

Appendix C
Traffic Report & Vehicle Queuing Memo

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SUSAN STREET APARTMENTS TRANSPORTATION IMPACT ANALYSIS

FINAL DRAFT REPORT

PAJARO, MONTEREY COUNTY, CALIFORNIA

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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:

Signalized Intersection (Intersection 1):

- 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.

One- or Two-Way Stop-Controlled Intersection (Intersections 2-4):

- 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 any 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 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. 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.

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. As indicated on **Exhibit 6**, standard apartments would generate about 454 daily trips with 29 during the morning peak hour and 35 during the evening peak hour. H2A would generate about 148 daily trips with 4 in the morning peak hour and 36 in the evening peak hour when the Project is occupied.

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 F**.

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 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 three 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.

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 G**.

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 (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 H**.

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, 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 be 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 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 I** 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 Rodriguez 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 J. 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. Pay the TAMC Regional Development Impact Fee. Monterey County staff will quantify the applicable fees to the Project at the time of development.
3. Pay the County of Monterey Traffic Impact Fee. Monterey County staff will quantify the applicable fee to the Project at the time of development.

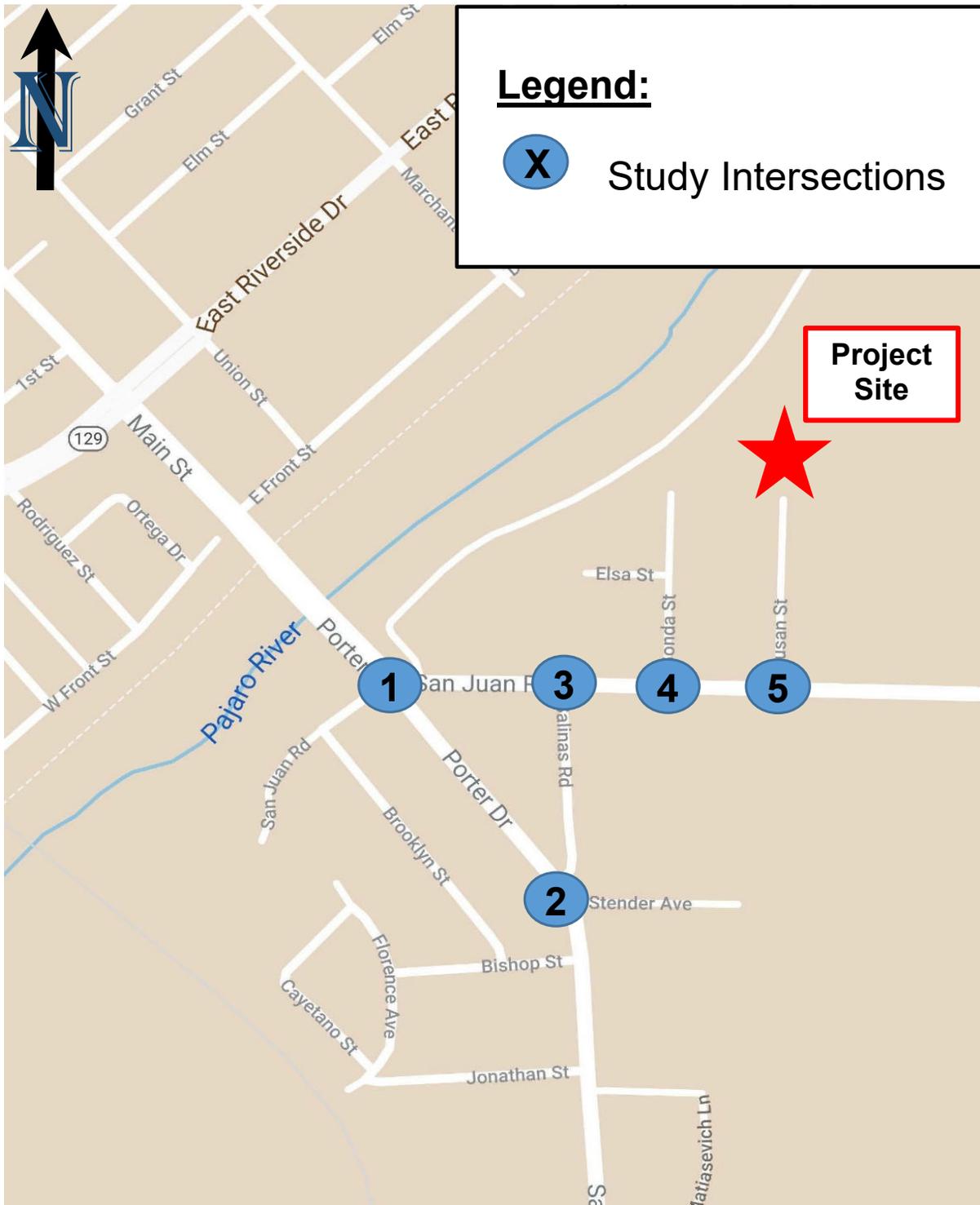
10 REFERENCES

10.1 List of References

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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, 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.



Basemap Source: Google Maps, 2021.

Keith Higgins
Traffic Engineer

Exhibit 1
Project Location Map
and Study Area

Project / Owner:

Susan Street Agricultural Employee Housing

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

APN: 117-361-016-000



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

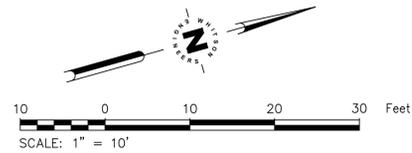
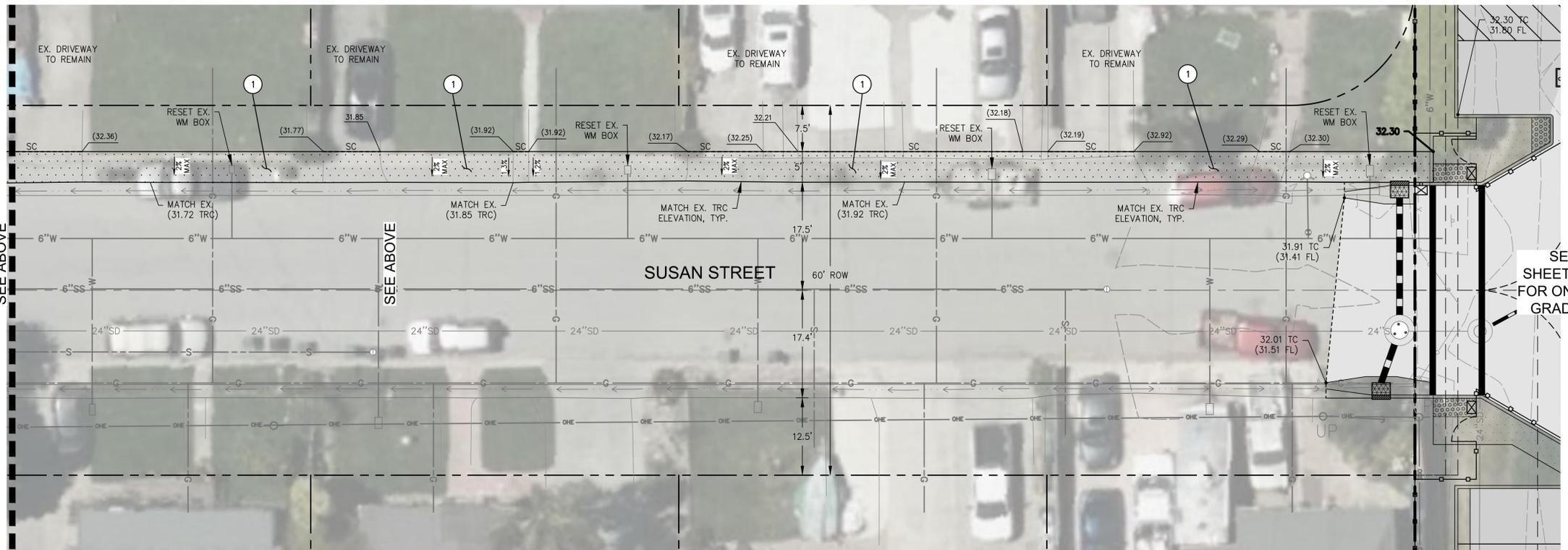
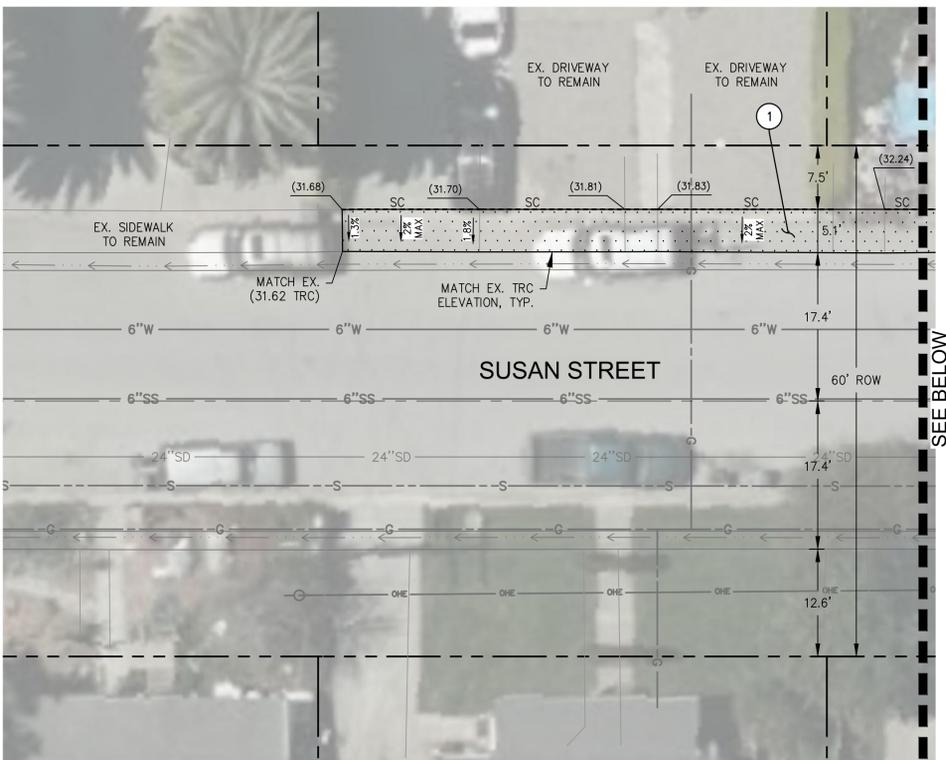
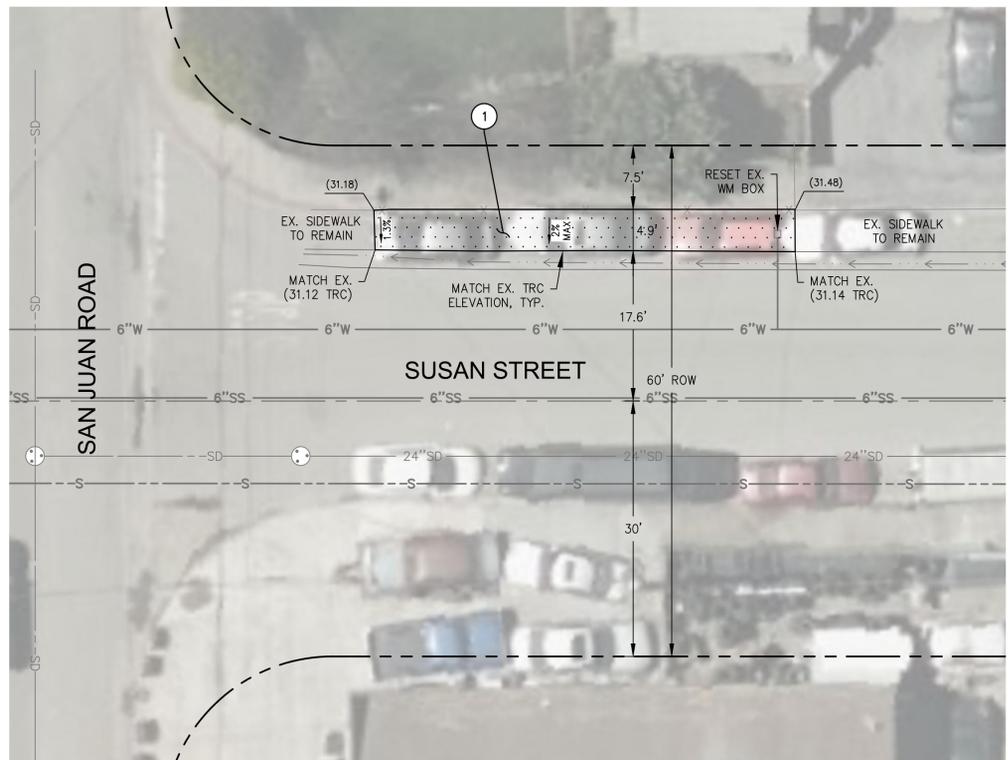
Revisions:
Planning Submittal 10-14-2021
Planning Resubmittal 11-23-2021

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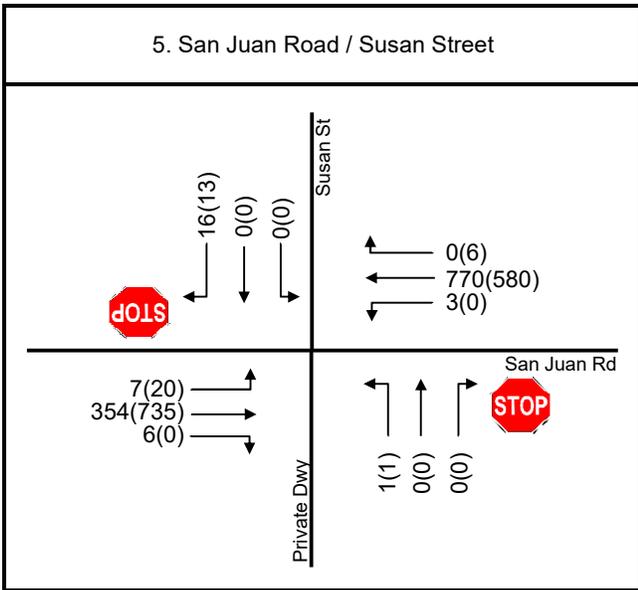
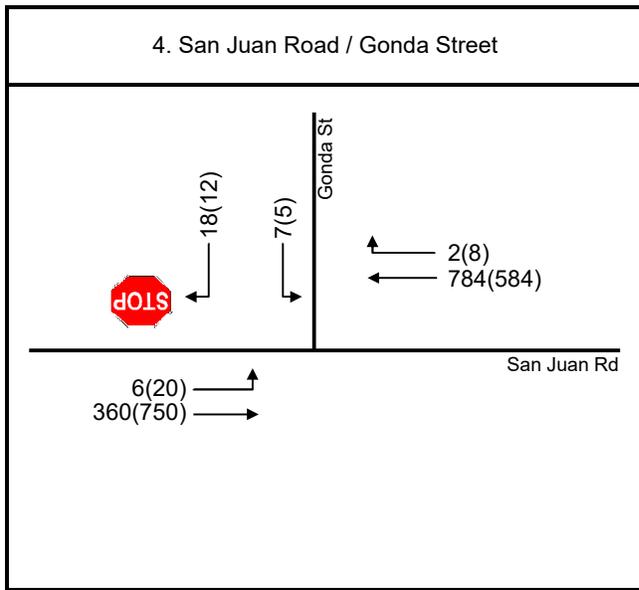
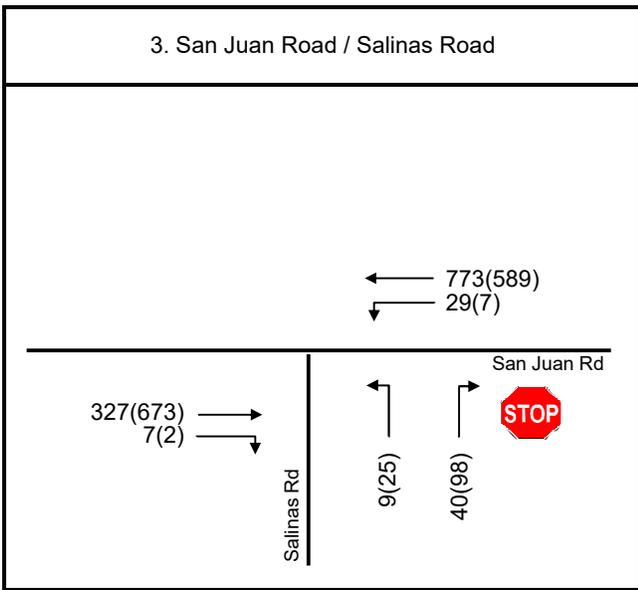
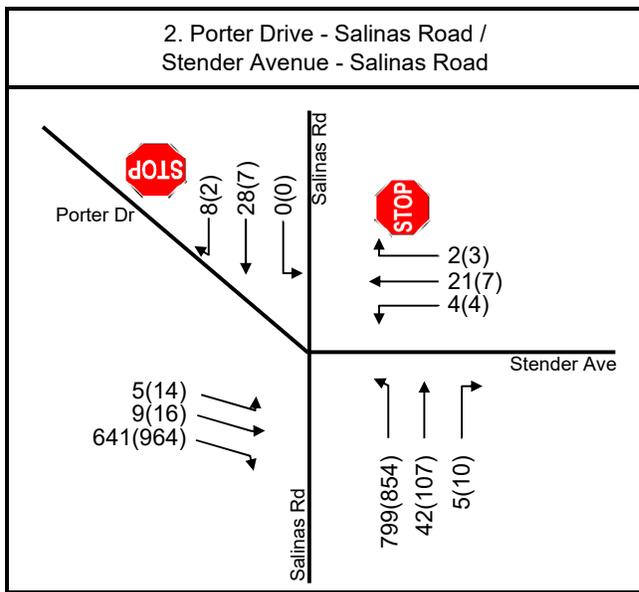
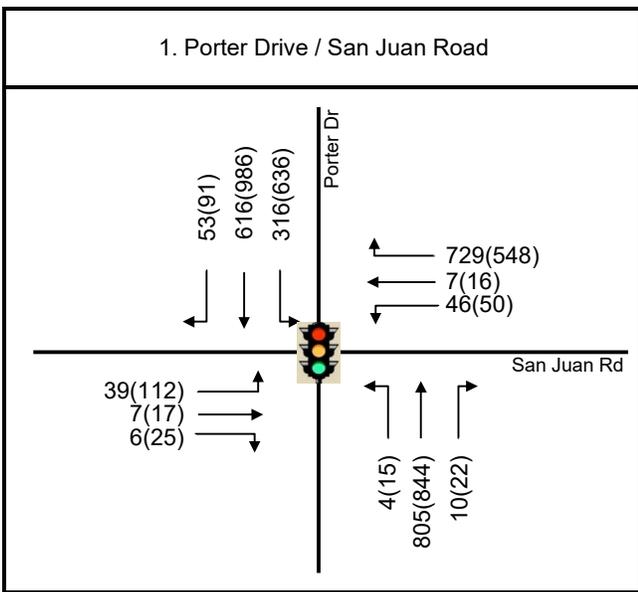
Sheet Title:
OFF-SITE IMPROVEMENT
PLAN - SUSAN STREET

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.



	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Peak Hour	Existing Conditions		Existing Plus Project Conditions		Cumulative Without Project Conditions		Cumulative Plus Project Conditions		
							Delay	LOS	Delay	LOS	Delay	LOS	Delay	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
							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
							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
							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
							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
							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.

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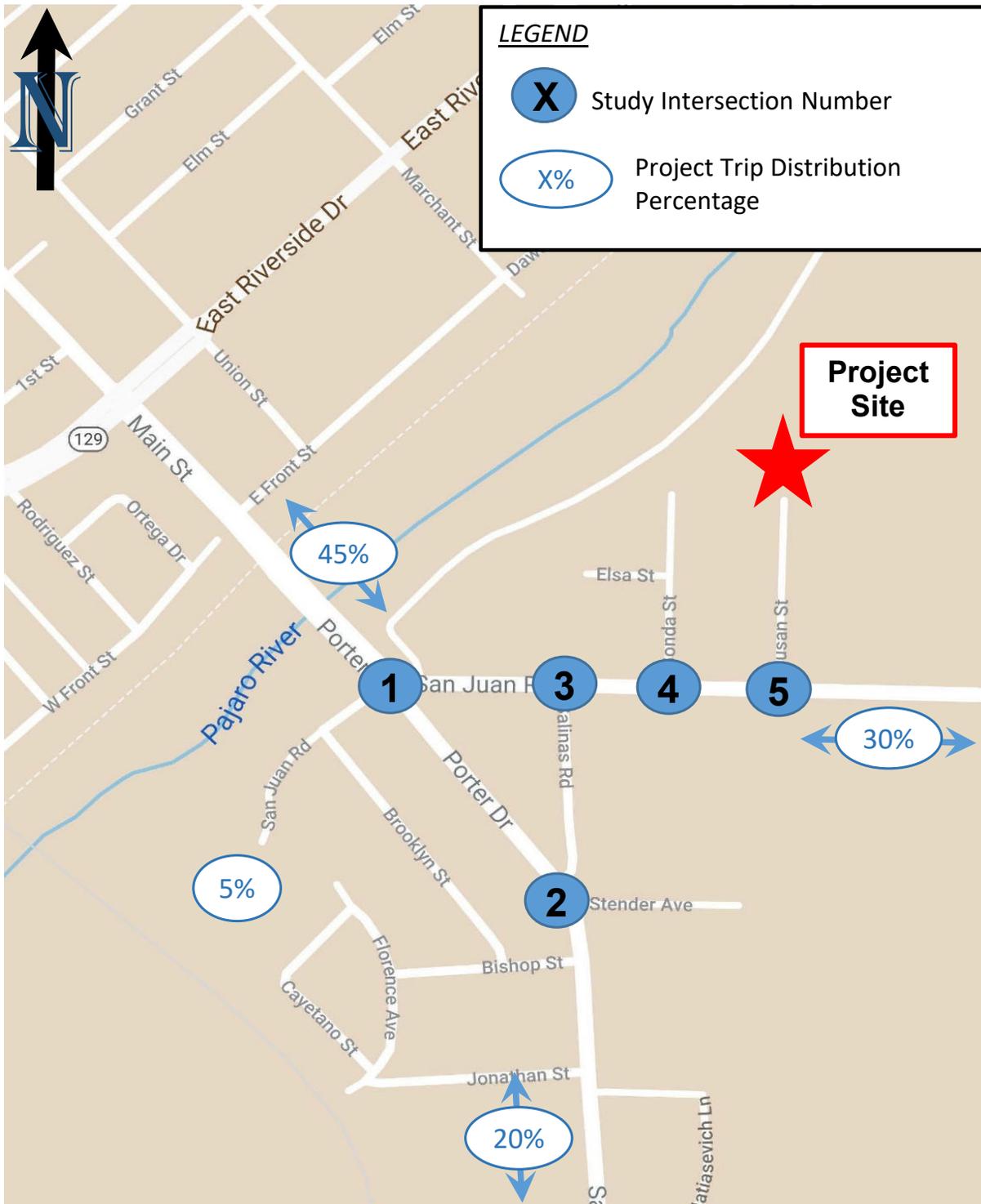
Exhibit 5B
Recommended
Intersection Improvements

PROPOSED PROJECT - APARTMENTS										
A. Project Trip Rates										
TRIP GENERATION RATES	ITE LAND USE CODE	DAILY TRIP RATE	AM PEAK HOUR			PM PEAK HOUR				
			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										
PROPOSED USE	PROJECT SIZE	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR				
			PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Apartments	61 units	447	28	6%	6	22	34	8%	21	13
Apartment - Manager's Unit	1 unit	7	1	14%	0	1	1	14%	1	0
Total:		454	29		6	23	35		22	13

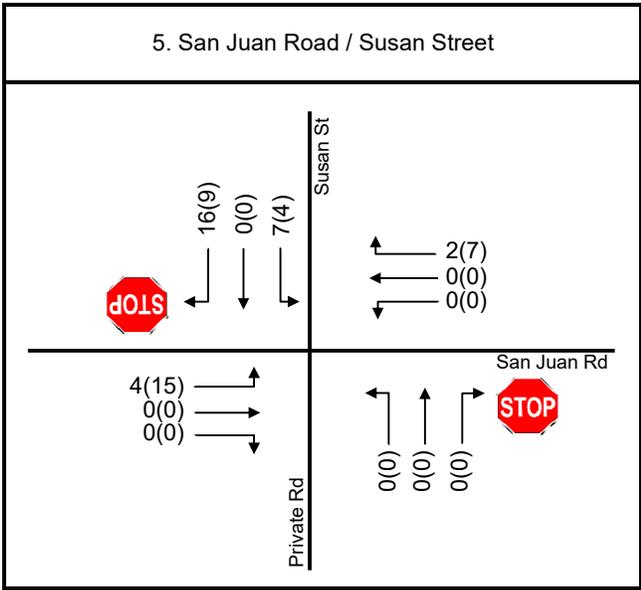
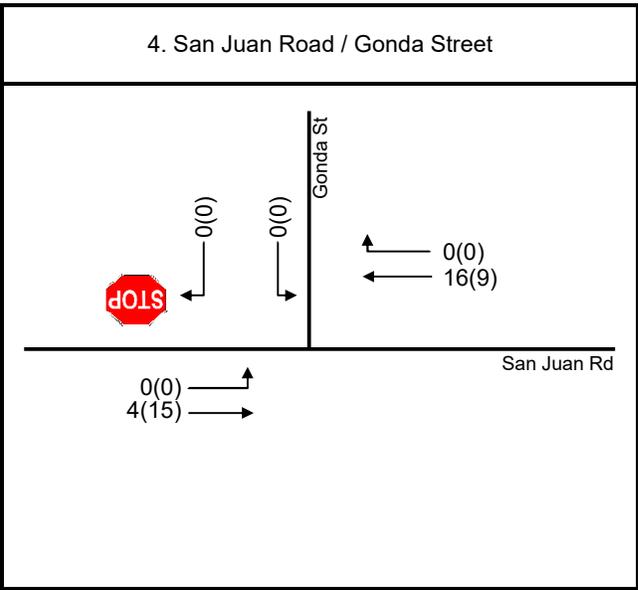
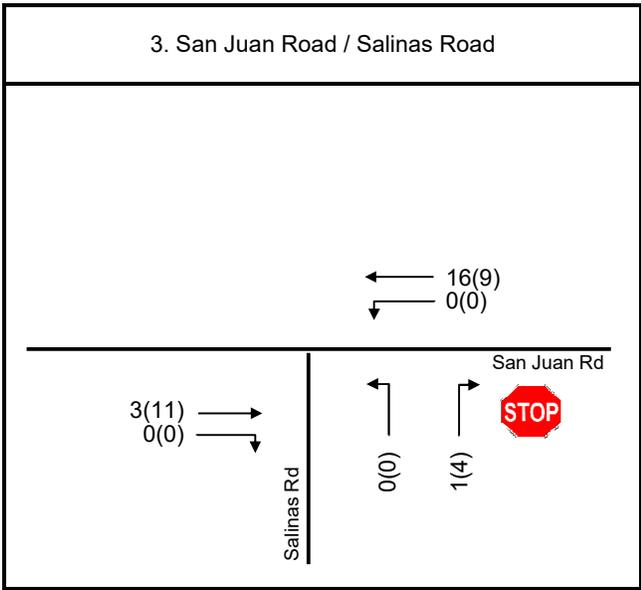
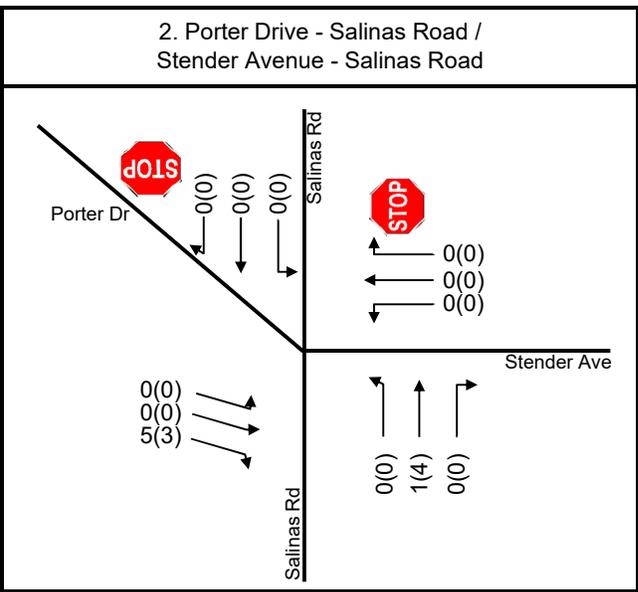
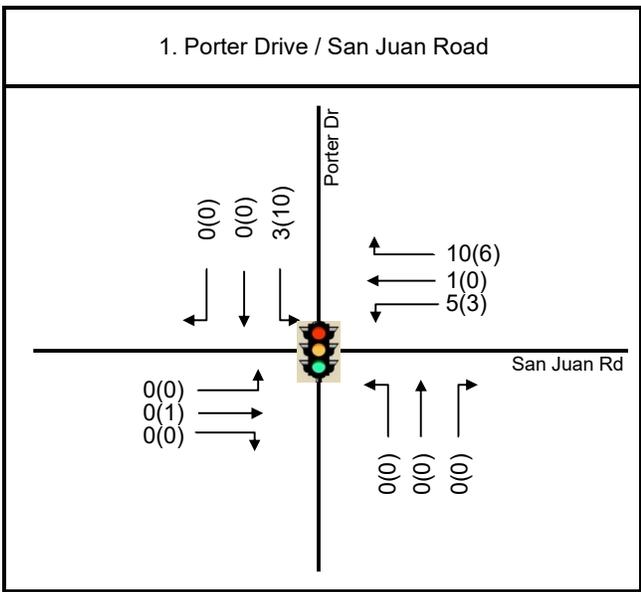
PROPOSED PROJECT - AGRICULTURAL EMPLOYEE HOUSING										
A. Project Trip Rates										
REFERENCE USE	EXISTING SIZE	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR				
			PEAK HOUR TRIPS	% OF ADT	% IN	% OUT	PEAK HOUR TRIPS	% OF ADT	% IN	% OUT
Casa Boronda Ag. Employee Housing Driveway Count ¹	600 beds	N.A.	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										
PROPOSED USE	PROJECT SIZE	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR				
			PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT	PEAK HOUR TRIPS	% OF ADT	TRIPS IN	TRIPS OUT
Agricultural Employee Housing	488 beds	141	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):		148	4	3%	2	2	36	24%	19	17
Percent of Apartment Trip Generation		33%	14%				103%			
Annual Average Total:		105	3		1	2	26		13	13
Percent of Apartment Trip Generation		23%	10%				74%			

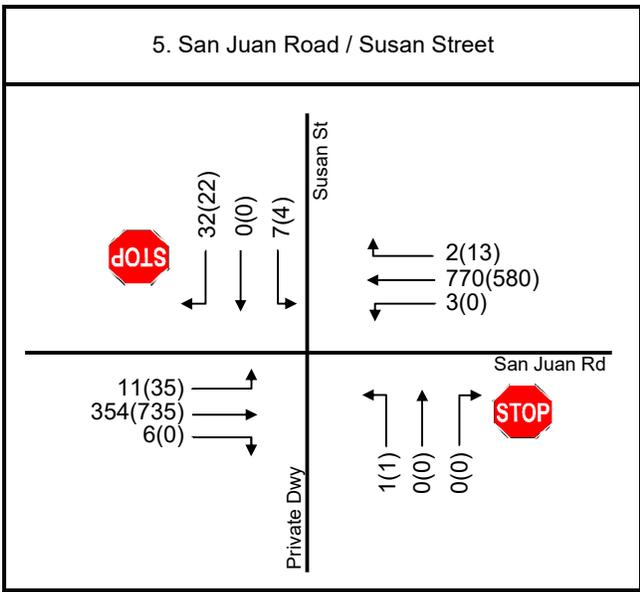
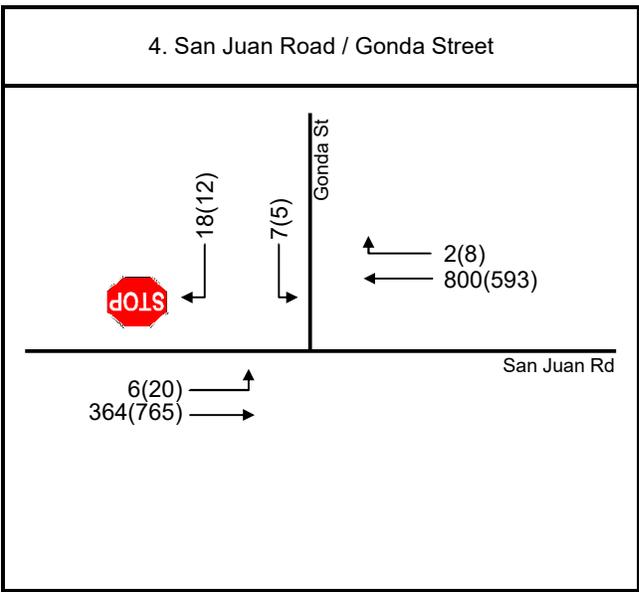
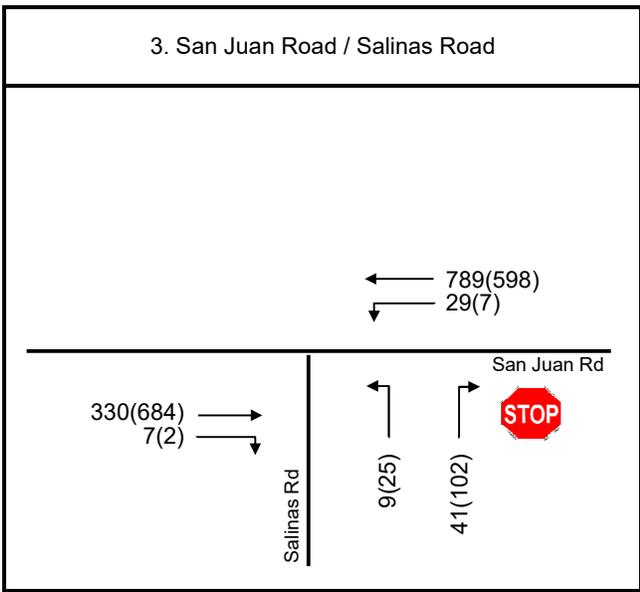
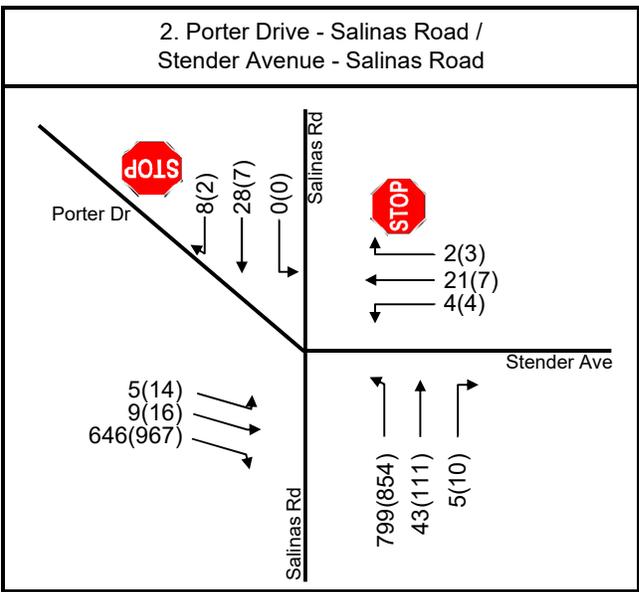
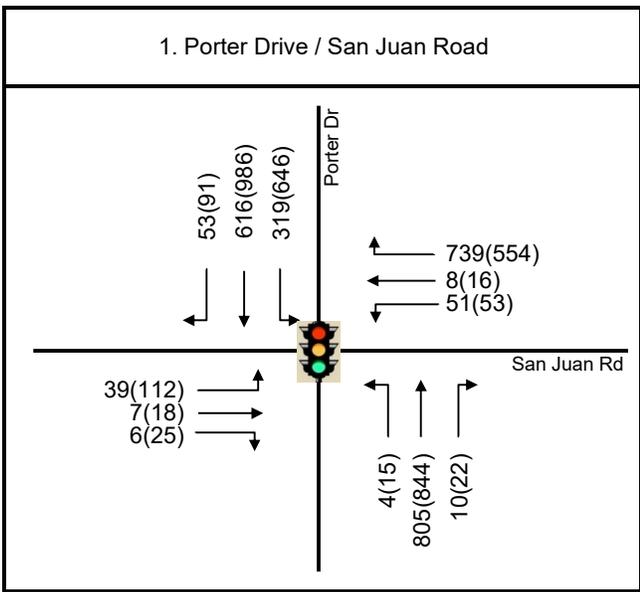
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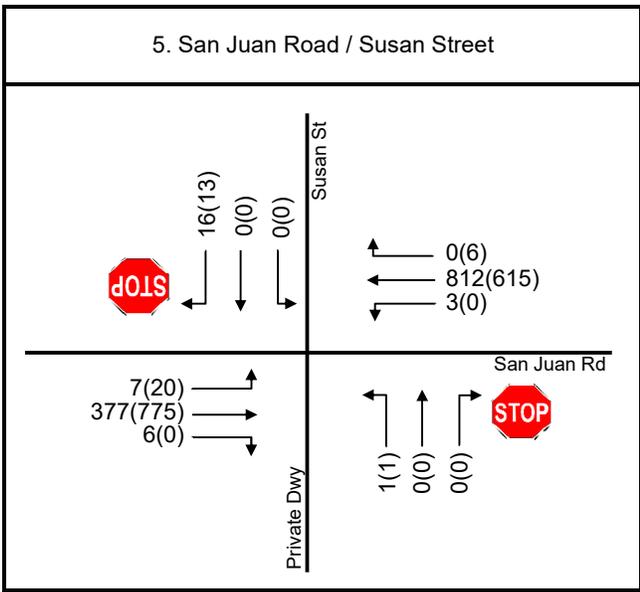
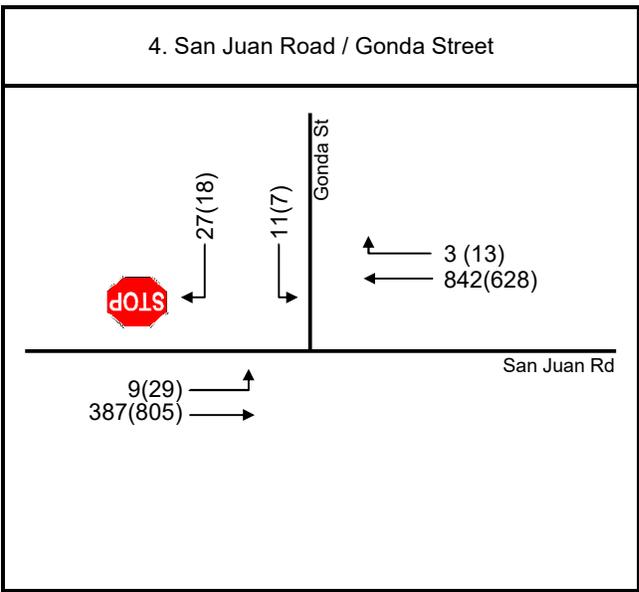
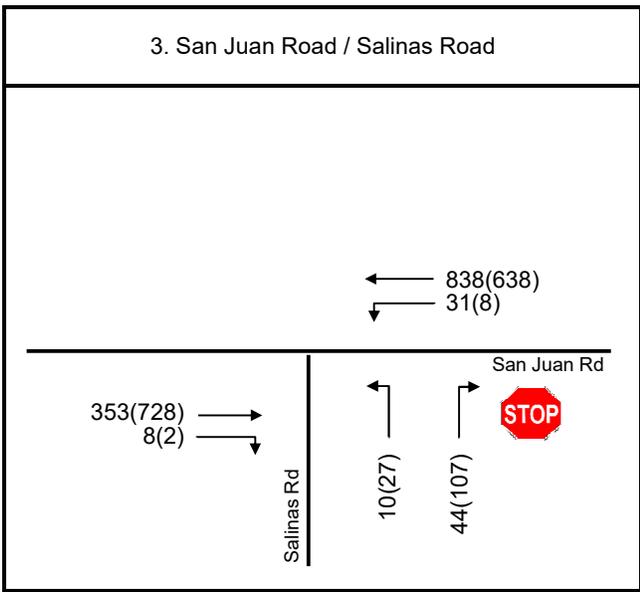
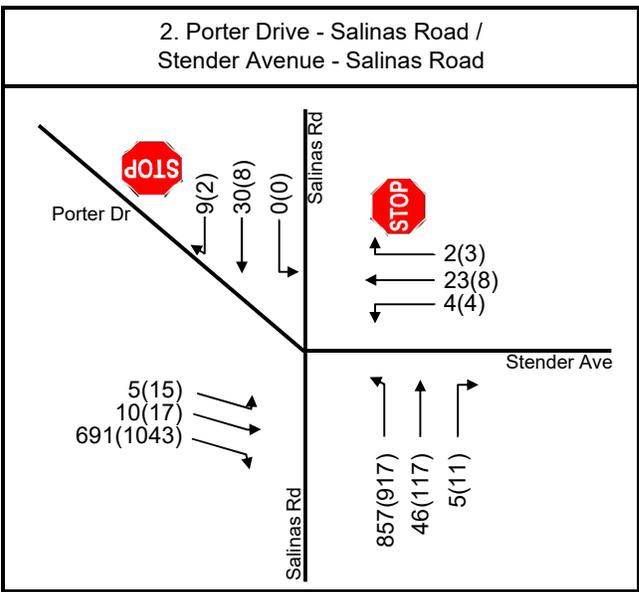
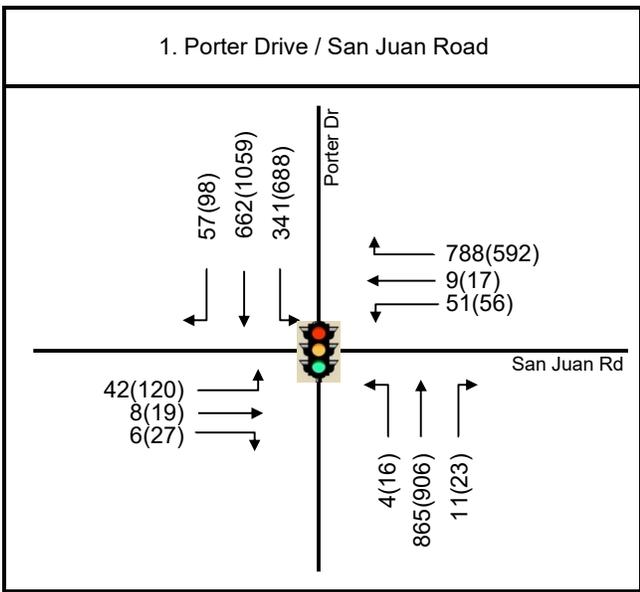
1. AM and PM peak hour traffic at Casa Boronda was collected Tuesday, April 16, 2019. This data can be found in **Appendix C**.
2. Daily trip rate derived by assuming that PM peak rate is 25% of the daily trip rate.
3. Estimated trip generation for Casa Boronda project cited from *Casa Boronda Agricultural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

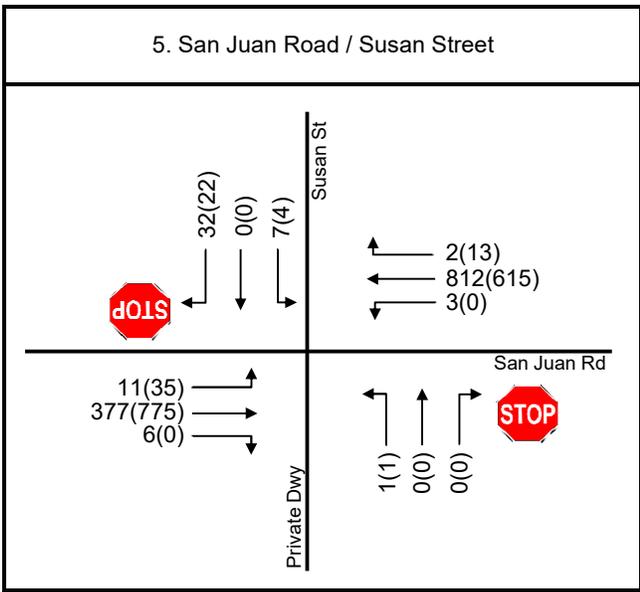
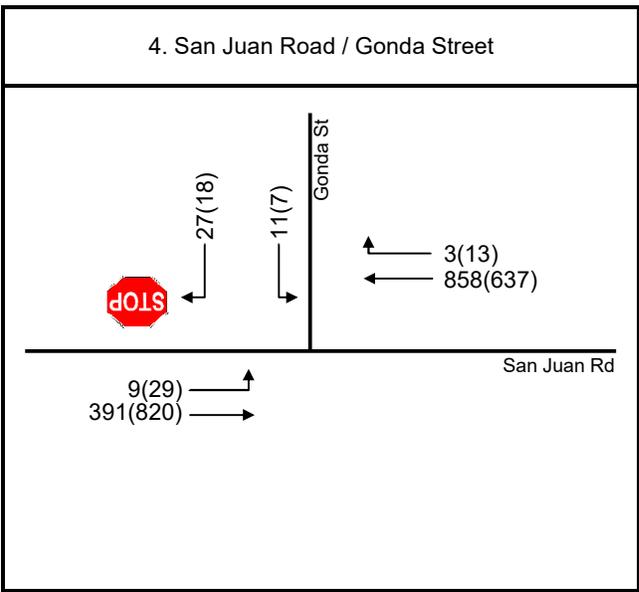
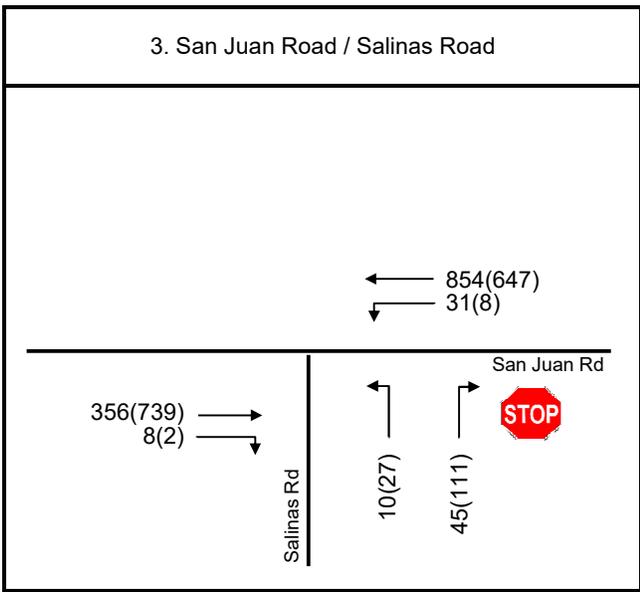
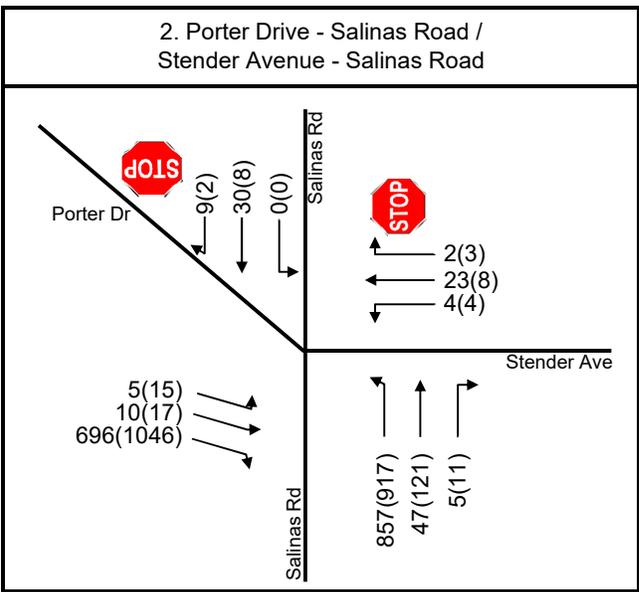
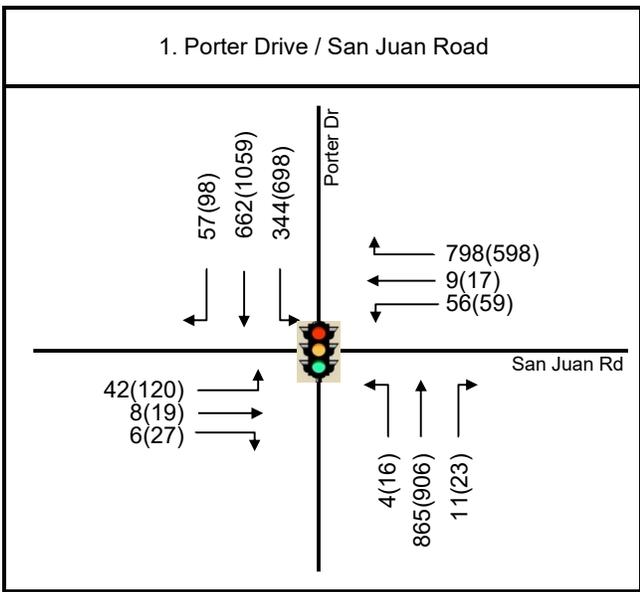


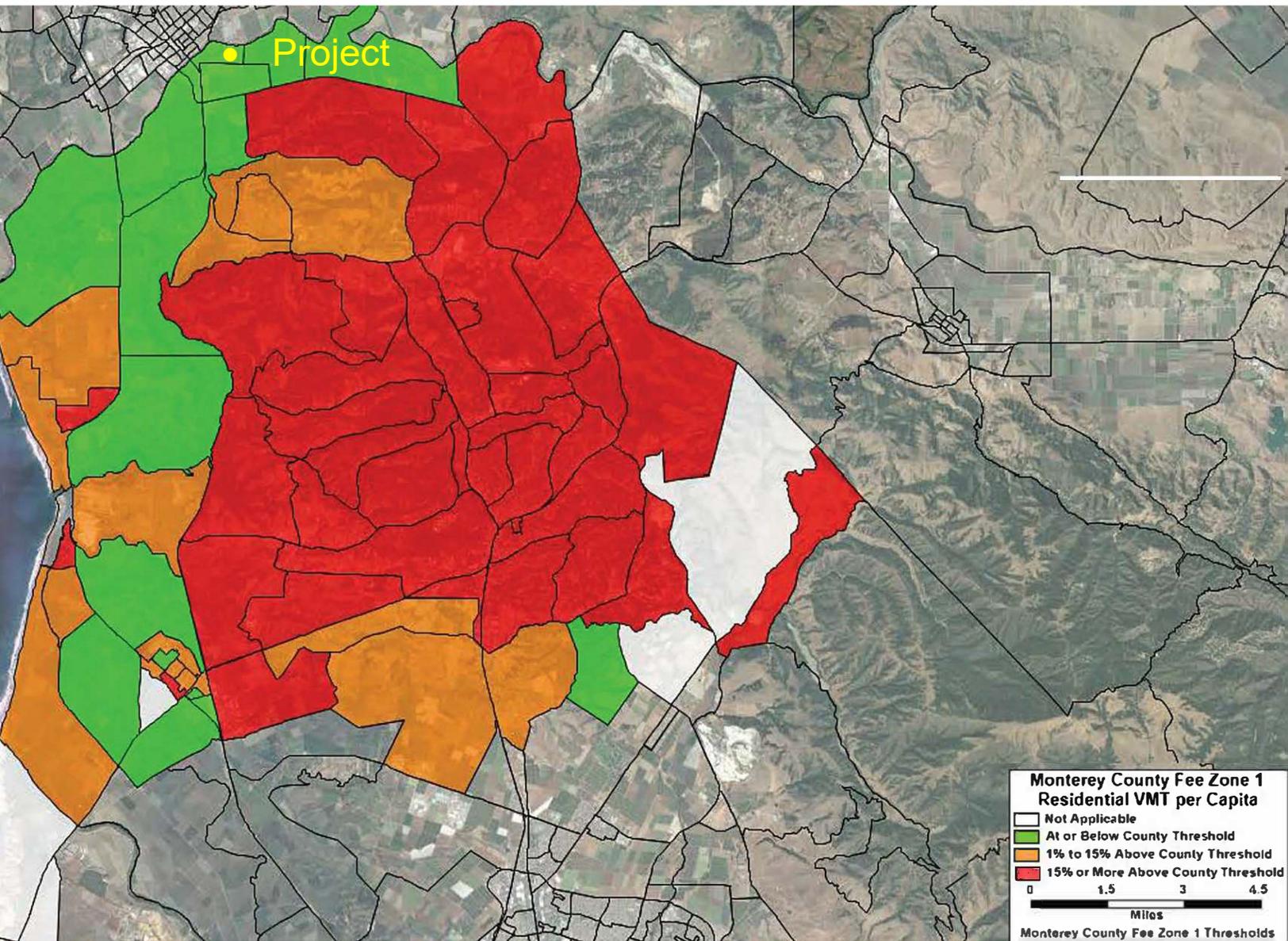
Basemap Source: Google Maps, 2021.











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 Occurred		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://iswitr.chp.ca.gov/> from January 1, 2011 through October 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.

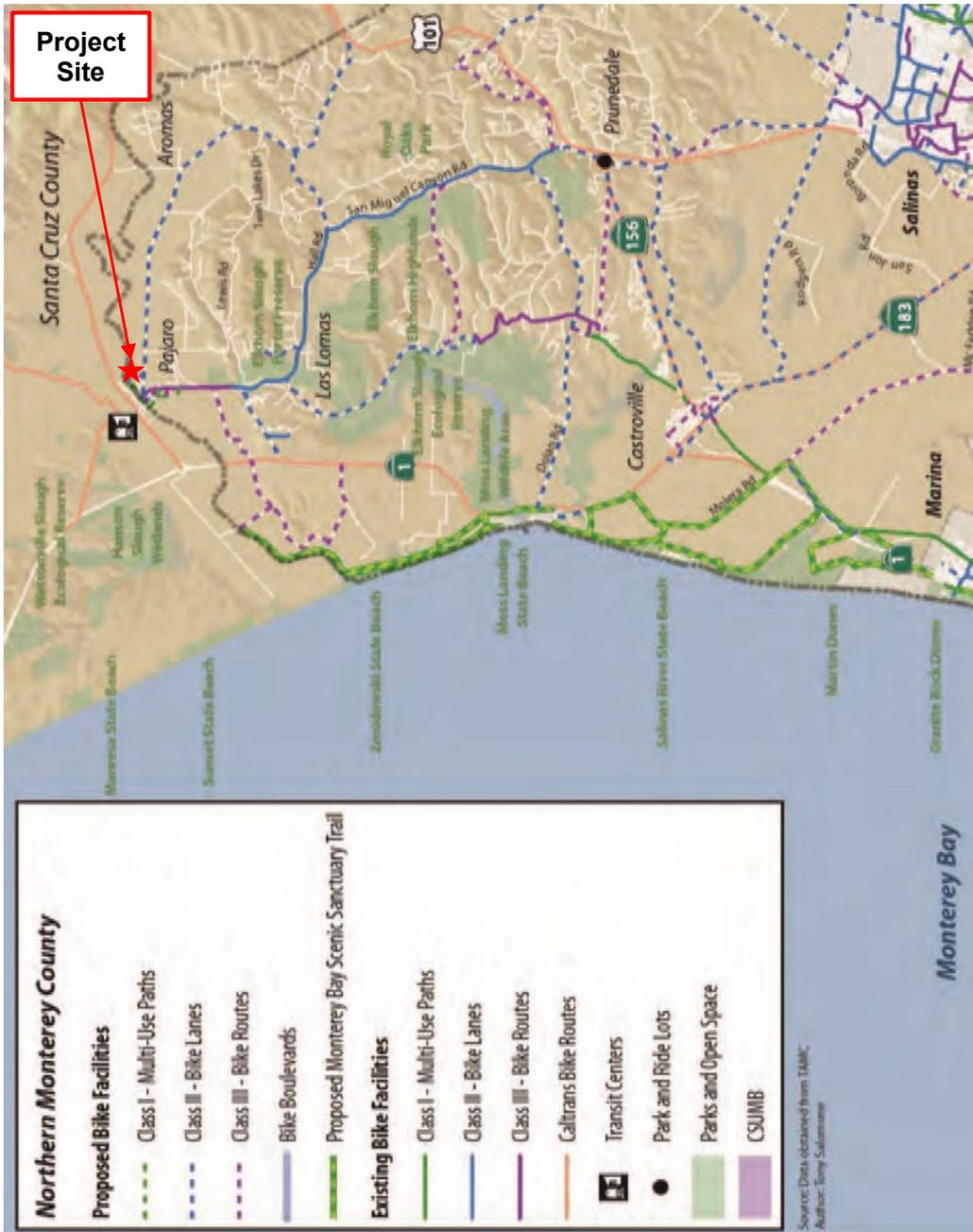
LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS

(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)

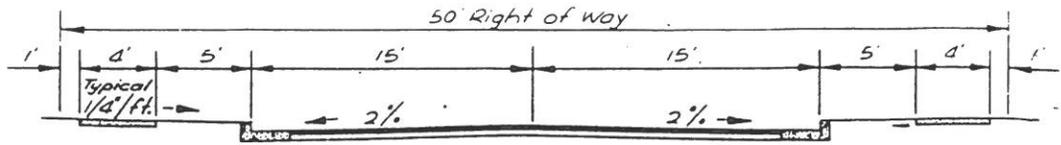
STANDARD DETAILS

COUNTY OF MONTEREY, CALIFORNIA

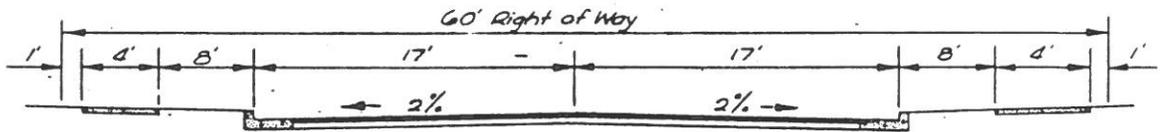
OCTOBER 1977

STANDARD STREET CLASSIFICATIONS

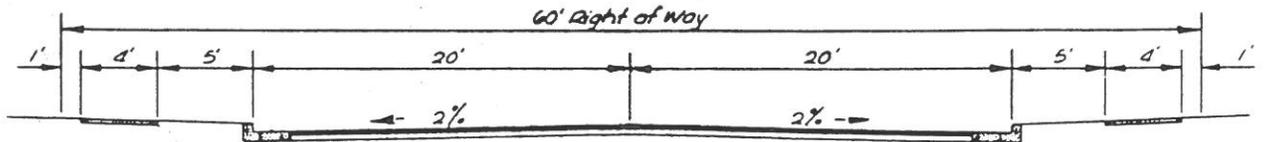
<u>TRAFFIC</u>	<u>STREET TYPE</u>
10,000 vehicles expected in 20 years. 1,500 left turning movements per day	Major Divided Street
<hr/>	
This street is so designated by a Master Plan, Precise Plan or Road Classification Plan adopted by the Board of Supervisors. 5,000 vehicles or more, but less than 15,000 vehicles expected in 20 years	Major Street
<hr/>	
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
<hr/>	
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
<hr/>	
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
<hr/>	
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
<hr/>	
Special purpose street types	Industrial Street - Half-width Street - Frontage Road - Alley - Split-level



LOOP OR CUL-DE-SAC STREET

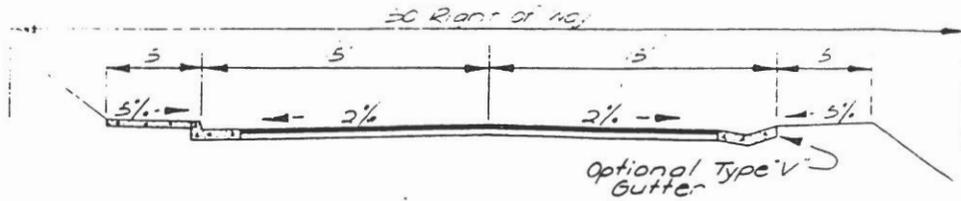


TERTIARY STREET

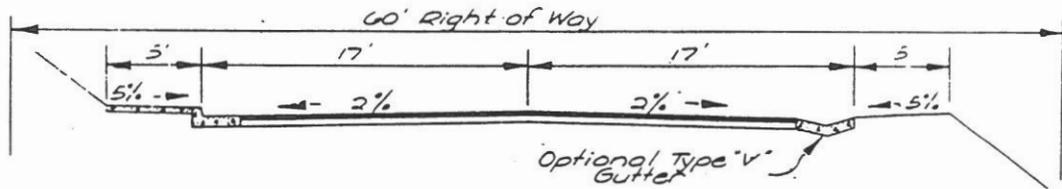


SECONDARY STREET

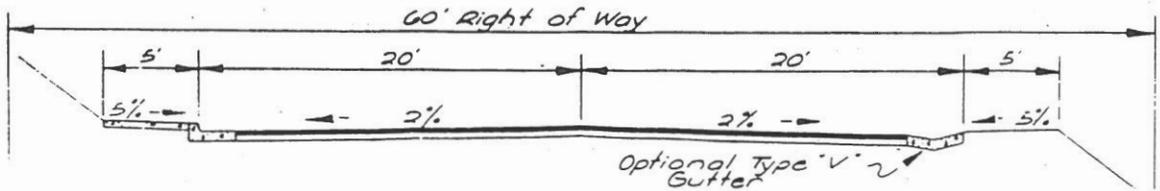
MONTEREY COUNTY		DEPT. OF PUBLIC WORKS
STANDARD DETAILS		
FLAT TERRAIN STREET SECTION		
APPROVED	<i>Bruce W. M. [Signature]</i>	DATE 10-24-77
REVISED	DATE	PLATE NO.



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	<i>Bruce H. McLean</i>	DATE 10-24-77
REVISED	DATE	PLATE NO.
		2

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)			Net Dif.	% Growth	% per year
	2017	2018	2019			
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:	<u>7.00%</u>	<u>2.33%</u>

Volume Source: *Monterey County Public Works Annual Average 2019*, Monterey County Public Works Department, 2020.

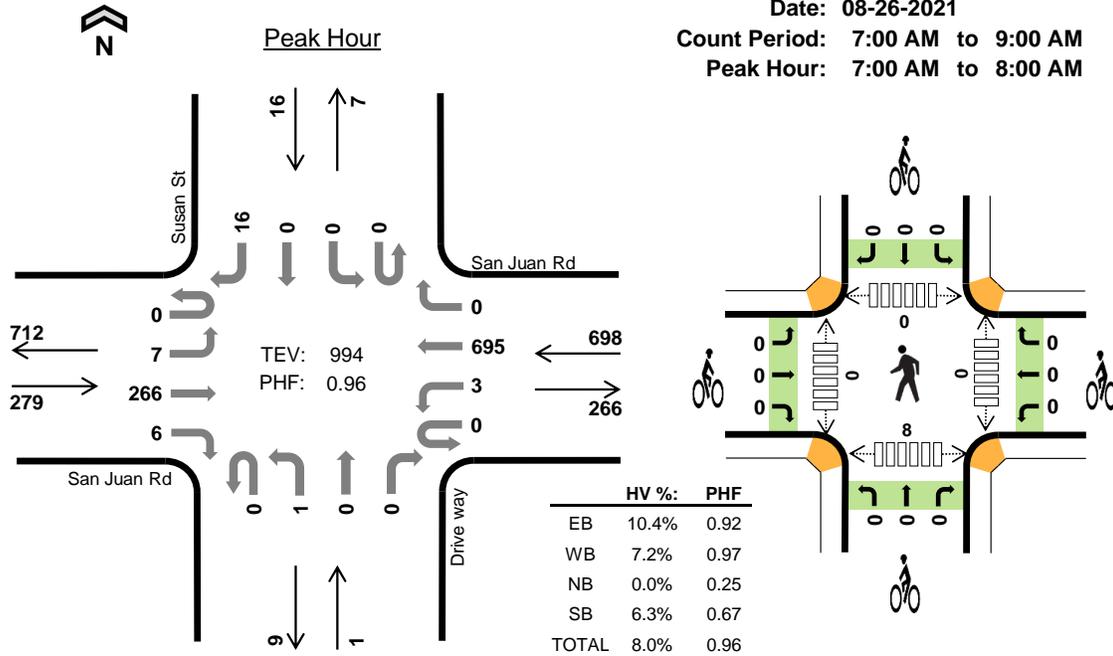
Susan St San Juan Rd



Date: 08-26-2021

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:00 AM to 8:00 AM



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			
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
	HV	0	1	28	0	0	0	50	0	0	0	0	0	0	0	0	1	80	0
	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					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	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				San Juan Rd				Drive way				Susan St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
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	1	0	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	1	0	156	0
Peak Hour	0	1	28	0	0	0	50	0	0	0	0	0	0	0	1	0	80	0
Two-Hour Count Summaries - Bikes																		
Interval Start	San Juan Rd			San Juan Rd			Drive way			Susan St			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	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	0	0	0	0
7:30 AM	0	0	0	0	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	0	0	0	0
8:00 AM	0	0	0	0	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	0	0	0	0
8:30 AM	0	0	0	0	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	0	0	0	0
Count Total	0	0	0	0	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	0	0	0	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

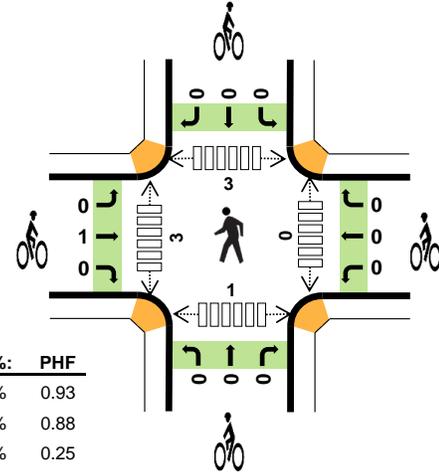
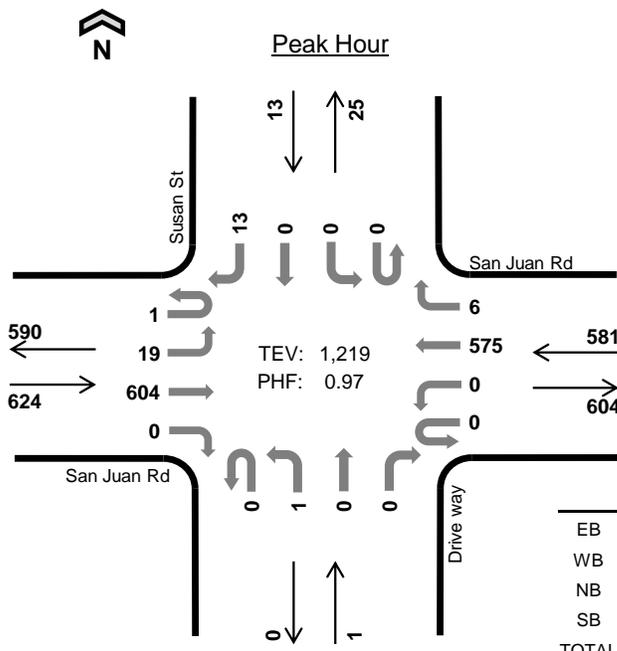
Susan St San Juan Rd



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
	HV	0	0	32	0	0	0	22	0	0	0	0	0	0	0	0	0	54	0
	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				San Juan Rd				Drive way				Susan St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
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			San Juan Rd			Drive way			Susan St			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	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	0	0	0	0
4:30 PM	0	0	0	0	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	0	0	0	1	1	1
5:00 PM	0	0	0	0	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	0	0	0	1	1	2
5:30 PM	0	0	0	0	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	0	0	0	0	1
Count Total	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

Appendix E

Level of Service

Calculations

Existing

Conditions

HCM Signalized Intersection Capacity Analysis

Existing AM

1: Porter Dr & San Juan Rd

												
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 (vphp)	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	
Frbp, 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
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	NBRWBLn1	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
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.236	-	-
Pot Cap-1 Maneuver	745	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	745	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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									
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

HCM Signalized Intersection Capacity Analysis

1: Porter Dr & San Juan Rd

Existing PM

													
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		
Frbp, 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
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	NBRWBLn1	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									
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

Level of Service

Calculations

Existing Plus Project

Conditions

HCM Signalized Intersection Capacity Analysis
1: Porter Dr & San Juan Rd

Existing Plus Project AM

												
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 (vphp)	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	
Frbp, 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
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	NBRWBLn1	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									
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

HCM Signalized Intersection Capacity Analysis
1: Porter Dr & San Juan Rd

Existing Plus Project PM

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		
Frbp, 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
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	NBRWBLn1	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									
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 G

Level of Service

Calculations

Cumulative Without Project

Conditions

HCM Signalized Intersection Capacity Analysis

Cumulative Without Project AM

1: Porter Dr & San Juan Rd

													
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 (vphp)	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	
Frbp, 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	Y		T		T	T
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
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	NBRWBLn1	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									
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

HCM Signalized Intersection Capacity Analysis
1: Porter Dr & San Juan Rd

Cumulative Without Project PM

												
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
Frbp, 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
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	NBRWBLn1	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
Stage 1	-	-	654
Stage 2	-	-	890
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	928	-	126
Stage 1	-	-	517
Stage 2	-	-	401
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	928	-	122
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									
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 H

Level of Service

Calculations

Cumulative Plus Project

Conditions

HCM Signalized Intersection Capacity Analysis
1: Porter Dr & San Juan Rd

Cumulative Plus Project AM

													
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 (vphp)	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	
Frbp, 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
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	NBRWBLn1	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									
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

HCM Signalized Intersection Capacity Analysis
1: Porter Dr & San Juan Rd

Cumulative Plus Project PM

													
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	
Frbp, 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
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	NBRWBLn1	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
Stage 1	-	-	664
Stage 2	-	-	905
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	920	-	122
Stage 1	-	-	512
Stage 2	-	-	395
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	920	-	118
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									
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 I
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>

Confidentiality Notice:

This is a communication from North County Fire District. This message and any attached documents may be confidential and contain information protected by state and federal medical privacy statutes. They are intended only for the use of the addressee. If you are not the intended recipient, any disclosure, copying, or distribution of this information is strictly prohibited. If you received this transmission in error, please accept our apologies and notify the sender.

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,



JEFFREY D. NOHR

Project Manager

Email: Jeff@avilaconst.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>

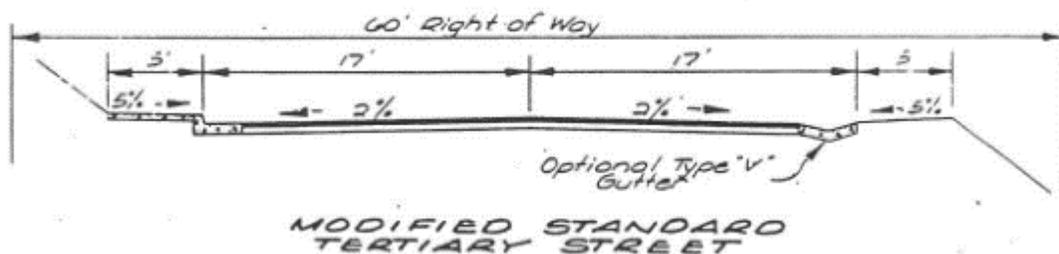
Subject: RE: Susan St Agricultural Employee Housing project PLN#210152

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?

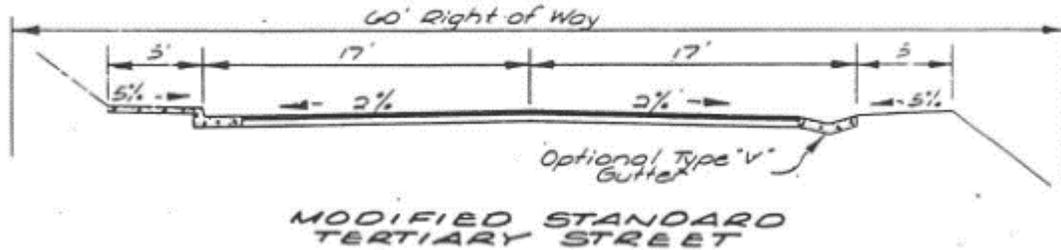
Response: Please refer to section Monterey County FIRE001 - ROAD ACCESS

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

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@ncfcpd.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>

Confidentiality Notice:

This is a communication from North County Fire District. This message and any attached documents may be confidential and contain information protected by state and federal medical privacy statutes. They are intended only for the use of the addressee. If you are not the intended recipient, any disclosure, copying, or distribution of this information is strictly prohibited. If you received this transmission in error, please accept our apologies and notify the sender.

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

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 J
San Juan Road Collision History –
Raw SWITRS Database
2011-October 2021

Does not include State Highway cases

Report Run On: 11/22/2021

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	1													
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 Info											Victim Info														
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	-	-								
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	2													
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 Info											Victim Info														
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	
2	DRVR	57	M	H	HNBD		LFT TURN	W	A	0800	CHRY	2001	-	3	N	-	M G	PASS		21	M	6	0	P G	
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	3													
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 Info											Victim Info														
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		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info											Victim Info														
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		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 Info											Victim Info														
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								

Does not include State Highway cases

Report Run On: 11/22/2021

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														Victim Info											
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	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	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														Victim Info											
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	19	M	H	HNBD		RAN OFF RD	W	A	0100	HOND	1997	- 3	A	22107	-	L G	DRVR	COMP PN	19	M	1	0	L	G
2	DRVR	35	F	H	HNBD		PROC ST	E	A	0100	HOND	2005	- 3	N		-	M G	DRVR	OTH VIS	35	F	1	0	M	G
3	DRVR	56	M	W	HNBD		PROC ST	E	A	0700	TOYT	2016	- 3	N		-	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														Victim Info											
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	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	DRVR	OTH VIS	21	M	1	0	M	G

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					

4

Party Info														Victim Info											
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	F	H	HNBD		PROC ST	E	A	0100	VOLK	2004	- 3	F		-	L G	DRVR	COMP PN	17	F	1	0	L	G
2	PRKD	998	-				PARKED	E	A	0700	HOND	1998	- 3	N		-	-								
3	PRKD	998	-				PARKED	E	A	0700	GMC	2002	- 3	N		-	-								

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		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
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	40	M	H	HNBD		LFT TURN	E	A	0100	CADI	2003	- 3	N		-	M G	DRVR	COMP PN	40	M	1	0	M	G

Does not include State Highway cases

Report Run On: 11/22/2021

2	DRVR	31	M	H	HNBD	PROC ST	E	A	0800	CHRY	1996	-	3	N	-	L	G	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

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 5 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															Victim Info											
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	52	M	H	HNBD		UNS TURN	E	A	0700	AMER	1992	-	3	F	-	P	G	DRVR	MINOR	52	M	1	0	P	G
2	PRKD	998	-				PARKED	E	A	0100	HOND	1999	-	3	N	-	-	-								
3	PRKD	998	-				PARKED	E	A	0100	HOND	2001	-	3	N	-	-	-								

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 6 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															Victim Info											
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	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								

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 7 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															Victim Info											
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	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	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															Victim Info											
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	HBD-UI		PROC ST	N	A	0100	TOYT	2015	-	3	A	22350	-	M	G							

Does not include State Highway cases

Report Run On: 11/22/2021

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 Info Victim Info 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 - HBD-UNK PROC ST S - 9900 HONDA - - N - - - DRVR COMP PN 24 M 1 0 L G 2 PRKD 998 - PARKED S A 0100 BMW 2017 - - N - - - PED COMP PN 54 F 9 3 - -														
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 Info Victim Info 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 24 M H HNBD LFT TURN S - 0000 HONDA 1997 - 3 - - L G DRVR COMP PN 24 M 1 0 L G 2 PRKD 998 - PARKED S - 0000 HONDA 1997 - 3 - - - - - 3 PRKD 998 - PARKED S - 0000 CHRYS 2002 - 3 - - - - -														
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 Info Victim Info 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 82 M H HNBD STOPPED W A 0100 SUZUK 2003 - - E - - M G 2 PED 54 F H null S N 6000 - - - - - - - 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 Info Victim Info 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 F HNBD PARKING N - 0000 HONDA 2016 - - - - - P B 2 PRKD 998 - PARKED S - 0000 AUDI 2017 - - - - - - -														
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 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 Info Victim Info 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 A 0100 - - 3 N - - B B 2 PRKD 998 - PARKED W A 0100 MERZ 2008 - 3 N - - - -														

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Does not include State Highway cases

Report Run On: 11/22/2021

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 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FUNCTNG 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 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 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw 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 Info 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 PASS MINOR 23 - 3 0 L G														
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 STRNG BCKNG Violation 22106 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20190219 Weather1 CLOUDY Weather2 Rdw Surface WET Rdw Cond1 NO UNUSL CND Rdw 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 Info 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 Rdw Surface WET Rdw Cond1 NO UNUSL CND Rdw 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 Info 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 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - NO Ped Action Cntrl Dev FUNCTNG 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 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														

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Does not include State Highway cases

Report Run On: 11/22/2021

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 002	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 Info																											
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										
Party Info																											
Victim Info																											
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 075	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 Info																											
Victim Info																											
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 075	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 Info																											
Victim Info																											
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
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 075	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 Info																											
Victim Info																											
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	-	-	-									
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 075	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 Info																											
Victim Info																											
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	-	-	-									

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Does not include State Highway cases

Report Run On: 11/22/2021

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 Info											Victim Info														
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														
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 Info											Victim Info														
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 Info											Victim Info														
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 Info											Victim Info														
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 Info											Victim Info														
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

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MONTEREY COUNTY RESOURCE MANAGEMENT AGENCY



168 W. Alisal Street, 2nd Floor
Salinas, CA 93901
<http://www.co.monterey.ca.us/rma>

FACILITIES TRIP REDUCTION PLAN

To be completed by applicant:

Name & Location	Project/Business Name: Susan St Farm Worker Employee Housing		
	Address: xxxx Susan St, Pajaro, CA 95076		
	Assessor Parcel Number(s): 117-361-016		
Applicant	Name: Rio Vista Group LLC		
	Address: PO Box 4500		
	City: Salinas	State: CA	Zip Code: 93912
	Phone: 831.214.1970	FAX: ()	
<input type="checkbox"/> Property Owner <i>or</i> <input checked="" type="checkbox"/> Authorized Agent	Name: Jeffrey Nohr		
	Address: 12 Thomas Owens Way, Ste. 200		
	City: Monterey	State: CA	Zip Code: 93940
	Phone: (831) 917.5622	FAX: ()	

Section 21.64.250 OF THE MONTEREY COUNTY ZONING ORDINANCE AND Section 20.64.250 OF THE COASTAL IMPLEMENTATION PLAN PROVIDES FOR REGULATIONS FOR THE REDUCTION OF VEHICLE TRIPS FOR RESIDENTIAL SUBDIVISIONS AND TOURIST-ORIENTED DEVELOPMENTS. How this is achieved depends on which vehicle trip reduction measures are selected by the applicant. From the following tables, select those vehicle trip reduction measures which you intend to utilize. Select any combination of measures that will result in a total reduction of 7 to 10 percent or more. Each measure selected is subject to approval by the Department of Public Works.

THE FOLLOWING RESIDENTIAL VEHICLE TRIP REDUCTION MEASURES ARE INCLUDED, AND MADE A PART HEAROF, IN THE ABOVE REFERENCED RESIDENTIAL SUBDIVISION:

Check Boxes That Apply	Vehicle Trip Reduction Measure	Residential Permit/Subdivision Conditions	Red uce (%)	Total (%)
<input type="checkbox"/>	Public information	Provide ridesharing, public transportation & nearby (within one mile) licensed child care facilities information to tenants/buyers as a part of move-in materials. A draft informational packet must be provided as part of the project's development approval process.	1%	

<input checked="" type="checkbox"/>	Printed transit schedules	Print transit schedule information on all promotional materials for the project. Draft printed transit schedules shall be provided as part of the project's development approval process.	.5%	.5%
<input type="checkbox"/>	Bicycle amenities	Bike lanes must be provided adjacent to the project, tie into a County-wide system & provide bicycle access to schools, shopping & employment centers.	1%	
<input checked="" type="checkbox"/>	Other bicycle amenities	Facilities or measures which go beyond those listed above and which facilitate increased non-vehicular trips. Contact Public Works. Bike racks will be included.	varies	1%
<input type="checkbox"/>	Bus pull-outs	Provide bus pull-outs, convenient pedestrian access to bus stops and other related amenities to encourage transit usage for those portions of the development within one quarter mile of a bus stop. Contact Monterey-Salinas Transit (831) 899-2558.	1%	
<input checked="" type="checkbox"/>	Transportation information centers	Provide locked and secured transportation information centers or kiosks with bus schedules and transit information as part of the common area of the development. Monterey-Salinas Transit shall maintain the transportation information; the developer shall maintain the centers/kiosks. Contact Monterey-Salinas Transit.	.5%	.5%
<input type="checkbox"/>	Pedestrian facilities	Provide pedestrian facilities linking transit stops to common areas.	.5%	
<input type="checkbox"/>	Park & Ride	Provide park & ride facilities. Contact Public Works.	varies	
<input type="checkbox"/>	Child care facilities	Provide on-site child care facilities based on the capacity of the center and marketing data on expected use. Contact Public Works.	varies	
<input type="checkbox"/>	Telecommuting	Provide facilities to encourage telecommuting. Contact Public Works.	varies	
<input type="checkbox"/>	Mixed uses	Provide mixed uses that reduce the length and number of vehicle trips. Project must consist of at least five acres of high density housing within one quarter mile of neighborhood commercial development and have convenient pedestrian access. (Note: Similar trip reduction measures listed elsewhere cannot be counted toward the required vehicle trip reduction). Contact Public Works.	varies	
<input type="checkbox"/>	Transit-oriented design	Residential development with at least 35 percent of the project in high density housing and clustered within one half mile of bus stops on a major arterial with convenient pedestrian access to transit and neighborhood shopping.	5%	5%
<input type="checkbox"/>	Trip generation fees	Contact Public Works.	varies	
<input checked="" type="checkbox"/>	Shuttle bus service, bus pools, or improved transit service	Contact Monterey Salinas Transit (831) 899-2558. Seasonal use of property and busing of residents to and from work and non-work activities (see project description) accounts for greater than the 10% targeted trip reduction.	varies can be up to 30%	30%
<input type="checkbox"/>	Other	Other measures supported by documented data of trip reductions in other developments. Contact Public Works.	varies	

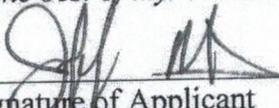
RESIDENTIAL TOTAL	
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THE FOLLOWING TOURIST-ORIENTED VEHICLE TRIP REDUCTION MEASURES ARE INCLUDED, AND MADE A PART HEAROF, IN THE ABOVE REFERENCED TOURIST ORIENTED DEVELOPMENTS.

Check Boxes That Apply	Vehicle Trip Reduction Measure	Tourist-Oriented Development Permit Conditions	Red uce (%)	Total (%)
<input type="checkbox"/>	Child care facilities	Provide on-site child care facilities for children of tourists. Contact Public Works.	varies	
<input type="checkbox"/>	Transit scheduling information	Provide transit scheduling information for tourists.	.5%	
<input type="checkbox"/>	Bicycle amenities	1. Proposed development/use adjacent to bicycle lanes. Contact Public Works.	varies up to 2%	
<input type="checkbox"/>	Bus pull-outs	Provide bus pull-outs, pedestrian access and transit stops.	5%	
<input type="checkbox"/>	Bus subsidy	Provide transit subsidy program for tourists that reduces the cost of a bus pass by 50% from standard rate.	1%	
<input type="checkbox"/>	Transportation information centers	Provide locked and secured transportation information centers or kiosks with bus schedules and transit information. Monterey-Salinas Transit shall maintain the transportation; the developer shall maintain the centers/kiosks. Contact Monterey-Salinas Transit.	.5%	
<input type="checkbox"/>	Pedestrian facilities	Provide pedestrian facilities linking transit stops to tourist facilities entrances, provided such pedestrian facilities do not exceed one-quarter mile.	.5%	
<input type="checkbox"/>	Other pedestrian facilities	Pedestrian and bicycle system improvements beyond above related measures. Contact Public Works.	varies	
<input type="checkbox"/>	Other site amenities	Provide site amenities that reduce the need for vehicle trips based on documentation of trip reduction. Contact Public Works.	varies	
<input type="checkbox"/>	Park & ride	Provide park & ride facilities. Contact Public Works.	varies	
<input type="checkbox"/>	Transportation system management program	Provide a local transportation system management program to reduce on-site trips based on documentation of expected trip reduction. Contact Public Works.	2%	
<input type="checkbox"/>	Educational and Marketing	Provide educational and marketing strategies to tourists to reduce vehicle trips. Contact Public Works.	varies	
<input type="checkbox"/>	On-site services	Provide on-site ATMs, restaurants, dry cleaners, grocery and other typically needed services to reduce travel.	1%	
<input type="checkbox"/>	Park & ride, shuttles, marketing techniques for special events	Provide information to Public Works.	varies	

<input type="checkbox"/>	Tourist-oriented vehicle use reduction	Provide information to Public Works.	varies	
<input type="checkbox"/>	Other	Other measures supported by documented data of trip reductions in other developments. Contact Public Works.	varies	
TOURIST-ORIENTED DEVELOPMENT TOTAL				

I/we declare under penalty of perjury that the information contained in this Facilities Trip Reduction Plan, including any attachments included herewith, are true and correct to the best of my/our knowledge.



 Signature of Applicant

10/14/21

 Date

Cesar Padilla

 Signature of Property Owner or Authorized Agent

10/14/21

 Date

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