0.76	0.98	0.05
Uniform Delay, d1	35.5	34.2	34.1		36.1	31.9	55.1	25.0		44.7	19.3	7.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	0.0		0.2	7.8	6.8	5.9		5.6	26.8	0.0
Delay (s)	35.6	34.3	34.1		36.2	39.7	61.8	30.8		50.3	46.1	7.4
Level of Service	D	C	C		D	D	E	C		D	D	A
Approach Delay (s)		35.2			39.4			31.0			45.3	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	111.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	34	857	51	15	691
Future Vol, veh/h	34	34	857	51	15	691
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	39	39	985	59	17	794

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1843	1015	0	0	1044	0
Stage 1	1015	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	83	289	-	-	659	-
Stage 1	350	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	81	289	-	-	659	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	418	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.7	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	243	659	-
HCM Lane V/C Ratio	-	-	0.322	0.026	-
HCM Control Delay (s)	-	-	26.7	10.6	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	353	8	31	838	10	44
Future Vol, veh/h	353	8	31	838	10	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	406	9	36	963	11	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	415	0	1446	411
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	1035	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1133	-	145	641
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	342	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1133	-	140	641
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	331	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	256	641	-	-	1133	-
HCM Lane V/C Ratio	0.045	0.079	-	-	0.031	-
HCM Control Delay (s)	19.7	11.1	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	387	842	3	11	27
Future Vol, veh/h	9	387	842	3	11	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	10	445	968	3	13	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	971	0	-	0	1435	970
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	465	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	702	-	-	-	147	307
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	702	-	-	-	145	307
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	702	-	-	-	295
HCM Lane V/C Ratio	0.015	-	-	-	0.148
HCM Control Delay (s)	10.2	-	-	-	19.3
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	377	6	3	812	0	1	0	0	0	0	16
Future Vol, veh/h	7	377	6	3	812	0	1	0	0	0	0	16
Conflicting Peds, #/hr	0	0	8	8	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	10	10	10	7	7	7	2	2	2	6	6	6
Mvmt Flow	7	393	6	3	846	0	1	0	0	0	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	846	0	0	407	0	0	1279	1270	404	1262	1273	846
Stage 1	-	-	-	-	-	-	418	418	-	852	852	-
Stage 2	-	-	-	-	-	-	861	852	-	410	421	-
Critical Hdwy	4.2	-	-	4.17	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.29	-	-	2.263	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	758	-	-	1125	-	-	143	168	647	144	164	356
Stage 1	-	-	-	-	-	-	612	591	-	349	370	-
Stage 2	-	-	-	-	-	-	350	376	-	611	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	758	-	-	1116	-	-	134	165	642	143	161	356
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	165	-	143	161	-
Stage 1	-	-	-	-	-	-	602	581	-	346	369	-
Stage 2	-	-	-	-	-	-	333	375	-	605	572	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	32.1	15.6
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	134	758	-	-	1116	-	-	356
HCM Lane V/C Ratio	0.008	0.01	-	-	0.003	-	-	0.047
HCM Control Delay (s)	32.1	9.8	-	-	8.2	-	-	15.6
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	19	27	56	17	592	16	906	23	688	1059	98
Future Volume (vph)	120	19	27	56	17	592	16	906	23	688	1059	98
Ideal Flow (vphpl)	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.90	1.00
Frpb, ped/bikes	1.00	1.00	0.96		1.00	1.00	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		0.98	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1537	1618	1316		1521	2420	1537	2255		2981	1456	1337
Flt Permitted	0.71	1.00	1.00		0.77	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1145	1618	1316		1212	2420	1537	2255		2981	1456	1337
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	124	20	28	58	18	610	16	934	24	709	1092	101
RTOR Reduction (vph)	0	0	23	0	0	71	0	1	0	0	0	31
Lane Group Flow (vph)	124	20	5	0	76	539	16	957	0	709	1092	70
Confl. Peds. (#/hr)			22	22					14			4
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	18.8	18.8	18.8		18.8	48.2	2.3	53.1		29.4	80.0	80.0
Effective Green, g (s)	18.8	18.8	18.8		18.8	48.2	2.3	53.1		29.4	80.0	80.0
Actuated g/C Ratio	0.16	0.16	0.16		0.16	0.42	0.02	0.46		0.25	0.69	0.69
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	1.6
Lane Grp Cap (vph)	185	262	213		196	1007	30	1034		756	1005	923
v/s Ratio Prot		0.01				0.14	0.01	0.42		c0.24	c0.75	
v/s Ratio Perm	c0.11		0.00		0.06	0.09						0.05
v/c Ratio	0.67	0.08	0.02		0.39	0.54	0.53	0.93		0.94	1.09	0.08
Uniform Delay, d1	45.6	41.1	40.8		43.4	25.4	56.2	29.5		42.3	17.9	5.8
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.3	0.0	0.0		0.5	0.3	8.8	13.3		18.8	54.9	0.0
Delay (s)	52.9	41.2	40.8		43.8	25.7	65.0	42.7		61.1	72.8	5.9
Level of Service	D	D	D		D	C	E	D		E	E	A
Approach Delay (s)		49.5			27.7			43.1			64.9	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	115.8	Sum of lost time (s)	14.7
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	13	917	128	32	1043
Future Vol, veh/h	12	13	917	128	32	1043
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	13	945	132	33	1075

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2152	1011	0	0	1077	0
Stage 1	1011	-	-	-	-	-
Stage 2	1141	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	53	291	-	-	647	-
Stage 1	352	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	50	291	-	-	647	-
Mov Cap-2 Maneuver	167	-	-	-	-	-
Stage 1	352	-	-	-	-	-
Stage 2	289	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	215	647	-
HCM Lane V/C Ratio	-	-	0.12	0.051	-
HCM Control Delay (s)	-	-	24	10.9	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	728	2	8	638	27	107
Future Vol, veh/h	728	2	8	638	27	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	751	2	8	658	28	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	753	0	1426	752
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	674	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	857	-	149	410
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	857	-	148	410
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	501	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	288	410	-	-	857	-
HCM Lane V/C Ratio	0.097	0.269	-	-	0.01	-
HCM Control Delay (s)	18.8	17	-	-	9.2	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	1.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	805	628	13	7	18
Future Vol, veh/h	29	805	628	13	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	830	647	13	7	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	660	0	-	0	1544	654
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	890	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	928	-	-	-	126	467
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	401	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	928	-	-	-	122	467
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	401	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	928	-	-	-	381
HCM Lane V/C Ratio	0.032	-	-	-	0.068
HCM Control Delay (s)	9	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	775	0	0	615	6	1	0	0	0	0	13
Future Vol, veh/h	20	775	0	0	615	6	1	0	0	0	0	13
Conflicting Peds, #/hr	3	0	2	2	0	3	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	5	5	5	4	4	4	2	2	2	2	2	2
Mvmt Flow	20	791	0	0	628	6	1	0	0	0	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	637	0	0	793	0	0	1474	1470	793	1465	1467	637
Stage 1	-	-	-	-	-	-	833	833	-	634	634	-
Stage 2	-	-	-	-	-	-	641	637	-	831	833	-
Critical Hdwy	4.15	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	932	-	-	819	-	-	105	127	389	106	128	477
Stage 1	-	-	-	-	-	-	363	384	-	467	473	-
Stage 2	-	-	-	-	-	-	463	471	-	364	384	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	929	-	-	817	-	-	100	124	388	104	125	474
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	124	-	104	125	-
Stage 1	-	-	-	-	-	-	355	375	-	456	472	-
Stage 2	-	-	-	-	-	-	449	470	-	356	375	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	41.4	12.8
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	100	929	-	-	817	-	-	474
HCM Lane V/C Ratio	0.01	0.022	-	-	-	-	-	0.028
HCM Control Delay (s)	41.4	9	-	-	0	-	-	12.8
HCM Lane LOS	E	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Appendix I

Level of Service

Calculations

Cumulative Plus Project

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	8	6	56	9	798	4	865	11	344	662	57
Future Volume (vph)	42	8	6	56	9	798	4	865	11	344	662	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.70	1.00
Frpb, ped/bikes	1.00	1.00	0.91		1.00	1.00	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		0.94	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1731	1334		1553	2589	1644	2417		3190	1212	1431
Flt Permitted	0.71	1.00	1.00		0.76	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1227	1731	1334		1237	2589	1644	2417		3190	1212	1431
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	48	9	7	64	10	917	5	994	13	395	761	66
RTOR Reduction (vph)	0	0	5	0	0	54	0	1	0	0	0	24
Lane Group Flow (vph)	48	9	2	0	74	863	5	1006	0	395	761	42
Confl. Peds. (#/hr)			32	32					38			4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	24.4	24.4	24.4		24.4	43.0	0.9	54.8		18.6	72.3	72.3
Effective Green, g (s)	24.4	24.4	24.4		24.4	43.0	0.9	54.8		18.6	72.3	72.3
Actuated g/C Ratio	0.22	0.22	0.22		0.22	0.38	0.01	0.49		0.17	0.64	0.64
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	1.6
Lane Grp Cap (vph)	266	376	289		268	991	13	1179		528	780	921
v/s Ratio Prot		0.01				c0.14	0.00	0.42		0.12	c0.63	
v/s Ratio Perm	0.04		0.00		0.06	0.19						0.03
v/c Ratio	0.18	0.02	0.01		0.28	0.87	0.38	0.85		0.75	0.98	0.05
Uniform Delay, d1	35.8	34.6	34.4		36.6	32.1	55.4	25.2		44.6	19.2	7.3
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	0.0		0.2	8.2	6.8	6.0		5.0	26.0	0.0
Delay (s)	35.9	34.6	34.4		36.8	40.3	62.2	31.2		49.7	45.1	7.3
Level of Service	D	C	C		D	D	E	C		D	D	A
Approach Delay (s)		35.6			40.1			31.3			44.5	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	112.3	Sum of lost time (s)	14.7
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	34	857	52	15	696
Future Vol, veh/h	34	34	857	52	15	696
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	39	39	985	60	17	800

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1849	1015	0	0	1045	0
Stage 1	1015	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	82	289	-	-	658	-
Stage 1	350	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	289	-	-	658	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	415	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.7	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	243	658	-
HCM Lane V/C Ratio	-	-	0.322	0.026	-
HCM Control Delay (s)	-	-	26.7	10.6	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	356	8	31	854	10	45
Future Vol, veh/h	356	8	31	854	10	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	409	9	36	982	11	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	418	0	1468	414
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	1054	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1130	-	141	638
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1130	-	136	638
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	324	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	251	638	-	-	1130	-
HCM Lane V/C Ratio	0.046	0.081	-	-	0.032	-
HCM Control Delay (s)	20	11.1	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	391	858	3	11	27
Future Vol, veh/h	9	391	858	3	11	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	10	449	986	3	13	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	989	0	-	0	1457	988
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	469	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	691	-	-	-	143	300
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	691	-	-	-	141	300
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	630	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	691	-	-	-	289
HCM Lane V/C Ratio	0.015	-	-	-	0.151
HCM Control Delay (s)	10.3	-	-	-	19.7
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	377	6	3	812	2	1	0	0	7	0	32
Future Vol, veh/h	11	377	6	3	812	2	1	0	0	7	0	32
Conflicting Peds, #/hr	0	0	8	8	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	10	10	10	7	7	7	2	2	2	6	6	6
Mvmt Flow	11	393	6	3	846	2	1	0	0	7	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	848	0	0	407	0	0	1296	1280	404	1271	1282	847
Stage 1	-	-	-	-	-	-	426	426	-	853	853	-
Stage 2	-	-	-	-	-	-	870	854	-	418	429	-
Critical Hdwy	4.2	-	-	4.17	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.29	-	-	2.263	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	756	-	-	1125	-	-	139	166	647	142	162	356
Stage 1	-	-	-	-	-	-	606	586	-	348	370	-
Stage 2	-	-	-	-	-	-	346	375	-	605	577	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	756	-	-	1116	-	-	123	162	642	140	158	356
Mov Cap-2 Maneuver	-	-	-	-	-	-	123	162	-	140	158	-
Stage 1	-	-	-	-	-	-	593	573	-	343	369	-
Stage 2	-	-	-	-	-	-	313	374	-	596	564	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	34.5	20.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	756	-	-	1116	-	-	279
HCM Lane V/C Ratio	0.008	0.015	-	-	0.003	-	-	0.146
HCM Control Delay (s)	34.5	9.8	-	-	8.2	-	-	20.1
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	19	27	59	17	598	16	906	23	698	1059	98
Future Volume (vph)	120	19	27	59	17	598	16	906	23	698	1059	98
Ideal Flow (vphpl)	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Total Lost time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00	0.88	1.00	*0.70		0.97	*0.90	1.00
Frpb, ped/bikes	1.00	1.00	0.96		1.00	1.00	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		0.98	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1537	1618	1315		1520	2420	1537	2255		2981	1456	1337
Flt Permitted	0.71	1.00	1.00		0.76	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1141	1618	1315		1204	2420	1537	2255		2981	1456	1337
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	124	20	28	61	18	616	16	934	24	720	1092	101
RTOR Reduction (vph)	0	0	23	0	0	70	0	1	0	0	0	31
Lane Group Flow (vph)	124	20	5	0	79	546	16	957	0	720	1092	70
Confl. Peds. (#/hr)			22	22					14			4
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	18.9	18.9	18.9		18.9	48.7	2.3	53.2		29.8	80.5	80.5
Effective Green, g (s)	18.9	18.9	18.9		18.9	48.7	2.3	53.2		29.8	80.5	80.5
Actuated g/C Ratio	0.16	0.16	0.16		0.16	0.42	0.02	0.46		0.26	0.69	0.69
Clearance Time (s)	5.0	5.0	5.0		5.0	5.2	5.4	4.3		5.2	4.3	4.3
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.6		1.0	1.6	1.6
Lane Grp Cap (vph)	185	262	213		195	1012	30	1030		763	1006	924
v/s Ratio Prot		0.01				0.14	0.01	0.42		c0.24	c0.75	
v/s Ratio Perm	c0.11		0.00		0.07	0.09						0.05
v/c Ratio	0.67	0.08	0.02		0.41	0.54	0.53	0.93		0.94	1.09	0.08
Uniform Delay, d1	45.8	41.3	41.0		43.7	25.4	56.5	29.8		42.5	18.0	5.8
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.3	0.0	0.0		0.5	0.3	8.8	13.7		19.8	54.5	0.0
Delay (s)	53.1	41.4	41.0		44.2	25.7	65.3	43.5		62.3	72.5	5.9
Level of Service	D	D	D		D	C	E	D		E	E	A
Approach Delay (s)		49.8			27.8			43.9			65.1	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	52.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	116.4	Sum of lost time (s)	14.7
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	13	917	132	32	1046
Future Vol, veh/h	12	13	917	132	32	1046
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	13	945	136	33	1078

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2157	1013	0	0	1081	0
Stage 1	1013	-	-	-	-	-
Stage 2	1144	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	52	290	-	-	645	-
Stage 1	351	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	49	290	-	-	645	-
Mov Cap-2 Maneuver	167	-	-	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	288	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.1	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	214	645	-
HCM Lane V/C Ratio	-	-	0.12	0.051	-
HCM Control Delay (s)	-	-	24.1	10.9	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	739	2	8	647	27	111
Future Vol, veh/h	739	2	8	647	27	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	50
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	762	2	8	667	28	114

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	764	0	1446	763
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	683	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	849	-	145	404
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	502	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	849	-	144	404
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	497	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	284	404	-	-	849	-
HCM Lane V/C Ratio	0.098	0.283	-	-	0.01	-
HCM Control Delay (s)	19	17.4	-	-	9.3	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	1.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	820	637	13	7	18
Future Vol, veh/h	29	820	637	13	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	845	657	13	7	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	670	0	-	0	1569	664
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	905	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	920	-	-	-	122	461
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	395	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	920	-	-	-	118	461
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	395	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	920	-	-	-	375
HCM Lane V/C Ratio	0.032	-	-	-	0.069
HCM Control Delay (s)	9	-	-	-	15.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	775	0	0	615	13	1	0	0	4	0	22
Future Vol, veh/h	35	775	0	0	615	13	1	0	0	4	0	22
Conflicting Peds, #/hr	3	0	2	2	0	3	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	5	5	5	4	4	4	2	2	2	2	2	2
Mvmt Flow	36	799	0	0	634	13	1	0	0	4	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	650	0	0	801	0	0	1528	1523	801	1515	1517	647
Stage 1	-	-	-	-	-	-	873	873	-	644	644	-
Stage 2	-	-	-	-	-	-	655	650	-	871	873	-
Critical Hdwy	4.15	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	922	-	-	813	-	-	96	118	384	98	119	471
Stage 1	-	-	-	-	-	-	345	368	-	461	468	-
Stage 2	-	-	-	-	-	-	455	465	-	346	368	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	919	-	-	811	-	-	88	113	383	95	114	468
Mov Cap-2 Maneuver	-	-	-	-	-	-	88	113	-	95	114	-
Stage 1	-	-	-	-	-	-	331	353	-	442	467	-
Stage 2	-	-	-	-	-	-	432	464	-	332	353	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	46.4	18.6
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	88	919	-	-	811	-	-	292
HCM Lane V/C Ratio	0.012	0.039	-	-	-	-	-	0.092
HCM Control Delay (s)	46.4	9.1	-	-	0	-	-	18.6
HCM Lane LOS	E	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.3

Appendix J

North County Fire District Emergency Access Review Email

Jeffrey Nohr

From: Joel Mendoza <joel.mendoza@ncfpd.org>
Sent: Friday, November 19, 2021 8:59 AM
To: Jeffrey Nohr
Subject: RE: Susan St Agricultural Employee Housing project PLN#210152

Mr. Nohr,

Regarding questions 1 and 2 (below), based on the diagram that accompanies each question, I agree that Susan Street meets the street standard for both questions 1 and 2.

Thank you,

Joel Mendoza

Joel Mendoza
Fire Chief
www.ncfpd.org
North County Fire District
Off: 831-633-2578
Cel: 831-212-1908
Fax: 831-633-2572
mailto:Joel.Mendoza@ncfpd.org

From: Jeffrey Nohr <jeff@avilaconst.com>
Sent: Thursday, November 18, 2021 4:23 PM
To: Joel Mendoza <joel.mendoza@ncfpd.org>
Subject: RE: Susan St Agricultural Employee Housing project PLN#210152

Joel

Good afternoon.

Were you have to review and discuss this Juan Hernandez? I would appreciate if you could get back to me tomorrow at some point with an update.

Thank you,

AVILA CONSTRUCTION COMPANY

JEFFREY D. NOHR
Project Manager
Email: Jeff@avilaconst.com.com
Direct Dial: 831.382.3523 | Cell: 831.917.5622 | Main **Office:** 831.372.5580
Fax: 831.372.5584
12 Thomas Owens Way, Ste 200, Monterey, CA 93940

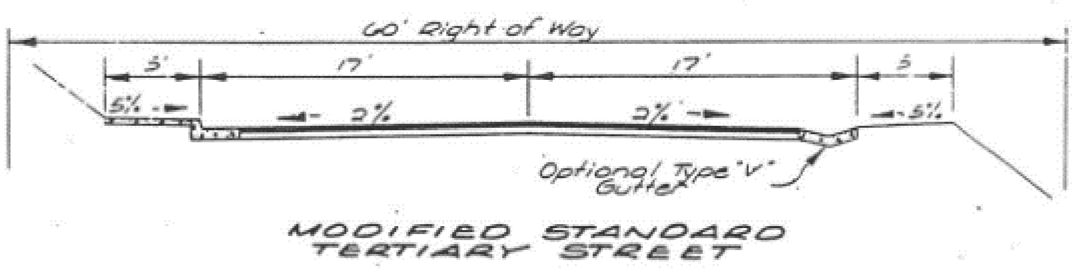
From: Jeffrey Nohr
Sent: Tuesday, November 16, 2021 10:28 AM
To: Joel Mendoza <joel.mendoza@ncfpd.org>
Subject: RE: Susan St Agricultural Employee Housing project PLN#210152

Joel

Following up on our conversation yesterday. These are the two questions to review from public works. Juan Hernandez is reviewing the project from Public Works.

For pedestrian safety, Where would the pedestrians from the proposed project walk?

Response / Action: Per county standard Susan St. meets the threshold of a Tertiary Street - *100 units abutted by residential lots and provided access to no more than 100 units. 300 to 1,000 vehicles expected in 20 years.* Project proposes 61 units + 18 existing lots = 78 units. Project will propose to complete missing sections of side walk along West side of Susan St. for continuous path of travel along Susan St. See Standard Detail below for Modified Tertiary St. Susan St. Currently meets this street standard.

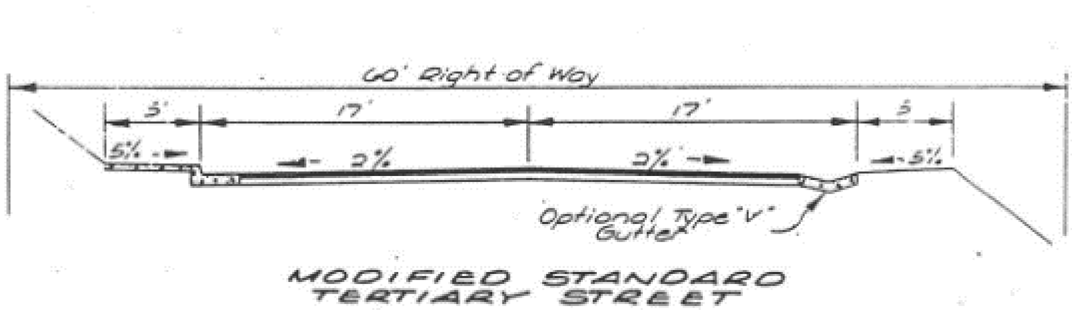


Provide analysis that Susan Street travel width is adequate to accommodate existing on street parking and ingress and egress for emergency vehicles?

Response: Please refer to section Monterey County FIRE001 - ROAD ACCESS
Access roads shall be required for every building when any portion of the exterior wall of the first story is located more than 150 feet from fire department access. All roads shall be constructed to provide a minimum of two nine-foot traffic lanes with an unobstructed vertical

clearance of not less than 15 feet. The roadway surface shall provide unobstructed access to conventional drive vehicles including sedans and fire apparatus and shall be an all-weather surface designed to support the imposed load of fire apparatus (22 tons). Each road shall have an approved name.
Susan St. currently meets this standard.

Per county standard Susan St. meets the threshold of a Tertiary Street - *100 units abutted by residential lots and provided access to no more than 100 units. 300 to 1,000 vehicles expected in 20 years.* Project proposes 61 units + 18 existing lots = 78 units.



JEFFREY D. NOHR
Project Manager
Email: Jeff@avilaconst.com.com
Direct Dial: 831.382.3523 | **Cell:** 831.917.5622 | Main **Office:** 831.372.5580
Fax: 831.372.5584
12 Thomas Owens Way, Ste 200, Monterey, CA 93940

From: Joel Mendoza <joel.mendoza@ncfpd.org>
Sent: Thursday, November 4, 2021 10:54 AM
To: Jeffrey Nohr <jeff@avilaconst.com>
Subject: RE: Susan St Agricultural Employee Housing project PLN#210152

Jeff,

I emailed you an invoice for our review of the Use and Variance Permit. At this point the project seems complete and I do not require any further information.

Please submit payment so that I can close out my review.

Thank you,

Joel Mendoza
Fire Chief
www.ncfpd.org
North County Fire District
Off: 831-633-2578
Cel: 831-212-1908
Fax: 831-633-2572
mailto:Joel.Mendoza@ncfpd.org

From: Jeffrey Nohr <jeff@avilaconst.com>
Sent: Tuesday, November 2, 2021 8:14 AM
To: Joel.Mendoza@ncfpd.org
Cc: Mike Avila <mike@avilaconst.com>
Subject: Susan St Agricultural Employee Housing project PLN#210152

Joel -

Good Morning.

I am emailing to reach out to provide any assistance or response to questions to keep traction on the review and approval process for the **Susan St Agricultural Employee Housing project PLN#210152**. The project was submitted on October 14th to our planner Shawn Archbold at *Monterey County Housing and Community Development Services Department.* The property is located at 51, 53, 55 & 57 Susan Street, Royal Oaks (Assessor's Parcel Number 117-361-016-000), North County Area Plan. The proposed project consists of the construction of four (4) two-story apartment style buildings on the 3.41-acre property, consisting of 60 apartment units, two (2) laundry facilities, one (1) manager unit, one (1) recreation room, open space. The housing project would be occupied primarily during the Salinas Valley harvest season from April through November. The housing would be available for agricultural employees and is designed to accommodate a maximum of 480 agricultural employees without dependents. Each apartment unit would be suitable to house up to eight individuals.

The planning application submittal was routed out to all reviewing agencies the week of October 18th. The 30 day review period for interagency comment and completeness is due to expire on November 15th at which time we are looking to receive a letter of completeness to move our approval process forward. We would appreciate any feedback or comment prior to the November 15th date to make sure you can provide any required conditions and approval during this planning review stage to allow your department to properly condition the project and allow our planner to issue a letter of completeness during this first 30 day review period.

I am available for any questions or discussions to assist you in your review.

Please feel free to contact me by phone or email.

Regards,

JEFFREY D. NOHR
Project Manager
Email: Jeff@avilaconst.com.com
Direct Dial: 831.382.3523 | Cell: 831.917.5622 | Main **Office:** 831.372.5580
Fax: 831.372.5584
12 Thomas Owens Way, Ste 200, Monterey, CA 93940

Appendix K

San Juan Road Collision History –

Raw SWITRS Database

2011-October 2021

1

Primary Rd **SAN JUAN RD** *Distance (ft)* **150.** *Direction* **E** *Secondary Rd* **SUSAN ST** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **018786** *Collision Date* **20140320** *Time* **2500** *Day* **THU**
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **SIDESWIPE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20150227**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **PKD MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	UNS TURN	E	-	9900	-		- 3	N		-	-	-								
2	PRKD	998	-				PARKED	E	A	0100	MERCU	1999	- 3	N		-	-	-								

2

Primary Rd **SAN JUAN RD** *Distance (ft)* **528.** *Direction* **E** *Secondary Rd* **SUSAN ST** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **015638** *Collision Date* **20140819** *Time* **1430** *Day* **TUE**
Primary Collision Factor **IMPROP TURN** *Violation* **214605** *Collision Type* **SIDESWIPE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20150425**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	31	M	O	HNBD		PASSING	W	A	0100	TOYOT	2005	- 3	N		-	M	G	PASS		21	M	3	0	M	G
																			PASS		21	M	6	0	P	G
2	DRVR	57	M	H	HNBD		LFT TURN	W	A	0800	CHRYS	2001	- 3	N		-	M	G								

3

Primary Rd **SAN JUAN RD** *Distance (ft)* **300.** *Direction* **E** *Secondary Rd* **SUSAN ST** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **20168** *Collision Date* **20140910** *Time* **2015** *Day* **WED**
Primary Collision Factor **NOT DRIVER** *Violation* *Collision Type* **HIT OBJECT** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20160115**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DARK - ST** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	65	M		HNBD		PROC ST	N	E	2336	FORD	1990	- 3	N		-	M	G								

Primary Rd **SAN JUAN RD** *Distance (ft)* **75.0** *Direction* **E** *Secondary Rd* **TARPEY RD** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **12332** *Collision Date* **20141203** *Time* **1338** *Day* **WED**
Primary Collision Factor **DRVR ALC|DRG** *Violation* **23152A** *Collision Type* **SIDESWIPE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20150713**
Weather1 **CLOUDY** *Weather2* *Rdwy Surface* **WET** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run **MSDMNR** *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	67	M	W	HBD-UI		PASSING	E	D	2200	TOYOT	2004	- 3	A		-	M	G								
2	DRVR	28	M	H	HNBD		PROC ST	E	F	2600	INTER	2014	- 3	N		-	M	G								

Primary Rd **SAN LORENZO PARK RD** *Distance (ft)* **500.** *Direction* **W** *Secondary Rd* **SAN ANTONIO RD** *NCIC* **9735** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **003** *Type* **3** *CalTrans* *Badge* **017292** *Collision Date* **20140822** *Time* **1313** *Day* **FRI**
Primary Collision Factor **WRONG SIDE** *Violation* **21650** *Collision Type* **HIT OBJECT** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20150505**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	70	M	W	HNBD		RAN OFF RD	W	A	0100	CHEVR	1999	- 1	N		-	L	G								

Primary Rd **SAN JUAN RD** Distance (ft) **2640** Direction **W** Secondary Rd **SAN MIGUEL** NCIC **9730** State Hwy? **N** Route Postmile Prefix Postmile Side of Hwy
City **UNINCORP.** County **Monterey** Population **9** Rpt Dist Beat **075** Type **2** CalTrans Badge **020896** Collision Date **20160324** Time **1710** Day **THU**
Primary Collision Factor **UNSAFE SPEED** Violation **22350** Collision Type **REAR END** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **N** Process Date **20160404**
Weather1 **CLEAR** Weather2 Rdwy Surface **DRY** Rdwy Cond1 **NO UNUSL CND** Rdwy Cond2 Spec Cond **0**
Hit and Run Motor Vehicle Involved With **OTHER MV** Lighting **DAYLIGHT** Ped Action Cntrl Dev **NT PRS/FCTR** Loc Type Ramp/Int

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	23	M	H	HNBD		PROC ST	W	D	2200	FORD	1998	- 3	N		-	M	G
2	DRVR	25	F	H	HNBD		SLOWING	W	A	0700	MERC	2003	- 3	N		-	M	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	COMP PN	25	F	1	0	M	G
PASS		16	F	3	0	M	G
PASS		6	M	5	0	P	G

Primary Rd **SAN JUAN RD** Distance (ft) **6336** Direction **E** Secondary Rd **SAN MIGUEL** NCIC **9730** State Hwy? **N** Route Postmile Prefix Postmile Side of Hwy
City **UNINCORP.** County **Monterey** Population **9** Rpt Dist Beat **075** Type **2** CalTrans Badge **020896** Collision Date **20160531** Time **1745** Day **TUE**
Primary Collision Factor **IMPROP PASS** Violation **21755** Collision Type **BROADSIDE** Severity **INJURY** #Killed **0** #Injured **2** Tow Away? **Y** Process Date **20160608**
Weather1 **CLEAR** Weather2 Rdwy Surface **DRY** Rdwy Cond1 **NO UNUSL CND** Rdwy Cond2 Spec Cond **0**
Hit and Run Motor Vehicle Involved With **OTHER MV** Lighting **DAYLIGHT** Ped Action Cntrl Dev **NT PRS/FCTR** Loc Type Ramp/Int

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	19	M	H	HNBD		RAN OFF RD	W	A	0100	HOND	1997	- 3	A	22107	-	L	G
2	DRVR	35	F	H	HNBD		PROC ST	E	A	0100	HOND	2005	- 3	N		-	M	G
3	DRVR	56	M	W	HNBD		PROC ST	E	A	0700	TOYT	2016	- 3	N		-	M	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	COMP PN	19	M	1	0	L	G
DRVR	OTH VIS	35	F	1	0	M	G

Primary Rd **SAN JUAN RD** Distance (ft) **1056** Direction **W** Secondary Rd **SAN MIGUEL CYN** NCIC **9730** State Hwy? **N** Route Postmile Prefix Postmile Side of Hwy
City **UNINCORP.** County **Monterey** Population **9** Rpt Dist Beat **075** Type **2** CalTrans Badge **020391** Collision Date **20160704** Time **0550** Day **MON**
Primary Collision Factor **UNSAFE SPEED** Violation **22350** Collision Type **REAR END** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **Y** Process Date **20160711**
Weather1 **CLOUDY** Weather2 **RAINING** Rdwy Surface **WET** Rdwy Cond1 **NO UNUSL CND** Rdwy Cond2 Spec Cond **0**
Hit and Run Motor Vehicle Involved With **OTHER MV** Lighting **DAYLIGHT** Ped Action Cntrl Dev **NT PRS/FCTR** Loc Type Ramp/Int

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	44	M	W	HNBD		STOPPED	E	D	2200	CHEV	1997	- 3	N		-	M	G
2	DRVR	21	M	H	HNBD		PROC ST	E	A	0100	HOND	1997	- 3	N		-	M	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	OTH VIS	21	M	1	0	M	G

4

Primary Rd **SAN JUAN RD** Distance (ft) **50.0** Direction **W** Secondary Rd **SUSAN ST** NCIC **9730** State Hwy? **N** Route Postmile Prefix Postmile Side of Hwy
City **UNINCORP.** County **Monterey** Population **9** Rpt Dist Beat **075** Type **2** CalTrans Badge **020896** Collision Date **20161011** Time **0230** Day **TUE**
Primary Collision Factor **IMPROP TURN** Violation **22107** Collision Type **BROADSIDE** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **Y** Process Date **20161018**
Weather1 **CLOUDY** Weather2 Rdwy Surface **DRY** Rdwy Cond1 **NO UNUSL CND** Rdwy Cond2 Spec Cond **0**
Hit and Run Motor Vehicle Involved With **PKD MV** Lighting **DARK - ST** Ped Action Cntrl Dev **NT PRS/FCTR** Loc Type Ramp/Int

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	17	F	H	HNBD		PROC ST	E	A	0100	VOLK	2004	- 3	F		-	L	G
2	PRKD	998	-				PARKED	E	A	0700	HOND	1998	- 3	N		-	-	-
3	PRKD	998	-				PARKED	E	A	0700	GMC	2002	- 3	N		-	-	-

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	COMP PN	17	F	1	0	L	G

Primary Rd **SAN JUAN RD** Distance (ft) **0.00** Direction Secondary Rd **TARPEY RD** NCIC **9730** State Hwy? **N** Route Postmile Prefix Postmile Side of Hwy
City **UNINCORP.** County **Monterey** Population **9** Rpt Dist Beat **007** Type **3** CalTrans Badge **020419** Collision Date **20160609** Time **1727** Day **THU**
Primary Collision Factor **R-O-W AUTO** Violation **21802A** Collision Type **BROADSIDE** Severity **INJURY** #Killed **0** #Injured **2** Tow Away? **Y** Process Date **20160620**
Weather1 **CLEAR** Weather2 Rdwy Surface **DRY** Rdwy Cond1 **NO UNUSL CND** Rdwy Cond2 Spec Cond **0**
Hit and Run Motor Vehicle Involved With **OTHER MV** Lighting **DAYLIGHT** Ped Action Cntrl Dev **FNCTNG** Loc Type Ramp/Int

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	40	M	H	HNBD		LFT TURN	E	A	0100	CADI	2003	- 3	N		-	M	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	COMP PN	40	M	1	0	M	G

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
2	DRVR	31	M	H	HNBD		PROC ST	E	A	0800	CHRYS	1996	- 3	N		-	L	G

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	COMP PN	31	M	1	0	L	G
PASS	COMP PN	25	F	3	0	L	G
PASS	OTH VIS	25	M	4	0	M	G
PASS	COMP PN	18	M	6	0	M	G

5

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **1150** *Direction* **E** *Secondary Rd* **SUSAN COURT** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **020990** *Collision Date* **20171218** *Time* **2015** *Day* **MON**
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **SIDESWIPE** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **Y** *Process Date* **20171229**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **PKD MV** *Lighting* **DARK - NO** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	52	M	H	HNBD		UNS TURN	E	A	0700	AMER	1992	- 3	F		-	P	G
2	PRKD	998	-				PARKED	E	A	0100	HOND	1999	- 3	N		-	-	-
3	PRKD	998	-				PARKED	E	A	0100	HOND	2001	- 3	N		-	-	-

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	MINOR	52	M	1	0	P	G

6

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **60.0** *Direction* **W** *Secondary Rd* **SUSAN STREET** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **021407** *Collision Date* **20171021** *Time* **1730** *Day* **SAT**
Primary Collision Factor **R-O-W AUTO** *Violation* **21804A** *Collision Type* **BROADSIDE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20171026**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	90	M	H	HNBD		LFT TURN	N	A	0100	HONDA	1993	- 3	N		-	M	G
2	DRVR	47	M	W	HNBD		PROC ST	E	A	0100	PORS	2014	- 3	N		-	L	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected

7

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **528.** *Direction* **E** *Secondary Rd* **SUSAN STREET** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **018886** *Collision Date* **20171127** *Time* **0930** *Day* **MON**
Primary Collision Factor **UNSAFE SPEED** *Violation* **22350** *Collision Type* **REAR END** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **Y** *Process Date* **20171130**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	41	M	H	HNBD		PROC ST	W	D	2200	CHEVR	2006	- 3	F		N	M	G
2	DRVR	40	M	H	HNBD		STOPPED	W	A	0100	SUBA	2003	- 3	N		-	M	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	POSSIBL	40	M	1	0	M	G

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **0.00** *Direction* *Secondary Rd* **TARPEY ROAD** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **019512** *Collision Date* **20170207** *Time* **1900** *Day* **TUE**
Primary Collision Factor **DRVR ALC|DRG** *Violation* **23152A** *Collision Type* **HIT OBJECT** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20170214**
Weather1 **RAINING** *Weather2* *Rdwy Surface* **WET** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DARK - NO** *Ped Action* *Cntrl Dev* **FNCTNG** *Loc Type* *Ramp/Int*

Party Info

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip
1F	DRVR	22	M	H	HBD-UI		PROC ST	N	A	0100	TOYT	2015	- 3	A	22350	-	M	G

Victim Info

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected

Primary Rd **19TH ST** *Distance (ft)* **50.0** *Direction* **N** *Secondary Rd* **LIGHTHOUSE AV** *NCIC* **2707** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **Pacific Grove** *County* **Monterey** *Population* **3** *Rpt Dist* **2707** *Beat* **002** *Type* **0** *CalTrans* *Badge* **2224** *Collision Date* **20190612** *Time* **1430** *Day* **WED**
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **SIDESWIPE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20190717**
Weather1 **CLOUDY** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run **MSDMNR** *Motor Vehicle Involved With* **PKD MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip
1F	DRVR	998	-		HBD-UNK		PROC ST	S	-	9900	HONDA		- -	N		-	- -
2	PRKD	998	-				PARKED	S	A	0100	BMW	2017	- -	N		-	- -

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected

Primary Rd **1ST ST** *Distance (ft)* **10.0** *Direction* **S** *Secondary Rd* **ALVIN DR** *NCIC* **2708** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **Salinas** *County* **Monterey** *Population* **6** *Rpt Dist* **SALIN** *Beat* **002** *Type* **0** *CalTrans* *Badge* **74130** *Collision Date* **20190221** *Time* **1701** *Day* **THU**
Primary Collision Factor **UNSAFE SPEED** *Violation* **22350** *Collision Type* **REAR END** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **Y** *Process Date* **20190416**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run **MSDMNR** *Motor Vehicle Involved With* **PKD MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip
1F	DRVR	24	M	H	HNBD		LFT TURN	S	-	0000	HONDA	1997	- 3	-		-	L G
2	PRKD	998	-				PARKED	S	-	0000	HONDA	1997	- 3	-		-	- -
3	PRKD	998	-				PARKED	S	-	0000	CHRYS	2002	- 3	-		-	- -

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
DRVR	COMP PN	24	M	1	0	L	G

Primary Rd **1ST ST** *Distance (ft)* **0.00** *Direction* *Secondary Rd* **BELDEN ST** *NCIC* **2703** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **Gonzales** *County* **Monterey** *Population* **2** *Rpt Dist* **2703** *Beat* **ALL** *Type* **0** *CalTrans* *Badge* **9221** *Collision Date* **20190202** *Time* **1900** *Day* **SAT**
Primary Collision Factor **UNKNOWN** *Violation* *Collision Type* **AUTO/PED** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **N** *Process Date* **20190318**
Weather1 **RAINING** *Weather2* *Rdwy Surface* **WET** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **PED** *Lighting* **DUSK/DAWN** *Ped Action* **X-WLK AT** *Cntrl Dev* **FNCTNG** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip
1	DRVR	82	M	H	HNBD		STOPPED	W	A	0100	SUZUK	2003	- -	E		-	M G
2	PED	54	F	H		null		S	N	6000	-		- -	-		-	- -

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
PED	COMP PN	54	F	9	3	-	-

Primary Rd **1ST ST** *Distance (ft)* **0.00** *Direction* *Secondary Rd* **LIGHTHOUSE AV** *NCIC* **2707** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **Pacific Grove** *County* **Monterey** *Population* **3** *Rpt Dist* **2707** *Beat* **002** *Type* **0** *CalTrans* *Badge* **BAUM** *Collision Date* **20190723** *Time* **1545** *Day* **TUE**
Primary Collision Factor **STRTNG|BCKNG** *Violation* **22106** *Collision Type* **OTHER** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20190903**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **PKD MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip
1F	DRVR	67	F		HNBD		PARKING	N	-	0000	HONDA	2016	- -	-		-	P B
2	PRKD	998	-				PARKED	S	-	0000	AUDI	2017	- -	-		-	- -

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected

Primary Rd **207 SAN JUAN RD** *Distance (ft)* **40.0** *Direction* **E** *Secondary Rd* **SUSAN DR** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy* 8
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **020677** *Collision Date* **20190922** *Time* **0745** *Day* **SUN**
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **REAR END** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20191002**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DARK - ST** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip
1F	DRVR	998	-		IMP UNK	IMP UNK	UNS TURN	W	A	0100	-		- 3	N		-	B B
2	PRKD	998	-				PARKED	W	A	0100	MERZ	2008	- 3	N		-	- -

ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **0.00** *Direction* *Secondary Rd* **SAN MIGUEL** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **015160** *Collision Date* **20191024** *Time* **0630** *Day* **THU**
Primary Collision Factor **R-O-W AUTO** *Violation* **21802A** *Collision Type* **BROADSIDE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20191028**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DUSK/DAWN** *Ped Action* *Cntrl Dev* **FNCTNG** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	76	F	W	HNBD		LFT TURN	N	A	0100	TOYT	2015	- 3	N		-	M	G								
2	DRVR	31	M	H	HNBD		PROC ST	W	A	0100	HOND	2010	- 3	N		-	M	G								

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **1848** *Direction* **E** *Secondary Rd* **SAN MIGUEL CYN** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **020916** *Collision Date* **20190412** *Time* **2326** *Day* **FRI**
Primary Collision Factor **DRVR ALC|DRG** *Violation* **23152A** *Collision Type* **HIT OBJECT** *Severity* **FATAL** *#Killed* **1** *#Injured* **1** *Tow Away?* **Y** *Process Date* **20190708**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DARK - NO** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	H	HBD-UNK		RAN OFF RD	E	D	2200	TOYO	2004	- 3	A	22107	-	L	H	DRVR	KILLED	21	M	1	1	L	H
																			PASS	MINOR	23	-	3	0	L	G

9

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **60.0** *Direction* **E** *Secondary Rd* **SUSAN STREET** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **020701** *Collision Date* **20190208** *Time* **1250** *Day* **FRI**
Primary Collision Factor **STRTNG|BCKNG** *Violation* **22106** *Collision Type* **HIT OBJECT** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **N** *Process Date* **20190219**
Weather1 **CLOUDY** *Weather2* *Rdwy Surface* **WET** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	45	M	H	HNBD		ENT TRAF	E	D	2200	FORD	2017	- 3	N		-	M	G								

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **650.** *Direction* **W** *Secondary Rd* **TARPEY ROAD** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **018886** *Collision Date* **20190509** *Time* **0620** *Day* **THU**
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **HIT OBJECT** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20190517**
Weather1 **CLOUDY** *Weather2* **RAINING** *Rdwy Surface* **WET** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run **MSDMNR** *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	UNS TURN	E	A	0100	ACUR	1999	- 3	N		-	M	B								

Primary Rd **SAN JUAN ROAD** *Distance (ft)* **0.00** *Direction* *Secondary Rd* **TARPEY ROAD** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **020701** *Collision Date* **20191104** *Time* **1730** *Day* **MON**
Primary Collision Factor **R-O-W AUTO** *Violation* **21802A** *Collision Type* **BROADSIDE** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **Y** *Process Date* **20191114**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DARK - NO** *Ped Action* *Cntrl Dev* **FNCTNG** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety	Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	60	M	W	HNBD		ENT TRAF	N	D	2200	CHEV	2016	- 3	N		-	L	G								
2	DRVR	64	F	W	HNBD		PROC ST	E	A	0700	AMER	1991	- 3	N		-	P	G	DRVR	MINOR	64	F	1	0	P	G

Primary Rd SAN JUAN ROAD | Distance (ft) 10.0 | Direction W | Secondary Rd SAN MARCOS | NCIC 9730 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City UNINCORP. | County Monterey | Population 9 | Rpt Dist | Beat 002 | Type 3 | CalTrans | Badge 021358 | Collision Date 20200326 | Time 1600 | Day THU
Primary Collision Factor IMPROP TURN | Violation 22107 | Collision Type HIT OBJECT | Severity PDO | #Killed 0 | #Injured 0 | Tow Away? N | Process Date 20200406
Weather1 CLOUDY | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run MSDMNR | Motor Vehicle Involved With FIXED OBJ | Lighting DAYLIGHT | Ped Action | Cntrl Dev NT PRS/FCTR | Loc Type | Ramp/Int

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	UNS TURN	W	-	9900	-		- 3	N		-	B B								

Primary Rd SAN JUAN ROAD | Distance (ft) 528. | Direction E | Secondary Rd SAN MIGUEL | NCIC 9730 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City UNINCORP. | County Monterey | Population 9 | Rpt Dist | Beat 075 | Type 2 | CalTrans | Badge 015160 | Collision Date 20200819 | Time 0515 | Day WED
Primary Collision Factor WRONG SIDE | Violation 21460C | Collision Type SIDESWIPE | Severity PDO | #Killed 0 | #Injured 0 | Tow Away? N | Process Date 20200831
Weather1 OTHER | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Vehicle Involved With OTHER MV | Lighting DARK - NO | Ped Action | Cntrl Dev NT PRS/FCTR | Loc Type | Ramp/Int

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	M	H	HNBD		PASSING	E	A	0100	LEXS	2016	- 3	N		-	M G								
2	DRVR	48	M	H	HNBD		LFT TURN	E	F	2600	FRHT	2020	- 3	A	24252	-	P G								

Primary Rd SAN JUAN ROAD | Distance (ft) 5280 | Direction W | Secondary Rd SAN MIGUEL | NCIC 9730 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City UNINCORP. | County Monterey | Population 9 | Rpt Dist | Beat 075 | Type 2 | CalTrans | Badge 022061 | Collision Date 20200819 | Time 0035 | Day WED
Primary Collision Factor DRVR ALC|DRG | Violation 23152A | Collision Type HIT OBJECT | Severity INJURY | #Killed 0 | #Injured 1 | Tow Away? Y | Process Date 20200831
Weather1 CLEAR | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Vehicle Involved With FIXED OBJ | Lighting DARK - NO | Ped Action | Cntrl Dev NT PRS/FCTR | Loc Type | Ramp/Int

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	20	M	H	HBD-UI		RAN OFF RD	E	A	0100	TOYO	2013	- 3	A	22107	-	L H	DRVR	MINOR	20	M	1	0	L	H

10

Primary Rd SAN JUAN ROAD | Distance (ft) 1584 | Direction E | Secondary Rd SUSAN STREET | NCIC 9730 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City UNINCORP. | County Monterey | Population 9 | Rpt Dist | Beat 075 | Type 2 | CalTrans | Badge 015160 | Collision Date 20200129 | Time 1245 | Day WED
Primary Collision Factor IMPROP TURN | Violation 22107 | Collision Type HIT OBJECT | Severity FATAL | #Killed 1 | #Injured 0 | Tow Away? Y | Process Date 20200330
Weather1 CLEAR | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Vehicle Involved With FIXED OBJ | Lighting DAYLIGHT | Ped Action | Cntrl Dev NT PRS/FCTR | Loc Type | Ramp/Int

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	30	F	H	IMP UNK	IMP UNK	OTHER	E	A	0100	NISS	1994	- 3	N		-	B G	DRVR	KILLED	30	F	1	0	M	G
2	PRKD	998	-				PARKED	N	-	3500	FOSTE	1958	- 3	N		-	- -								

11

Primary Rd SAN JUAN ROAD | Distance (ft) 475. | Direction E | Secondary Rd SUSAN STREET | NCIC 9730 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City UNINCORP. | County Monterey | Population 9 | Rpt Dist | Beat 075 | Type 2 | CalTrans | Badge 018886 | Collision Date 20200801 | Time 0635 | Day SAT
Primary Collision Factor UNSAFE SPEED | Violation 22350 | Collision Type SIDESWIPE | Severity PDO | #Killed 0 | #Injured 0 | Tow Away? Y | Process Date 20200811
Weather1 CLOUDY | Weather2 FOG | Rdwy Surface WET | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Vehicle Involved With OTHER MV | Lighting DAYLIGHT | Ped Action | Cntrl Dev NT PRS/FCTR | Loc Type | Ramp/Int

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	26	F	H	HNBD		PROC ST	W	A	0100	FORD	2008	- 3	N		-	L G								
2	DRVR	69	M	H	HNBD		LFT TURN	E	D	2200	CHEV	2003	- 3	N		-	M G								
3	PRKD	998	-				PARKED	S	K	4500	CATER	2007	- 3	N		-	- -								

Primary Rd **SAN JUAN RD** *Distance (ft)* **528.** *Direction* **E** *Secondary Rd* **SUMMERLAND RD** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **019127** *Collision Date* **20211030** *Time* **0655** *Day* **SAT**
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **HIT OBJECT** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **N** *Process Date* **20211108**
Weather1 **CLOUDY** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **FIXED OBJ** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	42	F	H	HNBD		RAN OFF RD	E	A	0700	CHEV	2007	- 3	N		-	M G	DRVR	POSSIBL	42	F	1	0	M	G

Primary Rd **SAN JUAN RD** *Distance (ft)* **200.** *Direction* **E** *Secondary Rd* **SUSAN ST** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **019981** *Collision Date* **20211021** *Time* **2005** *Day* **THU** 12
Primary Collision Factor **IMPROP TURN** *Violation* **22107** *Collision Type* **SIDESWIPE** *Severity* **INJURY** *#Killed* **0** *#Injured* **1** *Tow Away?* **N** *Process Date* **20211101**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **PKD MV** *Lighting* **DARK - ST** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	88	M	A	HNBD		PROC ST	W	A	0100	NISS	1997	- 3	N		-	L G	DRVR	MINOR	88	M	1	0	L	G
2	PRKD	998	-				PARKED	W	A	0700	GMC	2012	- -	N		-	- -								

Primary Rd **SAN JUAN RD.** *Distance (ft)* **20.0** *Direction* **W** *Secondary Rd* **ALLISON RD.** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **019328** *Collision Date* **20210416** *Time* **0710** *Day* **FRI**
Primary Collision Factor **R-O-W AUTO** *Violation* **21802A** *Collision Type* **REAR END** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20210423**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	27	M	H	HNBD		LFT TURN	N	A	0100	HOND	2000	- 3	N		-	M G								
2	DRVR	44	M	H	HNBD		PROC ST	W	G	2731	PTRB	2012	- 3	N		-	M G								

Primary Rd **SAN JUAN RD.** *Distance (ft)* **0.00** *Direction* *Secondary Rd* **ALLISON RD.** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **075** *Type* **2** *CalTrans* *Badge* **019328** *Collision Date* **20210506** *Time* **0737** *Day* **THU**
Primary Collision Factor **R-O-W AUTO** *Violation* **21802A** *Collision Type* **BROADSIDE** *Severity* **PDO** *#Killed* **0** *#Injured* **0** *Tow Away?* **Y** *Process Date* **20210512**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	M	H	HNBD		LFT TURN	N	A	0700	TOYT	2005	- 3	N		-	L G								
2	DRVR	68	M	H	HNBD		PROC ST	E	D	2200	GMC	2016	- 3	N		-	M G								

Primary Rd **SAN JUAN RD.** *Distance (ft)* **3484** *Direction* **E** *Secondary Rd* **ALLISON RD.** *NCIC* **9730** *State Hwy?* **N** *Route* *Postmile Prefix* *Postmile* *Side of Hwy*
City **UNINCORP.** *County* **Monterey** *Population* **9** *Rpt Dist* *Beat* **073** *Type* **2** *CalTrans* *Badge* **019328** *Collision Date* **20210611** *Time* **0557** *Day* **FRI**
Primary Collision Factor **UNSAFE SPEED** *Violation* **22350** *Collision Type* **REAR END** *Severity* **INJURY** *#Killed* **0** *#Injured* **3** *Tow Away?* **Y** *Process Date* **20210617**
Weather1 **CLEAR** *Weather2* *Rdwy Surface* **DRY** *Rdwy Cond1* **NO UNUSL CND** *Rdwy Cond2* *Spec Cond* **0**
Hit and Run *Motor Vehicle Involved With* **OTHER MV** *Lighting* **DAYLIGHT** *Ped Action* *Cntrl Dev* **NT PRS/FCTR** *Loc Type* *Ramp/Int*

Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	36	M	H	HNBD	FATG	PROC ST	W	A	0100	HOND	2000	- 3	N		-	L G	DRVR	POSSIBL	36	M	1	0	L	G
2	DRVR	26	F	H	HNBD		STOPPED	W	A	0100	TOYT	2015	- 3	N		-	M G	DRVR	POSSIBL	26	F	1	0	M	G
																		PASS	POSSIBL	45	F	3	0	M	G

Attachment 1

This page intentionally left blank.

Keith Higgins

Traffic Engineer

July 8, 2022

Jeffrey Nohr
Avila Construction
12 Thomas Owens Way, Suite 200
Monterey, CA 93940

Re: Susan Street Apartments Responses to Planning Commission Comments, Pajaro, Monterey County, CA

Dear Jeff,

As you requested, this letter responds to questions and comments from the March 16, 2022, Planning Commission hearing. The format summarizes each question and provides a direct response. When applicable, it references the July 1, 2022, letter, which I previously submitted to you that addresses a number of these questions and comments in a topical format.

1. Martha Diel

a. Comment / Question - What is the correct width of Susan Street? **(1)**

Response / Answer- This is addressed in detail in the July 1, 2022, Letter, Section 2, "Adequacy of Susan Street Mid-Block Width."

In summary, as also discussed in Response B.b.i, in my letter regarding "Susan Street Apartments Transportation Impact Analysis, Pajaro, Monterey County, CA – Response to Comments from General Public PLN210152" to Craig Spencer, Monterey County Housing and Community Development dated January 28, 2022, this would be considered a "yield street" by the National Association of City Transportation Officials (NACTO). Yield streets are acceptable and often encouraged because they require vehicles to wait for gaps in oncoming traffic before proceeding through narrow spaces between parked cars. This feature results in reduced travel speeds and corresponding improved safety compared to wide streets.

b. Comment / Question – Are peak hours in the traffic study different than the "peak" of what the neighbors actually experience? **(2)**

Response / Answer – This is addressed in detail in the July 1, 2022, Letter, Section 1, "Project daily and peak hour traffic volumes."

In summary, Project traffic is generally expected to leave the site between 2 AM and 6 AM and return between 12 Noon and 4 PM. Most of the Project traffic will occur outside the street AM and PM peak hours.

2060 ROCKROSE COURT, GILROY, CA 95020
T 408.201.2752 KEITH@KEITHHIGGINSTE.COM WWW.KEITHHIGGINSTE.COM

c. Comment / Question – How will dirt be imported? **(3)**

Response / Answer – This is addressed in detail in the July 1, 2022, Letter, Section 5, “Project Construction Traffic Operations.”

2. Amy Roberts

a. Comment / Question – What is in the Susan Street traffic count? Is the business at the end of the street in the count? **(4)**

Response / Answer – This is addressed in detail in the July 1, 2022, Letter, Section 2, “Adequacy of Susan Street Mid-Block Width.”

The traffic counts were conducted at the Susan Street/San Juan Road intersection from 7 to 9 AM and from 4 to 6 PM on August 26, 2021, using standard video data collection equipment by a traffic count service. The counts include all vehicles entering and exiting Susan Street at San Juan Road. The counts include the portion of Royal Oaks Collision and Paint (Body Shop) traffic that enters and exits Susan Street to and from San Juan Road. The table below indicates the traffic volumes at San Juan Road as well as an estimate of the volumes immediately north of the Body Shop and at the north end of Susan Street (the Project Entrance). This is based on the numbers of residences on Susan Street assuming typical single family residential trip generation rates and no Accessory Dwelling Units (ADU) or more than a single family occupying any of the single family residences.

A total of about 23 AM peak hour vehicles and 39 PM peak hour vehicles were counted entering and exiting Susan Street at San Juan Road. This is an equivalent of about 400 vehicles per day assuming the typical hourly variation of traffic throughout the day with 10% in the PM peak hour.

Table 1 below summarizes existing AM, PM, and daily traffic at San Juan Road, at the north boundary of the Body Shop and the end of Susan Street. The 19 homes immediately north of the Body Shop can be expected to generate approximately 220 trips per day with 16 during the AM peak hour and 22 during the PM peak hour. The Body Shop represents the balance of the total traffic at San Juan Road, which includes about 7 AM peak hour, 17 PM peak hour and 180 daily trips. Personal observations at random times indicate that the Body Shop uses Susan Street for parking, vehicle storage and various Body Shop operations. This results in higher traffic on Susan Street as vehicles are maneuvered between Susan Street and on-site facilities.

	Existing		
Location on Susan Street	AM Peak Hour	PM Peak Hour	Daily Estimate
At San Juan Road	23	39	400
Immediately North of Body Shop	16	22	220
Body Shop	7	17	180

Table 1 – Susan Street Traffic Volume Summary

3. **Ernesto Mendoza**
    a. Comment / Question - Is there enough room for buses to turn between San Juan Road and Susan Street? **(5)**

       Response / Answer – This is addressed in detail in the July 1, 2022, Letter, Section 3, "Adequacy of San Juan Road / Susan Street Intersection."

       In summary, yes, the San Juan Road/Susan Street intersection is adequate to accommodate the low volume of buses generated by the Project. Left turns to, left turns out and right turns out of Susan Street can be made without encroaching into oncoming traffic. Eastbound San Juan Road right turns to Susan Street will encroach into the southbound Susan Street approach. However, this will occur very infrequently due to the low traffic volumes. In addition, the San Juan Road shoulder along the Body Shop frontage will provide a location for a bus to wait for the southbound Susan Street approach to clear.

    b. Comment / Question – Consider installing all-way stop control at the San Juan Road / Susan Street intersection. **(6)**

       Response / Answer – All-way stop control is only installed if the approach volumes exceed all-way stop warrants. The Susan Street approach is already controlled by a stop sign. It will carry about 39 vehicles on its approach to San Juan Road with Project traffic. This is only 28% of the average of 140 vehicles per hour that must be averaged for 8 hours to meet all-way stop warrants.

    c. Comment / Question – How did we get the traffic counts? **(4)**

       Response /Answer – See the response to Comments 1.b and 2.a above.

4. **Ana Ambriz** – No traffic questions

5. **Ernesto Gonzalez** -
    a. Comment / Question – How will overflow parking be handled? **(7)**

       Response / Answer – This is addressed in detail in the July 1, 2022, Letter, Section 4, "Parking Generation."

       In summary, there will be no overflow parking. The Project parking is designed to accommodate parking requirements for a standard apartment complex. The H2A housing will generate much less parking demand than the standard apartment alternative.

    b. Comment / Question - What is the ingress / egress provision for the Project in case of emergency? **(8)**

       Response / Answer –
       Project emergency access and egress is provided by Susan Street. According to the North County Fire Protection District email included as Appendix J of the "Susan Street Apartments Transportation Impact

Analysis Final Draft Report," Keith Higgins Traffic Engineer, December 8, 2021 (Project Traffic Study) emergency access is acceptable to serve the Project.

6. **Kate Daniels** –
    a. Comment / Question - Is adequate width provided for 2 vehicles to pass on Susan Street?

       Response / Answer – See response to Comment 1.a above.

    b. Comment / Question – Is the Project expected to generate 145 daily trips during the 8.5-month agricultural season, which is an annualized average of about 105 daily trips?

       Response / Answer – The 145 daily trip estimate in the Traffic Study was only an estimate. The 525 Third Street Apartments Agricultural Worker Housing project (Greenfield Project) in Greenfield, California generated a total of 175 in a 24-hour basis on Wednesday, June 22, 2022. This is described in detail the July 1, 2022, Letter, Section 1, "Project daily and peak hour traffic volumes." The difference of 30 trips, which is an average of 1.25 trips per hour is insignificant and does not affect the traffic analysis findings and conclusions.

    c. Comment / Question – Of the 400 daily trips on Susan Street, what portions are due to the Body Shop and what portions are due to the residents?

       Response / Answer – See response to Question 2.a above.

7. **Ernesto Gonzalez** -
    a. Comment / Question - How will overflow parking be handled? Will there be a limit on number of cars?

       Response / Answer – See response to Question 5.a above.

    b. Comment / Question – Is the sidewalk accounted for in the street section measurements?

       Response / Answer – See response to Question 1.a above. The sidewalk width is in addition to the curb to curb width.

8. **Lesley Noble (LUAC)** -
    a. Comment / Question – What are the Project traffic impacts on San Juan Road?

    b. Response / Answer – The Project will have an imperceptible impact on San Juan Road as discussed in detail in Section 3 of the Project Traffic Study. The Project will be responsible for payment of Monterey County and TAMC traffic impact fees for its incremental contribution to needed traffic improvements on the Monterey County road and regional highway systems as discussed in Section 9 of the Project Traffic Study.

c. Comment / Question – What are the cumulative impacts for the Gonda Street and Susan Street Projects?

   Response / Answer – Cumulative conditions including both the Gonda Street and Susan Street projects were analyzed in the “G12: Prunedale to Pajaro Corridor Study (“G12 Corridor Study”), GHD (Omni-Means), June 13, 2019, conducted under contract with the Transportation Agency for Monterey County (TAMC). According to this report, all study intersections in the Pajaro area will operate at acceptable Level of Service D through the Year 2040, which represents Monterey County General Plan buildout. Improvements recommended in the G12 Corridor Study include the restriping of southbound Porter Drive to convert one southbound through/right lane into a southbound right turn lane. These improvements are necessary to add bicycle lanes in each direction on Porter Drive south of the intersection. They are funded by the TAMC Regional Development Impact Fee. This is discussed in Sections 4 and 5 of the Project Traffic Study.

9. Miscellaneous Items

a. Comment –Confirm Hours for Bussing AM & PM travel times. Current report states 2am-5am and 12pm-4pm.

   Response – This is addressed in detail in the July 1, 2022, Letter, Section 1, “Project daily and peak hour traffic volumes.” All bus traffic at the Greenfield H2A project occurred between 2:45 AM and 6:30 AM to transport workers from the Project to work sites. All bus traffic associated with returning workers from work sites occurred between 10 AM and 6 PM. Only 2 buses per hour occurred during the street peak period between 4 PM and 6 PM. This is one bus every 30 minutes.

b. Comment - Confirm that busing or vans will transport tenants to town for supplies and personal business.

   Response – This is the primary method of transport for tenants for personal business.

If you have any questions regarding the contents of this proposal or need additional information, please do not hesitate to contact me at your convenience. Thank you for the opportunity to assist you with this project.

Respectfully submitted,

Keith Higgins

Keith B. Higgins, PE, TE

Attachment 2

This page intentionally left blank.

Keith Higgins
Traffic Engineer

July 1, 2022

Jeffrey Nohr
Avila Construction
12 Thomas Owens Way, Suite 200
Monterey, CA 93940

Re: Susan Street Apartments Responses to Planning Commission Hearing Comments, Pajaro, Monterey County, CA

Dear Jeff,

As you requested, this letter addresses traffic-related issues regarding the Susan Street Apartments Project discussed at the March 16, 2022, Monterey County Planning Commission hearing. The first is the adequacy of the width of Susan Street to accommodate oncoming vehicles to pass each other between San Juan Road and the Project. The second is the adequacy of the San Juan Road / Susan Street intersection to accommodate inbound and outbound bus turning movements. The third is confirmation regarding the adequacy of the proposed on-site parking supply. More detailed information about Project trip generation including the volume and time of day of bus, vans, and cars as well as parking occupancy has been collected at a comparable project in Greenfield to assist in addressing these issues. This information is discussed below.

1. Project daily and peak hour traffic volumes

a. Greenfield Project Data Collection Description

No published data is available for agricultural housing (H2A) projects, which are a relatively new and unique land use. Trip generation rates used on recent H2A projects including the "Susan Street Apartments Transportation Impact Analysis," Keith Higgins Traffic Engineer, November 23, 2021 (Project Traffic Study), were based on street peak hour driveway counts at the Boronda Villas (previously named Casa Boronda) project on Madison Lane in the Boronda Area of Monterey County. In order to provide additional data to determine daily trip generation totals and hourly variations, a 24-hour traffic count was conducted at the 525 Third Street Apartments Agricultural Worker Housing project (Greenfield Project) in Greenfield, California on Wednesday, June 22, 2022. This location was chosen because its representatives were willing to provide information regarding the number of residents at the time of the count and approved collecting traffic count data at its driveways. A Google Earth image of the site taken on February 23, 2021, while the Greenfield Project was under construction is included at **Attachment 1**. Construction was completed prior to the growing season in 2022. It was in full service prior to the traffic count. Wednesday, June 22, 2022, was a typical day during the peak growing season.

b. Greenfield Project Description

The Greenfield Project has a total capacity of 480 residents plus a manager's unit. Coincidentally, this is exactly the same size as the Susan Street Apartments. A total of 438 residents plus manager occupied the facility the time of the count, which is an occupancy rate of 91.3%. According to Greenfield Project representatives, the Greenfield Project was effectively at full capacity because units are kept vacant in case ill workers need to be separated from their co-workers as well as random maintenance. It is not expected that a higher occupancy would change the trip generation because the 16 transport buses can carry 48 passengers and the average passenger load was about 27 passengers, which is an average occupancy rate of about 60%. If 480 workers were housed on-site, the average passenger load would only increase to about 30 passengers per bus, which is an occupancy rate of 62.5%. This could easily be accommodated by the current number of buses. In addition, there is a strong incentive to minimize bus trips to minimize corresponding transportation costs. These include the cost of the bus, its maintenance, fuel, driver, storage (off-site parking), and insurance.

No workers are housed at the facility from the latter part of November through early March, during the off season. The facility occupancy gradually increases from vacant in early March to effective full occupancy by early June, depending on weather. Occupancy begins to decline at the end of October. The Greenfield Project will be unoccupied except for the manager's apartment by late November. Occupancy varies throughout the peak growing season to a high of about 91%. Full (100%) occupancy rarely if ever occurs. As discussed in the preceding paragraph, a 10% variation in occupancy would have a minimal effect on trip generation.

c. Greenfield Project Trip Generation Data

i. Daily Trip Generation

Data collection was conducted for 24 hours and included subtotals for buses, vans, pickup trucks, passenger cars. The raw count data is included as **Attachment 2** which also highlights Project and street peak hours in the right columns. Peak hour trips are summarized and compared with the trip generation estimates for the 60-unit standard apartment alternative and for the previous estimate for the H2A alternative on **Attachment 3**. The Greenfield Project generated a total of 175 one-way trips (about 88 round trips) in 24 hours, including 65 bus trips, 7 van trips (about 4 in and 4 out), 2 truck trips (1 truck arriving and departing while picking up construction debris), 28 pickup trucks (14 in and 14 out) and 73 passenger cars (about 24 in and 49 out). Each bus trip represents a single bus that arrives empty and departs with passengers in the early morning (i.e., one inbound and one outbound trip). Each bus returns with passengers and departs empty in the early to late afternoon (again, one inbound and one outbound trip).

The Greenfield Project daily trip generation of 175 is slightly more than the estimate of 145 trips per day in the Project Traffic Study, which is insignificant. The more critical trip generation characteristics for this project are peak hour trips and number of bus trips. The Greenfield Project generated 65 bus trips per day, which is almost exactly the same as the estimate of 64 bus trips in the Project Traffic Study.

ii. Morning Trip Generation

A total of one outbound passenger car trip was generated during each of the 7 to 8 and 8 to 9 AM street peak hours. No buses were generated between 6:30 AM and 10 AM.

The Greenfield Project AM peak hour occurred between 5 and 6 AM, during which the Greenfield Project generated a total of 18 vehicle trips including 9 buses (3 in and 6 out).

The highest Greenfield Project bus trip generation occurred from 3 to 4 AM and included 12 buses (6 in and 6 out). The peak bus flow rate was one bus every 10 minutes, which is the highest flow rate in 24 hours. Only 3 passenger cars or other vehicles occurred during this hour-long period, or one passenger car every 20 minutes.

The Greenfield Project AM peak trip generation occurs when there is very little existing traffic on the street system. No Greenfield Project trips occurred during the two-hour AM street peak period. It thus has no AM peak hour traffic impact.

iii. Evening Trip Generation

A total of 14 trips (4 inbound and 10 outbound) were generated by the Greenfield Project during the 4 to 5 PM street peak hour. This included a total of 4 buses (2 inbound and 2 outbound).

A total of 7 trips (0 inbound and 7 outbound) were generated during the 5 to 6 PM street peak hour. This included a total of 2 buses (1 inbound and 1 outbound).

Only incidental passenger cars (i.e., no buses) entered and exited the Greenfield Project between 6 PM and 2:45 AM. A total of 7 passenger cars entered and exited the Greenfield Project during this nearly nine-hour period.

The Greenfield Project PM peak hour traffic occurred between 2 and 3 PM, during which the Greenfield Project generated a total of 28 vehicle trips (15 inbound and 13 outbound) including 7 buses (3 in and 4 out). This was the highest hour of Greenfield Project trip generation. The flow rate was approximately 1 inbound and 1 outbound vehicle every 4 minutes. The peak bus flow rate was one bus every 15 minutes in each direction.

iv. Comparison of Project Trip Generation Between Original Project Traffic Study and Based on Greenfield Project Traffic Counts

Attachment 3 provides an estimate of Susan Street Apartments (Project) trip generation based on the trip rates at the Greenfield Project. It also includes the trip generation estimate in the Project Traffic Study estimated that the Project would generate a total of about 145 daily trips with 4 in the AM peak hour and 36 in the PM peak hour if developed as an H2A (agricultural workers) housing project. The Project was estimated in the Project Traffic Study to generate a total of 446 daily trips with 29 in the AM peak hour and 35 in the PM peak hour if developed as standard apartments. The Greenfield Project, which is exactly the same size as the proposed Project, generated a total of 175 daily trips with 1 in the AM peak hour and 14 in the PM peak hour. Based on actual 24-hour traffic counts, the Project will generate slightly more daily trips and less than one-half as many peak hour trips as assumed for the H2A alternative. This is less than the estimate of 4 AM peak hour trips in the Project Traffic Study. The impact is less but the Project will have virtually no impact during the AM peak hour using either the Project Traffic Study estimate or the Greenfield Project traffic counts. The Project will probably generate about one-half the estimate in the Project Traffic Study during the PM peak hour, but the Project will have a minimal level of service impact during the PM peak hour using either estimate.

The traffic analysis is primarily based on peak hour traffic operations. The Project will result in less impacts than if developed as 60 standard apartments. The Project will also result in less impacts than anticipated in the Project Traffic Study assuming H2A housing. A summary comparison of the trip generation estimates for Project alternatives with Greenfield count data is provided in **Table 1** below.

Project Alternative	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Standard Apartments	446	29	35
H2A Housing			
-Original Project Traffic Study	145	4	36
-Based on Greenfield Project	175	1	14

Table 1 – Project Trip Generation Comparison – Original Project Traffic Study with Greenfield Project

Table 2 below provides a summary of Existing and Existing plus Project daily, traffic volumes on Susan Street immediately north of San Juan Road estimated in the Project Traffic Study and based on Greenfield Project traffic counts. The Project Traffic Study estimated that Susan Street currently carries about 400 daily trips. This is the highest volume section of Susan Street. The volume along Susan Street gradually declines to 0 at the existing terminus. With the addition of Project traffic, Susan Street will carry about 575 daily trips based on Greenfield Project traffic volumes. This compares with the estimate in the Project Traffic Study of about 545 daily trips. Because of its increased width and length and slower acceleration and deceleration rates compared with passenger cars, buses have been determined in studies by the Transportation Research Board to represent the equivalent of up to 3 passenger cars. The resulting traffic volumes on Susan Street accounting for bus passenger car equivalents is also tabulated in **Table 2**. The H2A Project will generate less traffic than the Project developed as standard apartments even conservatively assuming each bus represents three passenger cars. Both Project alternatives will result in traffic volumes on the highest volume section of San Juan Road being below the threshold for a Monterey County Standard Tertiary Street.

Project Alternative	Tertiary Street Threshold – Daily Traffic	Existing	Project Total Vehicles (Buses) / Total PCE's	Existing + Project Vehicles / PCE's
Standard Apartments	1,000	400	450 (0) / 450	850 / 850
H2A Housing				
-Original Project Traffic Study	1,000	400	145 (64) / 273	545 / 673
-Based on Greenfield Project	1,000	400	175 (65) / 305	575 / 705

Table 2 – Susan Street Daily Traffic – Original Project Traffic Study with Greenfield Project

Notes:

1. Susan Street daily traffic is immediately north of San Juan Road, which is the location of highest volumes.
2. PCE's = Passenger Car Equivalents, which accounts for large vehicles such as buses representing a greater impact per vehicle than a passenger car. Each bus is assumed to be the equivalent of 3 passenger cars.

2. Adequacy of Susan Street Mid-Block Width

Although Susan Street traffic volumes will be well within the acceptable threshold for a Monterey County Standard Tertiary Street, concern has been expressed that bus traffic generated by the project will not be able to be accommodated by the relatively narrow width of Susan Street. **Attachment 4** illustrates the existing cross section of Susan Street compared with the cross section of a Monterey County Tertiary Street. The standard width of a Tertiary Street is 34 feet from face of curb to face of curb per “Monterey County Standard Details,” (County Standard Details) 1977, Plate 2. This same width is shown on Standard Detail Plate 3 for a Modified Tertiary Street. The modified Tertiary Street width is measured from the face of the vertical curb to the back of a “V” gutter. A rolled curb is a hybrid between a vertical curb, which physically prevents a vehicle from parking past the face of the curb, and a “V” gutter, which allows a vehicle to park with its outside wheels at the back of curb. Vehicles can easily park with the outside wheel at the back of the rolled curb, which is often done along Susan Street. This type of curb can add 6 inches to the street width for a total effective width of 35 feet if provided on both sides of the street. However, to be conservative, the street width only includes the distance from the face of curb to 6 inches inside the rolled curb, which indicates an effective width of 34 feet.

The parking lanes are conservatively assumed to be 8 feet wide on **Attachment 4**, measured from the face of the vertical curb on the west side of the street and 6 inches in from the back of the rolled curb on the east side of the street. This accommodates the maximum passenger car width of 7.0 feet, with the vehicle parked one foot from the face of curb. The effective travel width between parked cars on the opposing sides of the street is a minimum of 18 feet, which accommodates two opposing travel lanes each 9 feet wide. This accommodates the maximum passenger car width of 7.0 feet, with the vehicle parked one foot from the face of curb. Typical passenger cars range from less than 6 feet to about 6.5 feet in width. Pickup trucks are less than 7 feet wide. Random measurements of the clear distance across Susan Street between parked cars on opposing sides of Susan Street indicate that 19 feet is generally provided. Field measurements of the spacing between cars parked on both sides of Susan Street indicate the clearance generally varies between 19 to 20 feet. This is because cars often park with their right wheels on the top of the curb.

A width of 19 feet is adequate to allow passenger cars to pass oncoming vehicles unimpeded. School buses, which will be used for H2A worker transport, have an exterior width of 8 feet. The width from the outside of the side mirrors, which extend about 9 inches on each side, is about 9.5 feet. This allows buses traveling in opposing directions to pass each other when a width of 19 feet between parked cars is provided. Otherwise, the buses must wait where a driveway or segments where no vehicles are parked to pull over to pull over a few feet to allow the oncoming bus to pass. The following discussion describes that the low volume can be easily accommodated by the occasional gaps on in-street parallel parked vehicles

Susan Street has no centerline striping. Thus, if necessary, wider vehicles such as buses can encroach into the oncoming travel lane if there is no oncoming traffic. Wide vehicles can also utilize to allow oncoming traffic to proceed.

As indicated on **Attachment 5**, Susan Street is a dead end street that currently carries about 400 vehicles per day immediately north of San Juan Road, with a gradual reduction to zero at its northerly terminus. This will increase to about 575 daily trips, which will decline to about 175 trips per day at the Project driveway, which is the current northerly terminus of Susan Street. The northern half of Susan Street will carry traffic volumes equal to or less than the current volumes immediately north of San Juan Road.

Attachment 6 indicates that Susan Street is expected to carry about 23 AM peak hour trips (7 northbound and 16 southbound) and 38 PM peak hour trips (25 northbound and 13 southbound) immediately north of San Juan Road. This declines immediately north of the Royal Oaks Collision and Paint auto body shop to about 19 AM peak hour trips (5 northbound and 14 southbound) and 28 PM peak hour trips (18 northbound and 10 southbound). **Attachment 6** also indicates the average time between vehicles during the corresponding hours. For example, a northbound vehicle on Susan Street currently encounters a southbound vehicle about every 3.75 minutes (3 minutes and 45 seconds) during the AM peak hour.

Another way to describe this is that a vehicle currently proceeds northbound every 8.57 minutes (8 minutes and 35 seconds). Northbound and southbound vehicles will encounter an oncoming vehicle very infrequently. Susan Street is only 660 feet long and can be traversed in about 30 seconds at 15 miles per hour, which is about the travel speed along Susan Street based on random trips during the past several months. An oncoming vehicle currently is generally only encountered about every six trips along the entire length of Susan Street.

The Project will add less than one vehicle including buses in each direction every 10 minutes between 3 and 4 AM when workers are transported to work sites. The Project will only add 1 vehicle per hour and generally no buses during the entire 3.5 hour morning street peak period between 6:30 and 10 AM. The Project will have virtually no impact during this entire morning peak period.

The Project will add about one total vehicle and one bus every 15 minutes in each direction during the Project mid-afternoon peak hour between 2 and 3 PM when workers return to the Project from their respective work sites. The Project will only add one bus every 30 minutes during the evening street peak hour between 4 and 5 PM. This is a vehicle every 4 minutes and a bus every 15 minutes, or one vehicle every 8 minutes and one bus every 30 minutes in each direction. The frequency of encountering any oncoming vehicle will increase only slightly from existing conditions.

Buses are 8 feet wide with an additional 18 inches of mirrors for a total outside dimension including mirrors of about 9 feet, 6 inches. If two buses encounter each other while traveling along Susan Street, one may need to pull over at a gap in parked cars along Susan Street. Based on aerial Google images and random visits to the site, about 4 gaps between parked cars exist along Susan Street at any given time that are adequate for a 30-foot long bus in one direction or the other to shift to the right to let the oncoming bus pass. This is about one gap every 200 feet on average. This distance can be covered in about 9 seconds by a bus traveling at 15 miles per hour.

The street that will occasionally require oncoming buses to wait allow opposing traffic to pass will have a traffic calming effect similar to a “Yield Street,” which has a narrow street width and is commonly used in current subdivision design. In summary, Susan Street will be able to accommodate the low volumes and low speeds of Existing plus Project traffic.

3. Adequacy of San Juan Road / Susan Street Intersection

Attachments 7a through **7d** illustrate the wheel paths for buses turning left and right, into and out of Susan Street at San Juan Road.

Attachments 7a and **7b** indicate that left turning buses will easily be able to negotiate exiting and entering Susan Street to and from San Juan Road with no interference from other vehicles stopped on the Susan Street approach.

According to **Attachment 7c**, right turns exiting Susan Street to proceed westbound on San Juan Road will also be able to complete the turn without encroaching into oncoming traffic.

Attachment 7d indicates that westbound right turns entering Susan Street will encroach about 6 feet into the southbound Susan Street approach lane. This will require the right turning vehicle to pull over close to the curb in front of the Body Shop, which has about 15 feet of red curb between the 25-foot curb return and Body Shop driveway. The curb return also has a red curb. An 8-foot shoulder is provided for a right turning bus to substantially encroach into the westbound San Juan Road two-way left turn lane that carries almost no westbound left turns. An average of about 3 buses per hour will turn right during the highest entering flow of buses during the Project peak hour, which is about one bus every 20 minutes. This is during the early morning hours between about 3 and 4 AM. About one or two buses per hour will turn right onto Susan Street from San Juan Road during the Project's afternoon peak hour. Buses will turn right at random times during the early morning and afternoon, but rarely more than two per hour.

The low right turn volume will easily be accommodated by the available shoulder space during the infrequent occasions when oncoming vehicles are encountered. According to the level of tabulated on Exhibit 5A of the Project Traffic Study, southbound Susan Street vehicles waiting to turn left or right onto San Juan Road will have an average delay of 34.1 seconds with a calculated maximum queue length of 0.5 vehicles during the AM peak hour. Southbound Susan Street vehicles will have an average delay of 18.6 seconds with a calculated maximum queue length of 0.3 vehicles during the PM peak hour. In other words, there will rarely be more than one vehicle stopped on the southbound approach during the morning and evening street peak hours. With an average flow rate of almost four minutes per southbound vehicle in the AM peak hour and about two and a half minutes between southbound vehicles in the PM peak hour, the vast majority of the time no vehicle will be on the southbound approach that would impede a westbound right turning vehicle.

To summarize, there will be minimal instances where a westbound right turning bus will encounter a southbound Susan Street vehicle stopped at San Juan Road that will impede its ability to complete the turn. The occasional times it will happen will simply require the bus to pull over to the curb in front of the body shop and wait 10 to 20 seconds for the vehicle to clear the southbound approach. Also, the existing two way left turn lane on the east side of San Juan Road has almost no westbound left turn traffic and can be used to swing a few feet wide as the bus approaches Susan Street from the east.

4. Parking Generation

Table 3 below summarizes a random sample of parking occupancy on Wednesday, June 22, 2022, at the 525 3rd Street Apartments H2A project (Greenfield Project). The maximum parking occupancy was 94 vehicles which included 7 vans and single unit work trucks. It is expected that Project parking generation will be similar to the Greenfield Project. The Project is proposed to include a total of 127 parking spaces, which exceeds the Monterey County parking ordinance requirement of 123 spaces for 60 2-bedroom apartments plus a 1-bedroom manager's apartment. The maximum occupancy is expected to be about 74% if operated as an agricultural workers housing facility, which is well within its proposed parking capacity.

Time of Day	Total Parked Cars	Parking Occupancy Rate	Vans and Work Trucks	Comments
7:00 AM	74	58%	0	
12:00 PM (Noon)	73	57%	0	Manager's car was missing
3:45 PM	81	64%	7	Total parking includes vans and work trucks
10:00 PM	94	74%	7	Total parking includes vans and work trucks
Susan Street Parking Supply	**127**			

Table 3 – 525 3rd Street Apartments Parking Occupancy

5. Project Construction Traffic Operations

All Project construction traffic will arrive at and depart from the Project site via Susan Street. Project construction traffic will consist primarily of construction workers commuting to and from the Project site and deliveries of construction materials. The Project will require the import of fill material to elevate the buildings as required by the flood control and water management agencies which will result in a short term hauling operation using dump trucks. Two options are currently being considered as offsite sources of fill material. The first is the Granite Road A.R. Wilson Quarry in Aromas (Granite Rock Quarry), located about 15 miles to the southeast of the Project. This haul route is illustrated on **Attachment 8**. The second is a site in the vicinity of the City of Santa Cruz. This haul route is illustrated on **Attachment 9**. In addition, there will be hauling of construction debris to the Buena Vista Landfill located to the west of the City of Santa Cruz. This haul route is essentially the same in the general vicinity of the City of Watsonville as the haul route for the import material from Santa Cruz illustrated on **Attachment 9.** Project construction effects are discussed for Susan Street, the San Juan Road / Susan Street intersection, and the alternative fill material haul routes. These are based on estimated construction total and truck trip generation and durations.

a. Project Construction Trip Generation

The Project will include site work involving the import of about 9,500 cubic yards of fill material during the site grading and earthwork operation. This will involve dump trucks carrying an average of about 12 cubic yards per load for a total of about 792 loads. About 80 loads will be delivered per 8-hour day, or about 10 loads per hour. The entire hauling operation will take about 10 to 15 working days, or two to three weeks, to complete.

In addition, an average of two deliveries of construction materials per day of miscellaneous structural concrete, steel, lumber, roofing, plumbing, electrical and asphalt and Portland cement concrete, and landscaping materials after completion of the site grading and earthwork operation and during construction of parking areas, underground utilities, structures, and landscaping.

b. Susan Street Traffic Operations During Project Construction

The resulting traffic volumes on Susan Street immediately north of San Juan Road, the highest volume location along Susan Street, will be as shown on **Table 4** on the following page. This indicates that daily construction traffic volumes will be at or below the volumes expected with the Project fully occupied. These will be about 25% or more below the threshold of 1,000 vehicles per day for a Monterey County Standard Tertiary Street. This accounts for dump trucks and major delivery trucks each as the equivalent of 3 passenger cars. For example, the highest anticipated traffic volume on Susan Street immediately north of San Juan Road will be about 575 vehicles per day, or 733 passenger car equivalents per day during the import of fill material during the grading operation. Susan Street will have acceptable traffic operations during the entire Project construction process.

	Tertiary Street Threshold	Existing	Existing Plus Project	Existing Plus Grading Operation	Existing Plus Foundations and Site Preparation	Existing Plus General Project Construction
Description		Vacant – No regular traffic	H2A Peak Season Traffic	9,500 Cubic Yards of Import – 792 Dump Truck Loads	Building Foundations and Underground Utilities – 2 Daily Truck Deliveries	Rough In, Utilities, Finish and Closeout – 30 to 60 Workers and 2 Daily Truck Deliveries
Construction Workers		0	0	5	15	60 Max
Daily Heavy Truck Trips		0	65 Bus Trips	106	4	4
Project Site Trips		0	175	175	49	184
Project Site PCE's		0	305	333	57	192
Approximate Duration		Current Ongoing	Ongoing at Maximum Occupancy	15 Days Max	2 Months	8 Months
Daily Traffic – Vehicles	1,000	400	575	575	449	584
Daily Traffic – Passenger Car Equivalents	1,000	400	705	733	457	592

Notes:

1. Each construction worker generates 3 trips per day to account for commute trips plus miscellaneous trips for random supplies, personal business, and visitors.
2. Dump trucks and delivery trucks represent 3 Passenger Car Equivalents (PCE's), in other words are the equivalent of the traffic effects of 3 passenger cars.
3. Each truck load represents 2 truck trips, one inbound and one outbound.
4. All conditions during construction and at full Project occupancy after construction will result in Susan Street daily traffic volumes below the allowable threshold for a Monterey County Tertiary Street.

Table 4 - Susan Street Construction Traffic Volumes Compared with Existing and Post-Construction Conditions

i. Project Grading Operation

As discussed in Section 2 earlier in this letter, Susan Street has a total width of 34 feet curb to curb, which accommodates a clear travel way of 18 to 20 feet between parked cars. The maximum truck volume will occur during the 15-day grading operation during which a total of about 10 truckloads per hour will occur. This will be about one truck every 6 minutes throughout the day entering and leaving the Project site. At an average speed of about 15 miles per hour, trucks will take about 30 seconds to travel the length of Susan Street, so generally will not encounter an opposing truck. Trucks will need to yield where gaps in parallel parked cars exist, which will normally include driveways at a minimum. Observations of on-street parking indicate that several additional gaps in parking are almost always available during the work week between about 9 AM and 5 PM. The hauling operation will generally result in minimal disruption of traffic operations along Susan Street. It must be emphasized that this is a short term condition that will only occur over a period of only 10 to 15 weekdays (Monday through Friday).

ii. Project Foundation, Site Preparation and General Construction

The construction of the buildings including foundations and site work will take a total of about 10 months to complete after the grading operation. The numbers of workers will range from about 15 during foundation and underground utilities construction for about two months to about 60 workers during the seven-month framing and general utility installation construction phase. Construction activity will gradually decline for the final month prior to completion. The number of major deliveries of construction materials will vary from day to day, but average about two per day. The resulting total and truck traffic volumes will be well within acceptable levels for a Tertiary Street.

c. San Juan Road / Susan Street Intersection Operations

Based on the discussion in Section 3 of this letter, the San Juan Road / Susan Street intersection was analyzed for its adequacy to accommodate buses between the Project site and San Juan Road. Dump trucks will have the same turning radii and wheel tracks as buses. This intersection will adequately accommodate left turns for dump trucks between San Juan Road and Susan Street as well as southbound Susan Street right turns to proceed westbound on San Juan Road.

Trucks making westbound San Juan Road right turns onto Susan Street will encroach into the southbound Susan Street approach lane, unless they first encroach into the two way left turn lane on the east leg of San Juan Road. This turn will be required for dump trucks arriving from the Granite Rock Quarry and for most deliveries arriving from outside of Watsonville and the greater Monterey Bay Area. Dump trucks arriving from the Santa Cruz import source will arrive from the west and make an eastbound left turn from San Juan Road onto Susan Street, which will not encroach into the southbound Susan Street approach lane. Trucks making this turn will require yielding to any vehicles queued on the southbound approach until they clear the intersection. This can be accommodated by the existing shoulder along the Body Shop frontage. Dump trucks will arrive about every six minutes and generally not encounter a southbound vehicle on Susan Street due to the low volume of existing traffic on this approach. This condition will be during the construction of the Project and will primarily be existing traffic plus dump trucks leaving the Project site. Existing peak hour approach volumes include 16 southbound right turns in the AM peak hour and 13 southbound right turns in the PM peak hour. The count data included in Appendix D of the Project Traffic Study indicate that a total of 21 southbound right turns and one southbound left turns occurred during the two hour AM peak period (7 to 9 AM) on Thursday, August 26, 2021. This is about one car every 3 minutes during the hours with the highest morning traffic volumes.

A total of 24 southbound right turns and two southbound left turns occurred during the two hour PM peak period (4 to 9 PM) on Thursday, August 26, 2021. This is about one car every 2.3 minutes during the hours with the highest evening traffic volumes. According to the level of service calculations included in Appendix E of the Project Traffic Study, these vehicles experienced only a few seconds of delay on average and that generally no vehicles were queued on the southbound Susan Street approach. Project construction traffic, including dump trucks arriving once every approximately 6 minutes, will be able to enter and exit Susan Street with minimal effect on traffic operations at the San Juan Road / Susan Street intersection.

d. Regional Road and Highway Operations

Attachments 8 and **9** depict the haul routes between alternative sources of fill material and the Project, which include the Granite Rock Quarry (**Attachment 8**) and a site in the Santa Cruz vicinity (**Attachment 9**). **Attachment 9** also shows the haul route to the Buena Vista Landfill for the disposal of Project construction debris.

The haul route depicted on **Attachment 8** indicates that the travel route will primarily include San Juan Road between Aromas and the Project in Pajaro. San Juan Road carries about 14,500 vehicles per day between Porter Drive and Allison Road and about 10,500 vehicles per day east of Allison Road. These road segments all operate at Level of Service (LOS) C or better, which meets the standard of the County of Monterey. The haul operation would include about 80 truckloads per day, each of which is a round trip. This is a total of about 160 daily trips. It will result in about a 1% to 1.6% increase in traffic, which will not result in a change of level of service. Aromas Road and Quarry Road are primary access routes for the Granite Rock Quarry and the accompanying quarry traffic of which this will be a routine part.

The haul route between the Project and the Buena Vista Landfill for construction debris disposal as well as the Santa Cruz vicinity for import of fill material will pass through the Porter Street / San Juan Road in Pajaro. As described in Chapter 2, “Existing Traffic Conditions,” section of the Project Traffic Study, this intersection currently operates at LOS C in the AM peak hour and D in the PM peak hour, which are both acceptable.

The haul route will also pass through the Main Street / Riverside Drive (State Route 129) intersection in Watsonville. This intersection operates at LOS D in the AM peak hour and LOS E in the PM peak hour, which is unacceptable.

The hauling operation will add about 20 trucks per hour to both the Porter Street / San Juan Road and Main Street / Riverside Drive (State Route 129) intersections. This would result in noticeable increases, especially the PM peak hour at the Main Street / Riverside Drive (State Route 129) intersection. It is recommended that the hauling operation end by 4 PM each day to avoid adding traffic to an intersection that is already operating deficiently.

e. General Construction Traffic Management Recommendations

First, it is recognized that all construction traffic will be temporary. The hauling of fill material for the site grading operation will take less than 3 weeks. The entire construction will be less than one year. The following are Project construction traffic management actions and recommendations.

1. The Project Construction Management Plan included on Susan Street Agricultural Employee Housing Architectural Plan Check Submittal, Sheet C4.3, The Paul Davis Partnership, 12/3/21, includes the following items to assist in managing Project off-site construction traffic.
   “The Contractor shall provide a construction coordinator(s) that can be contacted during construction. Should questions arise during construction (in

case of both regular inquiries and in emergencies) their contact information (including their address and 24 hour phone numbers) shall be conspicuously posted at the job site in a manner that the contact information is readily visible from public viewing areas. The posting shall indicate that the construction coordinator(s) shall be contacted to answer any questions that arise during construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number and nature of all complaints (if any) received during construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry."

2. Earthwork import hauling operations should be limited to 7 AM to 6 PM if the fill material is supplied by the Granite Rock Quarry.
3. Earthwork import hauling operation should be limited to 7 AM to 4 PM if the fill material is supplied from the Santa Cruz area or any other location requiring haul trucks to pass through the Main Street / Riverside Drive (State Route 129) intersection.

6. Conclusions and Recommendations

In conclusion, based on the low volume of buses and other vehicles anticipated at the Project, it will have minimal effect on traffic operations on Susan Street. No physical traffic improvements will be warranted.

The following are recommended to manage Project construction traffic and traffic during the growing season.

1. The Project will have a Construction Coordinator provided by the Contractor as described in Item 1 of Section 5 above. This will include contact information readily available to the public for regular inquiries and emergencies.
2. A permanent on-site Community Liaison should be provided by the Project similar to the Construction Coordinator. This would include contact information readily available to the public for regular inquiries and emergencies.
3. Earthwork import hauling operations should be limited to 7 AM to 6 PM if the fill material is supplied by the Granite Rock Quarry.
4. Earthwork import hauling operation should be limited to 7 AM to 4 PM if the fill material is supplied from the Santa Cruz area or any other location requiring haul trucks to pass through the Main Street / Riverside Drive (State Route 129) intersection.

If you have any questions or need additional information, please do not hesitate to contact me at your convenience.

Respectfully submitted,

Keith Higgins

Keith B. Higgins, PE, TE
Attachments


Attachment 1
525 Greenfield H2A
Apartments Site Plan
3rd St
Driveway 2
3rd St
Driveway 1
Note: Image date is 2/23/21
Walnut Ave
Walnut Ave
Walnut Ave
Google Earth
N
300 ft

Attachment 2
525 3rd Street Apartments H2A Driveway Count Data

Location: 525 3rd St., Greenfield, CA 93927 Date: 6/22/2022 Day of Week: Wednesday

DW 01 — Wednesday, June 22nd

Time	Passenger Vehicles Volume WB (In)	Passenger Vehicles Volume EB (Out)	Pick-Up Trucks Volume WB (In)	Pick-Up Trucks Volume EB (Out)	Vans Volume WB (In)	Vans Volume EB (Out)	Buses Volume WB (In)	Buses Volume EB (Out)	Other Volume WB (In)	Other Volume EB (Out)	Total
0:00	0	0	0	0	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	0	0	0	
0:30	0	0	0	0	0	0	0	0	0	0	
0:45	0	0	0	0	0	0	0	0	0	0	
1:00	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	
1:30	0	0	0	0	0	0	0	0	0	0	
1:45	0	0	0	0	0	0	0	0	0	0	
2:00	0	0	0	0	0	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0	0	0	0	
2:30	0	1	0	0	0	0	0	0	0	0	
2:45	0	1	0	0	0	0	0	0	0	0	
3:00	0	1	0	0	0	0	0	2	0	0	8
3:15	0	0	0	0	0	0	0	0	0	0	
3:30	0	1	0	0	0	0	0	1	0	0	
3:45	0	0	0	0	0	0	0	3	0	0	
4:00	0	0	0	0	0	0	0	1	0	0	3
4:15	0	0	0	0	0	0	0	1	0	0	
4:30	0	0	0	0	0	0	0	1	0	0	
4:45	0	0	0	0	0	0	0	0	0	0	
5:00	0	0	0	0	0	0	0	0	0	0	11
5:15	0	0	0	1	0	0	0	1	0	0	
5:30	0	1	0	1	0	2	0	3	0	0	
5:45	0	2	0	0	0	0	0	0	0	0	
6:00	0	0	0	1	0	0	0	1	0	0	4
6:15	0	0	0	0	0	0	1	0	0	0	
6:30	0	0	0	1	0	0	0	0	0	0	
6:45	0	0	0	0	0	0	0	0	0	0	
7:00	0	1	0	0	0	0	0	0	0	0	1
7:15	0	0	0	0	0	0	0	0	0	0	
7:30	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	
8:00	0	1	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	
8:30	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	
9:00	0	0	0	0	0	0	0	0	0	0	1
9:15	0	0	0	0	0	0	0	0	0	0	
9:30	0	0	0	1	0	0	0	0	0	0	
9:45	0	0	0	0	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	0	1	0	0	6
10:15	0	1	0	0	0	1	0	1	0	0	
10:30	0	1	0	1	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	
12:00	0	0	0	0	0	0	0	1	0	0	3
12:15	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	0	0	0	0	0	1	0	0	
12:45	0	1	0	0	0	0	0	0	0	0	
13:00	0	0	0	0	0	0	0	0	0	0	5
13:15	0	1	0	0	0	0	0	1	0	0	
13:30	0	0	0	0	0	0	0	0	0	0	
13:45	0	0	0	1	0	0	0	2	0	0	
14:00	0	1	0	0	0	0	1	2	0	0	12
14:15	0	0	0	0	0	0	0	1	0	0	
14:30	0	3	0	0	0	0	0	1	0	0	
14:45	0	2	0	1	0	0	0	0	0	0	
15:00	0	1	0	0	0	0	0	1	0	0	7
15:15	0	1	0	0	0	0	0	0	0	0	
15:30	0	1	0	0	0	1	0	0	0	0	
15:45	0	2	0	0	0	0	0	0	0	0	
16:00	1	2	0	1	0	0	0	0	0	0	11
16:15	0	2	0	0	0	0	0	1	0	0	
16:30	0	1	0	0	0	0	0	1	0	0	
16:45	0	2	0	0	0	0	0	0	0	0	
17:00	0	1	0	0	0	0	0	0	0	0	7
17:15	0	0	0	2	0	0	0	1	0	0	
17:30	0	1	0	0	0	1	0	0	0	0	
17:45	0	0	0	0	0	0	0	1	0	0	
18:00	0	1	0	0	0	0	0	0	0	0	3
18:15	0	0	0	0	0	0	0	0	0	0	
18:30	0	1	0	1	0	0	0	0	0	0	
18:45	0	0	0	0	0	0	0	0	0	0	
19:00	0	0	0	0	0	0	0	0	0	0	3
19:15	0	3	0	0	0	0	0	0	0	0	
19:30	0	0	0	0	0	0	0	0	0	0	
19:45	0	0	0	0	0	0	0	0	0	0	
20:00	0	2	0	0	0	0	0	0	0	0	4
20:15	0	1	0	0	0	0	0	0	0	0	
20:30	0	1	0	0	0	0	0	0	0	0	
20:45	0	0	0	0	0	0	0	0	0	0	
21:00	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	
21:30	0	0	0	0	0	0	0	0	0	0	
21:45	0	0	0	0	0	0	0	0	0	0	
22:00	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	
22:30	0	0	0	0	0	0	0	0	0	0	
22:45	0	0	0	0	0	0	0	0	0	0	
23:00	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	
23:30	0	0	0	0	0	0	0	0	0	0	
23:45	0	0	0	0	0	0	0	0	0	0	
TOTAL	1	42	0	12	0	5	2	30	0	0	92

DW 02 — Thursday, June 23rd

Time	Passenger Vehicles Volume WB (In)	Passenger Vehicles Volume EB (Out)	Pick-Up Trucks Volume WB (In)	Pick-Up Trucks Volume EB (Out)	Vans Volume WB (In)	Vans Volume EB (Out)	Buses Volume WB (In)	Buses Volume EB (Out)	Other Volume WB (In)	Other Volume EB (Out)	Total
0:00	0	0	0	0	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	0	0	0	
0:30	0	0	0	0	0	0	0	0	0	0	
0:45	0	0	0	0	0	0	0	0	0	0	
1:00	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	
1:30	0	0	0	0	0	0	0	0	0	0	
1:45	0	0	0	0	0	0	0	0	0	0	
2:00	0	0	0	0	0	0	0	0	0	0	1
2:15	0	0	0	0	0	0	0	0	0	0	
2:30	0	0	0	0	0	0	0	0	0	0	
2:45	0	0	0	0	0	0	1	0	0	0	
3:00	0	0	0	0	0	0	1	0	0	0	7
3:15	0	0	0	0	0	0	1	0	0	1	
3:30	0	0	0	0	0	0	1	0	0	0	
3:45	0	0	0	0	0	0	3	0	0	0	
4:00	0	0	0	0	0	0	0	0	0	0	3
4:15	0	0	0	0	0	0	0	0	0	0	
4:30	0	0	0	0	0	0	2	0	0	0	
4:45	0	0	0	0	0	0	1	0	0	0	
5:00	0	0	0	0	0	0	0	1	0	0	7
5:15	0	0	1	1	0	0	2	1	0	0	
5:30	0	0	0	0	0	0	1	0	0	0	
5:45	0	0	0	0	0	0	0	0	0	0	
6:00	0	0	0	0	0	0	1	0	0	0	3
6:15	0	0	2	0	0	0	0	0	0	0	
6:30	0	0	0	0	0	0	0	0	0	0	
6:45	0	0	0	0	0	0	0	0	0	0	
7:00	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	
7:30	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	
8:00	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	
8:30	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	
9:00	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	
9:30	0	0	0	0	0	0	0	0	0	0	
9:45	0	0	0	0	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	1	0	0	0	2
10:15	0	0	0	0	0	0	1	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	1	1	0	0	4
11:15	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	1	1	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	
12:00	3	3	1	0	0	0	1	0	0	0	11
12:15	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	0	0	0	0	1	0	0	0	
12:45	0	1	1	0	0	0	0	0	0	0	
13:00	1	0	0	0	0	0	0	0	0	0	10
13:15	2	0	0	0	0	0	1	0	0	0	
13:30	1	0	0	0	0	0	0	0	0	0	
13:45	0	0	2	0	0	0	3	0	0	0	
14:00	2	1	1	0	1	0	1	0	0	0	16
14:15	0	0	0	0	0	0	0	0	0	0	
14:30	3	1	1	0	0	0	1	0	0	0	
14:45	2	0	1	0	1	0	0	0	0	0	
15:00	6	1	0	0	0	0	1	0	0	0	14
15:15	1	0	0	0	0	0	0	0	0	0	
15:30	1	0	2	1	0	0	0	0	0	0	
15:45	1	0	0	0	0	0	0	0	0	0	
16:00	0	0	0	0	0	0	0	0	0	0	3
16:15	0	0	0	0	0	0	1	0	0	0	
16:30	0	0	0	0	0	0	1	0	0	0	
16:45	0	0	1	0	0	0	0	0	0	0	
17:00	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	
17:30	0	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	0	0	0	0	0	0	
18:00	0	0	1	0	0	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0	0	0	
18:30	0	0	0	0	0	0	0	0	0	0	
18:45	0	0	0	0	0	0	0	0	0	0	
19:00	0	0	0	0	0	0	0	0	1	0	1
19:15	0	0	0	0	0	0	0	0	0	0	
19:30	0	0	0	0	0	0	0	0	0	0	
19:45	0	0	0	0	0	0	0	0	0	0	
20:00	0	0	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	0	0	0	
20:30	0	0	0	0	0	0	0	0	0	0	
20:45	0	0	0	0	0	0	0	0	0	0	
21:00	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	
21:30	0	0	0	0	0	0	0	0	0	0	
21:45	0	0	0	0	0	0	0	0	0	0	
22:00	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	
22:30	0	0	0	0	0	0	0	0	0	0	
22:45	0	0	0	0	0	0	0	0	0	0	
23:00	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	
23:30	0	0	0	0	0	0	0	0	0	0	
23:45	0	0	0	0	0	0	0	0	0	0	
TOTAL	23	7	14	2	2	0	29	4	1	1	83

Total — Thursday, June 23rd

Time	Passenger Vehicles Volume WB (In)	Passenger Vehicles Volume EB (Out)	Pick-Up Trucks Volume WB (In)	Pick-Up Trucks Volume EB (Out)	Vans Volume WB (In)	Vans Volume EB (Out)	Buses Volume WB (In)	Buses Volume EB (Out)	Other Volume WB (In)	Other Volume EB (Out)	Total
0:00	0	0	0	0	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	0	0	0	
0:30	0	0	0	0	0	0	0	0	0	0	
0:45	0	0	0	0	0	0	0	0	0	0	
1:00	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	
1:30	0	0	0	0	0	0	0	0	0	0	
1:45	0	0	0	0	0	0	0	0	0	0	
2:00	0	0	0	0	0	0	0	0	0	0	3
2:15	0	0	0	0	0	0	0	0	0	0	
2:30	0	1	0	0	0	0	0	0	0	0	
2:45	0	1	0	0	0	0	1	0	0	0	
3:00	0	1	0	0	0	0	1	2	0	0	15
3:15	0	0	0	0	0	0	1	0	0	1	
3:30	0	1	0	0	0	0	1	1	0	0	
3:45	0	0	0	0	0	0	3	3	0	0	
4:00	0	0	0	0	0	0	0	1	0	0	6
4:15	0	0	0	0	0	0	0	1	0	0	
4:30	0	0	0	0	0	0	2	1	0	0	
4:45	0	0	0	0	0	0	1	0	0	0	
5:00	0	0	0	0	0	0	0	1	0	0	18
5:15	0	0	1	2	0	0	2	2	0	0	
5:30	0	1	0	1	0	2	1	3	0	0	
5:45	0	2	0	0	0	0	0	0	0	0	
6:00	0	0	0	1	0	0	1	1	0	0	7
6:15	0	0	2	0	0	0	1	0	0	0	
6:30	0	0	0	1	0	0	0	0	0	0	
6:45	0	0	0	0	0	0	0	0	0	0	
7:00	0	1	0	0	0	0	0	0	0	0	1
7:15	0	0	0	0	0	0	0	0	0	0	
7:30	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	
8:00	0	1	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	
8:30	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	
9:00	0	0	0	0	0	0	0	0	0	0	1
9:15	0	0	0	0	0	0	0	0	0	0	
9:30	0	0	0	1	0	0	0	0	0	0	
9:45	0	0	0	0	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	1	1	0	0	8
10:15	0	1	0	0	0	1	1	1	0	0	
10:30	0	1	0	1	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	1	1	0	0	4
11:15	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	1	1	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	
12:00	3	3	1	0	0	0	1	1	0	0	14
12:15	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	0	0	0	0	1	1	0	0	
12:45	0	2	1	0	0	0	0	0	0	0	
13:00	1	0	0	0	0	0	0	0	0	0	15
13:15	2	1	0	0	0	0	1	1	0	0	
13:30	1	0	0	0	0	0	0	0	0	0	
13:45	0	0	2	1	0	0	3	2	0	0	
14:00	2	2	1	0	1	0	2	2	0	0	28
14:15	0	0	0	0	0	0	0	1	0	0	
14:30	3	4	1	0	0	0	1	1	0	0	
14:45	2	2	1	1	1	0	0	0	0	0	
15:00	6	2	0	0	0	0	1	1	0	0	21
15:15	1	1	0	0	0	0	0	0	0	0	
15:30	1	1	2	1	0	1	0	0	0	0	
15:45	1	2	0	0	0	0	0	0	0	0	
16:00	1	2	0	1	0	0	0	0	0	0	14
16:15	0	2	0	0	0	0	1	1	0	0	
16:30	0	1	0	0	0	0	1	1	0	0	
16:45	0	2	1	0	0	0	0	0	0	0	
17:00	0	1	0	0	0	0	0	0	0	0	7
17:15	0	0	0	2	0	0	0	1	0	0	
17:30	0	1	0	0	0	1	0	0	0	0	
17:45	0	0	0	0	0	0	0	1	0	0	
18:00	0	1	1	0	0	0	0	0	0	0	4
18:15	0	0	0	0	0	0	0	0	0	0	
18:30	0	1	0	1	0	0	0	0	0	0	
18:45	0	0	0	0	0	0	0	0	0	0	
19:00	0	0	0	0	0	0	0	0	1	0	4
19:15	0	3	0	0	0	0	0	0	0	0	
19:30	0	0	0	0	0	0	0	0	0	0	
19:45	0	0	0	0	0	0	0	0	0	0	
20:00	0	2	0	0	0	0	0	0	0	0	4
20:15	0	1	0	0	0	0	0	0	0	0	
20:30	0	1	0	0	0	0	0	0	0	0	
20:45	0	0	0	0	0	0	0	0	0	0	
21:00	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	
21:30	0	0	0	0	0	0	0	0	0	0	
21:45	0	0	0	0	0	0	0	0	0	0	
22:00	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	
22:30	0	0	0	0	0	0	0	0	0	0	
22:45	0	0	0	0	0	0	0	0	0	0	
23:00	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	
23:30	0	0	0	0	0	0	0	0	0	0	
23:45	0	0	0	0	0	0	0	0	0	0	
TOTAL	24	49	14	14	2	5	31	34	1	1	175

Total Volumes

Project Peak Hour	Street Peak Hour	Time of Day
18		5 - 6AM
	1	7-8AM
	1	8-9AM
28		2-3PM
	14	4-5PM
	7	5-6PM

Bus Volumes

Project Peak Hour	Street Peak Hour	Time of Day
12		3-4AM
	0	7-9AM
	0	7-9AM
7		2-3PM
4		4-5PM
2		5-6PM

Attachment 3
Project Trip Generation Comparison -
Original Project Study Estimates with 525 3rd Street H2A Counts

ORIGINAL PROJECT TRAFFIC STUDY ESTIMATES

A. Project Trip Rates

			AM PEAK HOUR				PM PEAK HOUR			
REFERENCE USE	**EXISTING SIZE**	**DAILY TRIPS**	**PEAK HOUR TRIPS**	**% OF ADT**	**% IN**	**% OUT**	**PEAK HOUR TRIPS**	**% OF ADT**	**% IN**	**% OUT**
Casa Boronda Ag. Employee Housing Driveway Count[1]	600 beds	N.A.	4		3	1	43		22	21
Trip Rates (per employee):[2]		**0.288**	**0.007**		**75%**	**25%**	**0.072**		**51%**	**49%**

B. Project Trip Generation

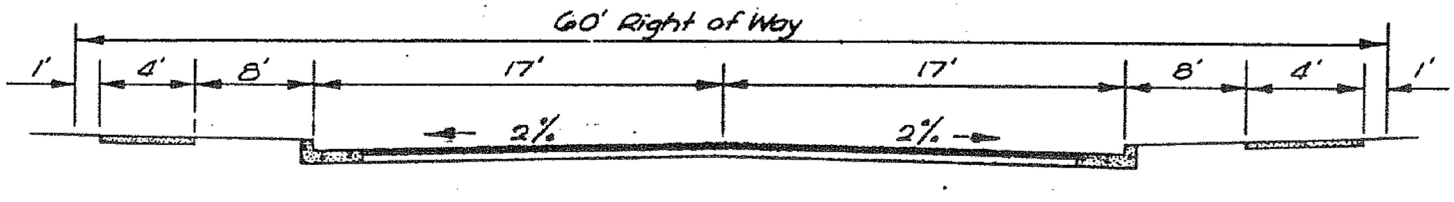
			AM PEAK HOUR				PM PEAK HOUR			
PROPOSED USE	**PROJECT SIZE**	**DAILY TRIPS**	**PEAK HOUR TRIPS**	**% OF ADT**	**TRIPS IN**	**TRIPS OUT**	**PEAK HOUR TRIPS**	**% OF ADT**	**TRIPS IN**	**TRIPS OUT**
Agricultural Employee Housing	480 beds	138	3	2%	2	1	35	25%	18	17
Apartment - Manager's Unit	1 unit	7	1	14%	0	1	1	14%	1	0
Raw (Peak Hour) Total (used in analysis):		**145**	**4**	**3%**	**2**	**2**	**36**	**25%**	**19**	**17**
Annual Average Total:		**103**	**3**		**1**	**2**	**26**		**13**	**13**

ACTUAL COUNT - 525 3RD STREET H2A HOUSING PROJECT, GREENFIELD, CA

Total Vehicles	**480 beds**	**175**	**1**	**1%**	**0**	**1**	**14**	**8%**	**4**	**10**
Annual Average Total Vehicles:		**124**	**1**		**0**	**1**	**10**		**3**	**7**

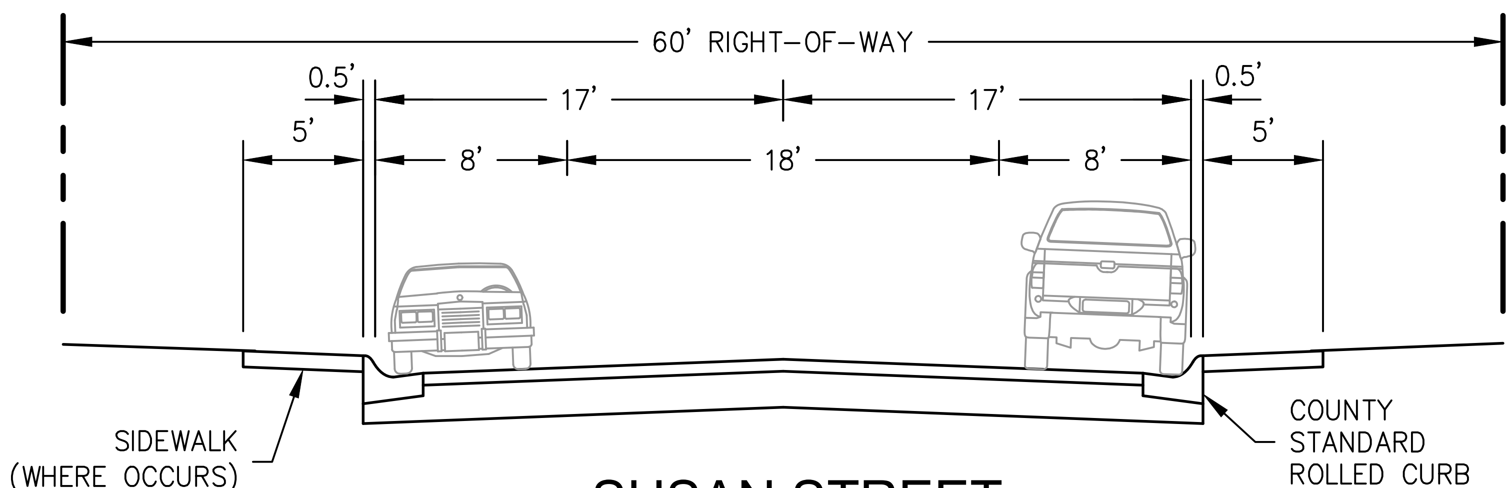
Notes:
1. Trip generation rates published by Institute of Transportation Engineers (ITE), *Trip Generation Manual,* 10th Edition, 2017
2. AM and PM peak hour traffic at Casa Boronda was collected Tuesday, April 16, 2019. This data can be found in **Appendix C**.
3. Daily trip rate derived by assuming that PM peak rate is 25% of the daily trip rate.
4. Estimated trip generation for Casa Boronda project cited from *Casa Boronda Agricultural Employee Housing Project Traffic Impact Analysis,* Keith Higgins Traffic Engineer, July 3, 2017.
5. Seasonal adjustment reflects that project is open for just 8.5 months of the year (i.e., approximately 71% of a year).
6. AM, PM and 24-Hour traffic at 525 3rd Street H2A Housing was collected Wednesday, June 22, 2022.

Attachment 4
Comparison of County Tertiary Street
and Susan Street Cross Sections



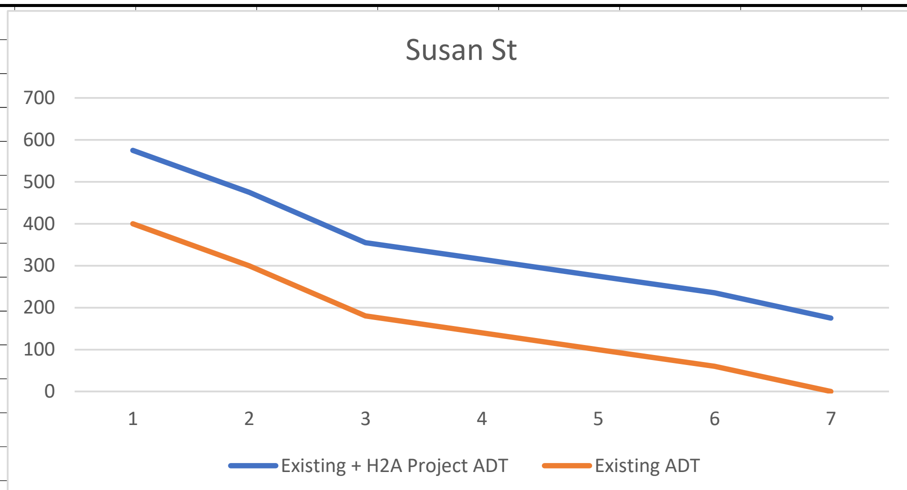
TERTIARY STREET

FROM MONTEREY COUNTY STANDARD DETAIL #2



SUSAN STREET

Attachment 5
Susan Street Average Daily Traffic



Existing + H2A Project ADT	575	475	355	315	275	235	175
Existing ADT	400	300	180	140	100	60	0
Distance from San Juan Road (ft)	0	110	220	330	440	550	660

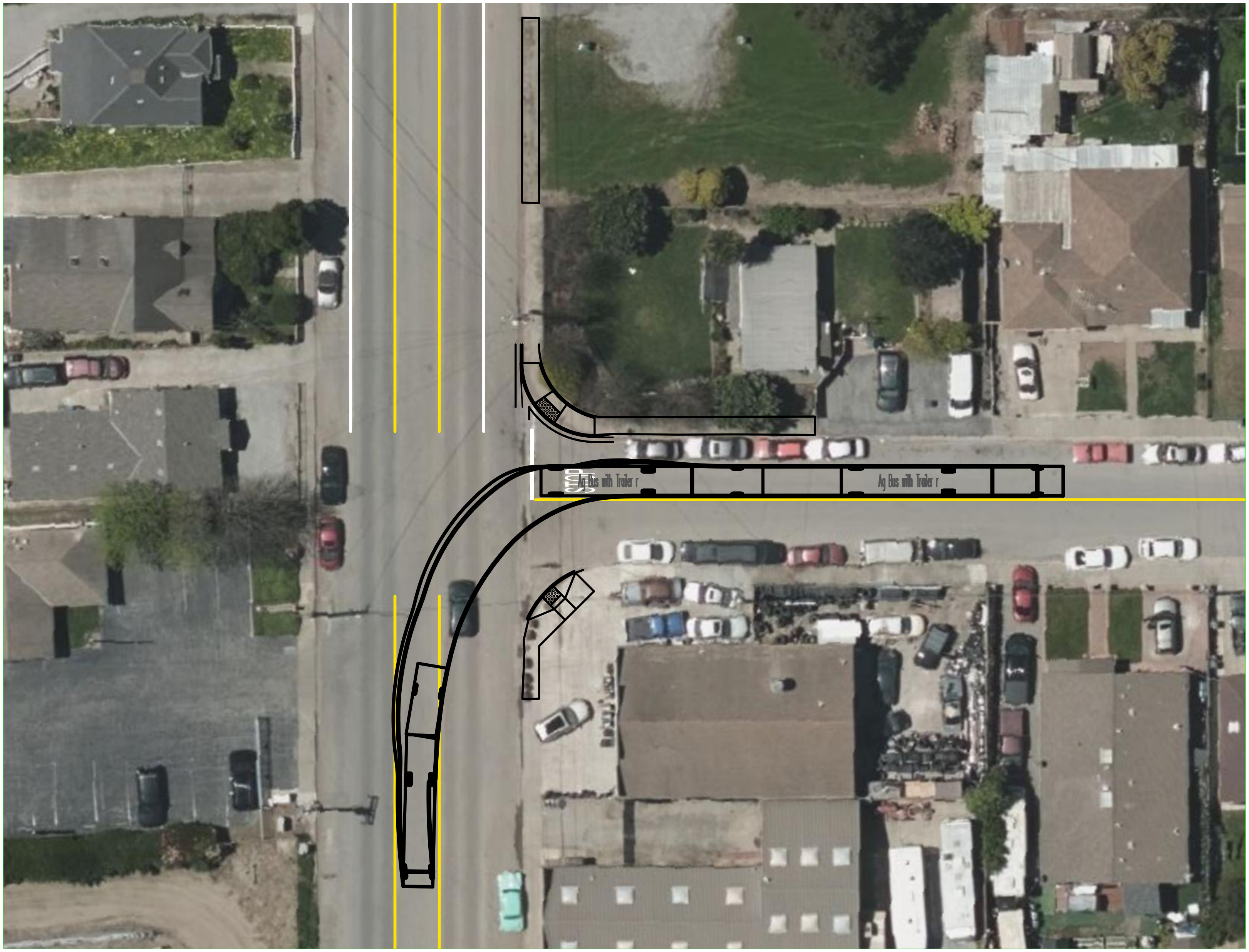
Attachment 6
Susan Street Peak Hour Volumes and Corresponding Headways

	Northbound					Southbound					Total - Both Directions				
	Peak Hour Volume			Headway (Minutes)		Peak Hour Volume			Headway (Minutes)		Peak Hour Volume			Headway (Minutes)	
Location Along Susan Street	Existing	Project	Existing Plus Project	Existing	Existing Plus Project	Existing	Project	Existing Plus Project	Existing	Existing Plus Project	Existing	Project	Existing Plus Project	Existing	Existing Plus Project
A. TOTAL TRAFFIC															
1. AM Street Peak Hour															
a. At San Juan Road	7	0	7	8.57	8.57	16	1	17	3.75	3.53	23	1	24	2.61	2.50
b. North of Body Shop	5	0	5	12.00	12.00	14	1	15	4.29	4.00	19	1	20	3.16	3.00
c. Project Entrance	0	0	0	N.A.	N.A.	0	1	1	N.A.	60.00	0	1	1	N.A.	N.A.
2. PM Street Peak Hour															
a. At San Juan Road	26	4	30	2.31	2.00	13	10	23	4.62	2.61	39	14	53	1.54	1.13
b. North of Body Shop	18	4	22	3.33	2.73	10	10	20	6.00	3.00	28	14	42	2.14	1.43
c. Project Entrance	0	4	4	N.A.	15.00	0	10	10	N.A.	6.00	0	14	14	N.A.	4.29
B. BUSES / HEAVY VEHICLES															
1. AM Street Peak Hour											0	0	0		
a. At San Juan Road	1	0	1	60.00	60.00	0	0	0	N.A.	N.A.	1	0	1	60.00	60.00
b. North of Body Shop	1	0	1	60.00	60.00	0	0	0	N.A.	N.A.	1	0	1	60.00	60.00
c. Project Entrance	0	0	0	N.A.	N.A.	0	0	0	N.A.	N.A.	0	0	0	N.A.	N.A.
2. PM Street Peak Hour															
a. At San Juan Road	0	2	2	N.A.	30.00	0	2	2	N.A.	30.00	0	4	4	N.A.	15.00
b. North of Body Shop	0	2	2	N.A.	30.00	0	2	2	N.A.	30.00	0	4	4	N.A.	15.00
c. Project Entrance	0	2	2	N.A.	30.00	0	2	2	N.A.	30.00	0	4	4	N.A.	15.00

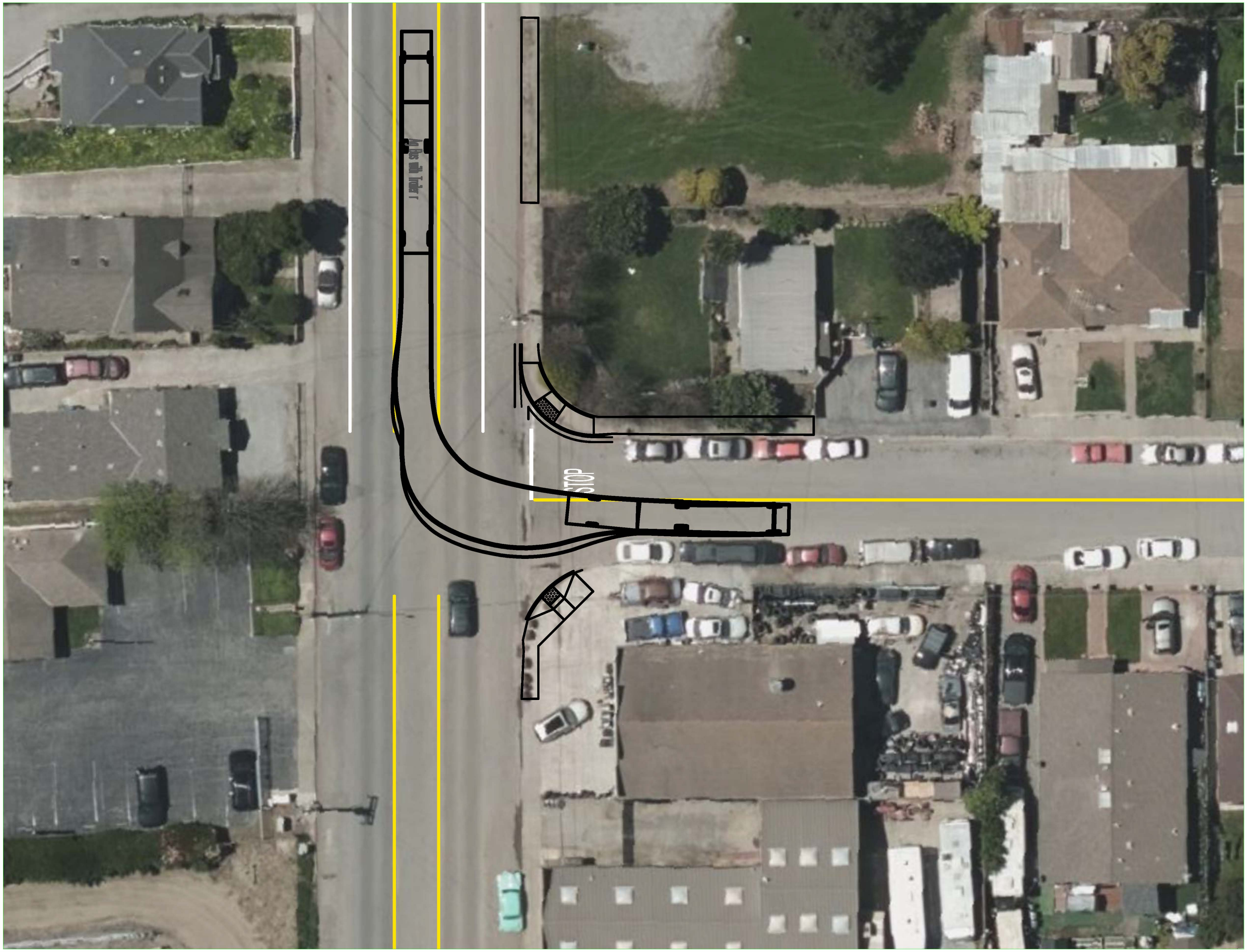
Notes:

1. Project peak morning bus traffic is expected between 2 AM and 3 AM. A total of 6 inbound and 6 outbound buses are expected, which is a headway of about 10 minutes in each direction.
2. Project peak afternoon bus traffic is expected between 2 PM and 3 PM. A total of 3 inbound and 4 outbound buses are expected, with a headway of about 15 minutes in the peak direction.

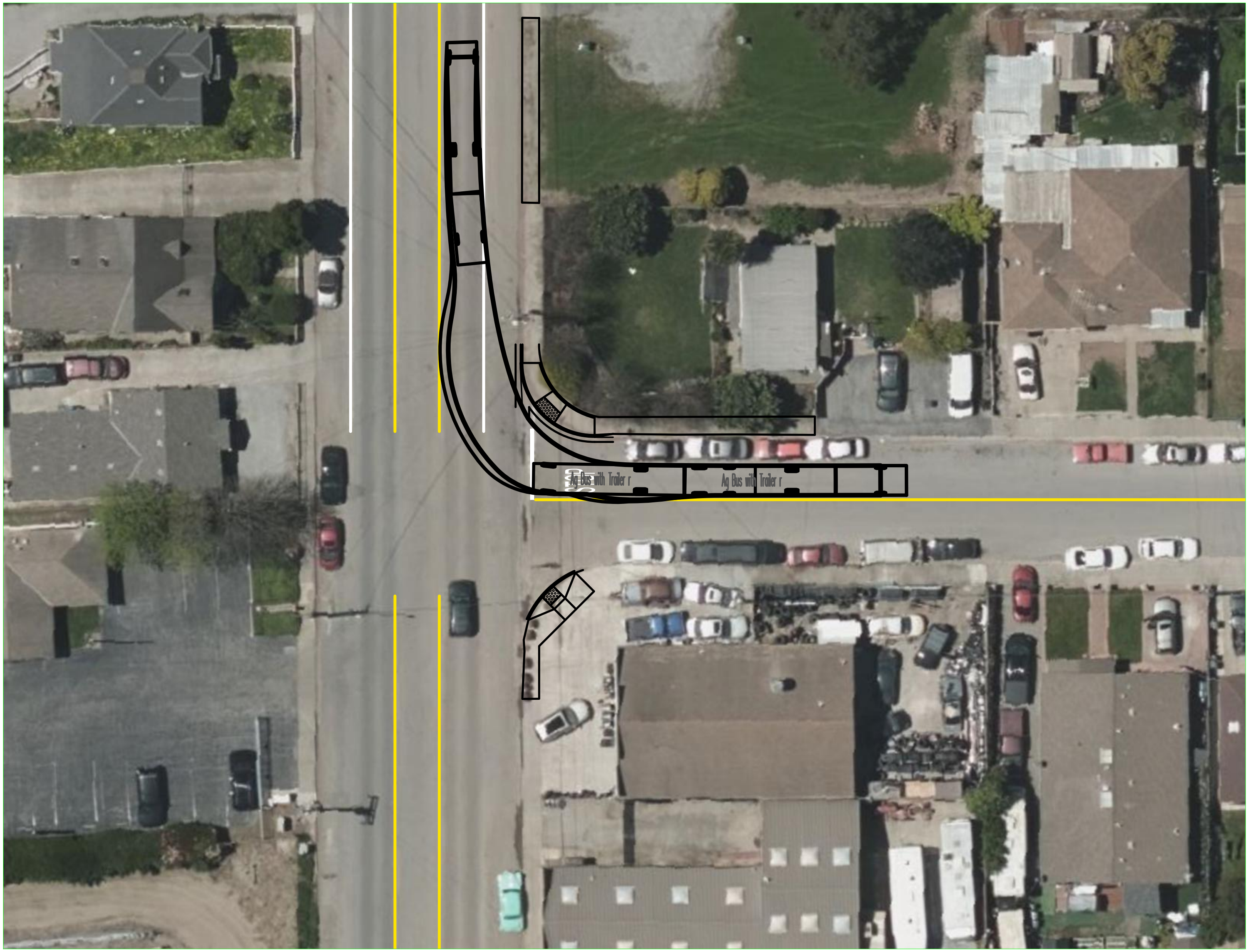
Attachment 7a
Bus Template - Southbound
Susan Street Left Turn



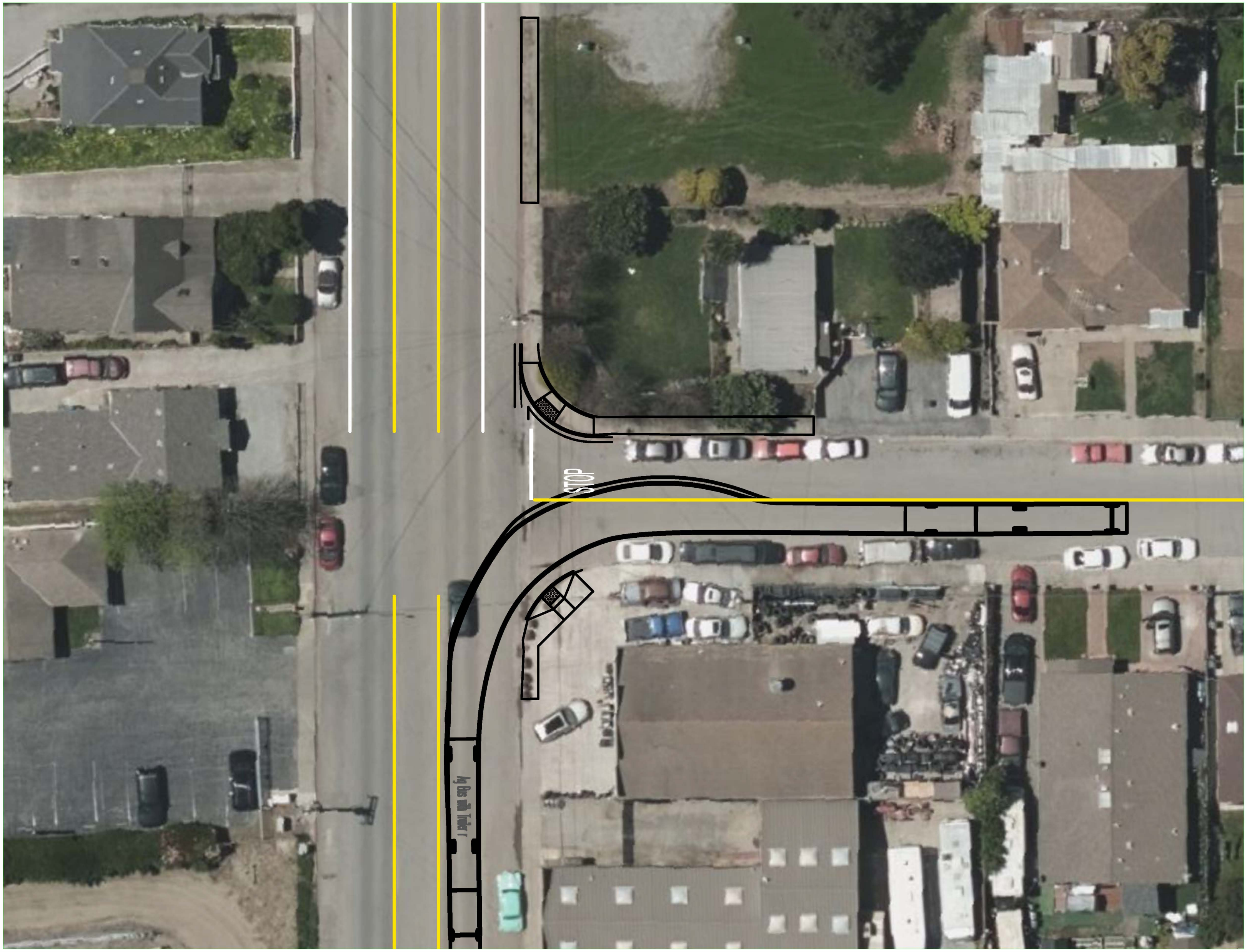
Attachment 7b
Bus Template - Eastbound
San Juan Road Left Turn



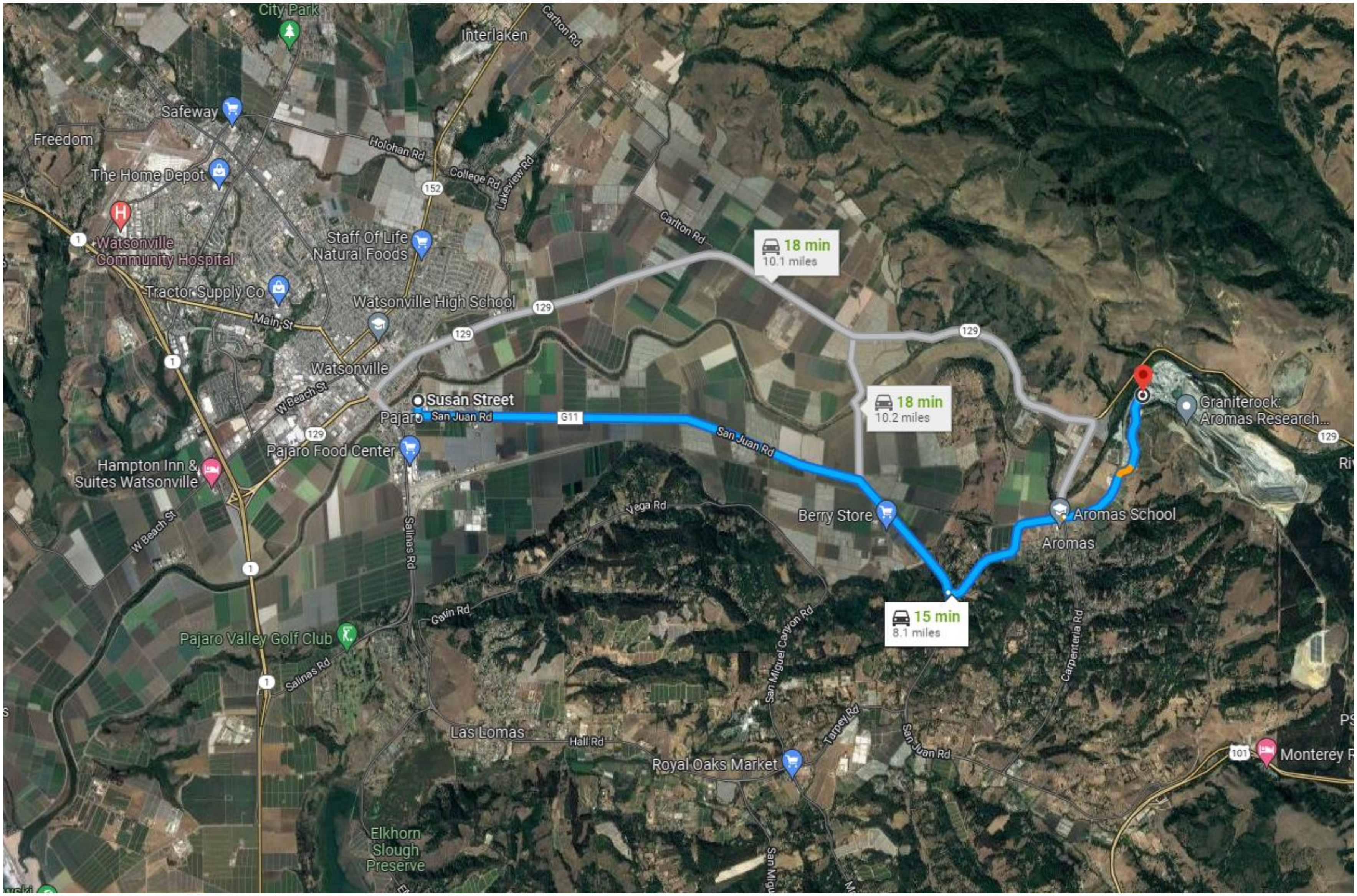
Attachment 7c
Bus Template - Southbound
Susan Street Right Turn



Attachment 7d
Bus Template - Westbound
San Juan Road Right Turn



Attachment 8
Fill Material Haul Route Map-
Granite Rock Quarry to Project



Attachment 9
Project to Buena Vista Landfill
Debris Haul Route

Source: Susan Street Agricultural Employee Housing
Sheet C4.3
The Paul Davis Partnership, 12/3/21