

# **Traffic Study**

Regusci Winery, Major Modification to Use Permit P16-00307 & Request for Exception to Road and Street Standards Planning Commission Hearing Date, November 15, 2017 Focused Traffic Analysis for the Proposed:

## Regusci Vineyards Winery Use Modification Project

County of Napa

Prepared for:

The County of Napa

At the Request of:

**Regusci Vineyards** 

Draft Report

June, 2017

Prepared by:



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#### FOCUSED TRAFFIC ANALYSIS

#### PROPOSED REGUSCI VINEYARDS WINERY USE MODIFICATION PROJECT

Prepared For: COUNTY OF NAPA At the request of: Regusci Vineyards

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> Draft Report JUNE, 2017

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Weekday PM and Weekend Mid-Day Peak Hour Intersection Counts Vehicle Speed Survey Sheets Weekday PM and Weekend Mid-Day Intersection LOS Calculation Sheets Right-Turn Guideline Diagram

### **1. Introduction**

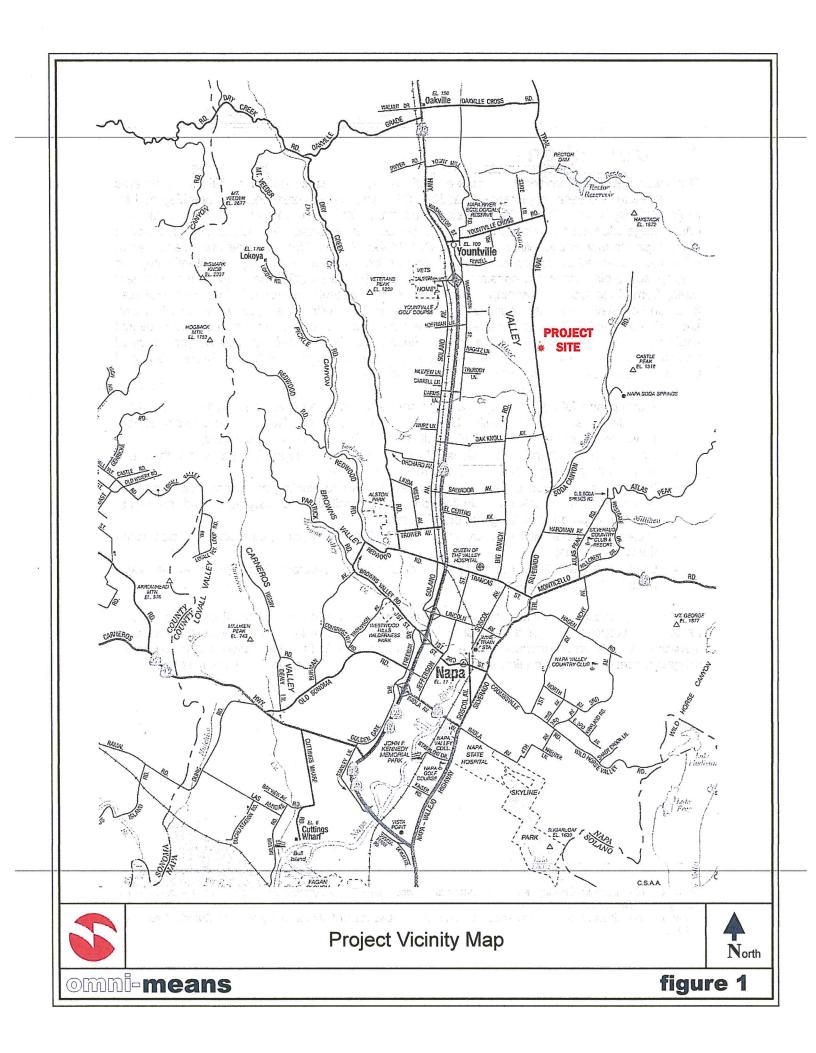
The following report provides a focused traffic analysis for the proposed Regusci Vineyards Winery Use Modification project located at 5584 Silverado Trail in Napa County— (see Figure 1 for Project Vicinity Map). This traffic analysis is based on discussions with your planning consultant (Mr. George Monteverdi) about the proposed project characteristics as well as correspondence from Napa County Public Works staff (Mr. Rick Marshall) and Planning staff (Ms. Dana Ayers) related to the overall traffic scope/analysis. The methodologies for analyzing the potential impacts of proposed project uses are consistent with the Use Permit Modification (Supplemental Winery Uses) from Napa County Planning, Building, and Environmental Services.<sup>1</sup> The methodologies focus on both daily and peak hour trip generation associated with winery production, employment, and visitation levels. Proposed marketing plans and/or special events are also included in overall analyses of trip generation characteristics. Finally, the County has recently adopted revised transportation significance criteria established in the memorandum by Fehr and Peers.<sup>2</sup> Some of the key issues evaluated in this study include the following:

- Existing and future weekday PM peak hour and weekend (Saturday) mid-day peak hour operations at the Yountville Crossroad/Silverado Trail, Regusci Vineyards Winery Driveway/Silverado Trail, and Oak Knoll Avenue/Silverado Trail intersections;
- Near-Term (2020) traffic conditions reflecting other approved/pending projects in the study area encompassing Napa County and the City of Napa;
- Increase in proposed project trip generation relative to existing conditions from proposed project use modifications including production, visitation, employment, and marketing events compared to existing use permit conditions;
- Project site access at the winery's Silverado Trail driveway and circulation of vehicles within the winery areas;
- Cumulative year 2030 (no project) conditions along Silverado Trail based on the Napa County General Plan Update EIR.

The following sections outline existing and future conditions with and without the net increase in traffic from proposed Regusci Vineyards Winery Use modification project. Where necessary, measures have been recommended to ensure acceptable traffic flow, circulation, and/or fair share mitigation consistent with significance thresholds outlined in the Fehr and Peers memorandum.

<sup>1</sup> Napa County Planning, Building, and Environmental Services, Use Permit Application (Supplemental Application for Winery Uses, Revised June 11, 2015.

<sup>2</sup> Fehr & Peers, Guidelines for Interpretation of General Plan Circulation Policies on Significance Criteria, December 1, 2015.



## 2. Existing Conditions

#### Proposed Project Site

The Regusci Vineyards Winery is located at 5584 Silverado Trail north of the City of Napa approximately midway between Oak Knoll and Yountville (located to the west via SR-29). Yountville Crossroad and Oak Knoll Avenue provide east-west access to Silverado Trail to/from Yountville and SR-29. A brief description of each roadway follows:

#### Roadways

**State Route 29** extends in a north-south direction between City of Napa and Town of Yountville in the project study area. In this area, SR-29 is classified as a four-lane rural throughway (arterial) based on the Napa County General Plan. SR-29 provides access north to Yountville, Oakville, Rutherford, St. Helena, and beyond. To the south, the highway provides access to Napa, American Canyon and Vallejo. In the immediate project site area SR-29 has two travel lanes in each direction separated by wide grass median. The speed limit on SR-29 is 60 mph in the project area.

**Yountville Crossroad** extends between Yount Mill Road in Yountville to Silverado Trail in an eastwest direction. A two-lane roadway, Yountville Crossroad provides one of many east-west crossings of the Napa Valley between SR-29 (proper) and Silverado Trail. Extending east from Yountville, the roadway has a speed limit of 35 mph with Class II bike lanes that extend for its entire length. Continuing east past Stag's View Lane and the Town's limit, the speed limit has recently been increased to 55 mph in the unincorporated areas until State Lane where speeds are again reduced to 45 mph to Silverado Trail. Yountville Crossroad provides access primarily to residential areas adjacent to Yountville and agricultural/vineyard areas for most of its length.

**Oak Knoll Avenue** extends between SR-29 and Silverado Trail south of the proposed project site. Like Yountville Crossroad, Oak Knoll Avenue is a two-lane roadway with speed limits of 45-55 mph. However, there are no Class II bike lanes on the roadway and posted signs indicate "Share the Road." Approximately 1.2 miles east of SR-29, Oak Knoll Avenue intersects Big Ranch Road prior to Silverado Trail. At this t-type intersection, Oak Knoll Avenue is off-set about 230 feet to the north before extending another 0.8 miles to Silverado Trail. Oak Knoll Avenue provides access to agricultural/vineyard areas.

**Silverado Trail** provides direct access to the proposed project site extending in a north-south direction between the Cities of Napa and Calistoga. In addition to SR-29, Silverado Trail makes up the primary north-south route through the Napa Valley. In the project study area, Silverado Trail has two travel lanes and Class II bike lanes. The speed limit on Silverado Trail is 55 mph in the vicinity of project site.

#### **Existing Volumes**

In order to identify existing peak hour operating conditions, existing peak period traffic counts were conducted at the Regusci Vineyards Winery (RVW) driveway and major outlying Silverado Trail

intersections north and south of the driveway.<sup>3 4</sup> Vehicle counts were conducted during a weekday PM commute period and a Saturday peak afternoon period at the following intersections:

- 1. Yountville Crossroad/Silverado Trail
- Regusci Vineyards Driveway/Silverado Trail
   Oak Knoll Avenue/Silverado Trail

Stop-control (Yountville Crossroad) Stop-control (RVW Driveway) Stop-control (Oak Knoll Ave.)

Peak period vehicle counts were conducted on a weekday late afternoon (4:00-6:00 p.m.) and Saturday afternoon (1:00-4:00 p.m.). The resultant "peak hour" of traffic flow on Silverado Trail occurs during 4:30-5:30 p.m. (Wednesday) and 1:45-2:45 p.m. (Saturday). Peak period counts were conducted during the non harvest/crush season (early January) and do not fully reflect peak traffic conditions on Silverado Trail. Therefore, peak hour volumes on Silverado Trail were increased by 15% at all study intersections based on Napa County historical ADT data for Silverado Trail.

Existing weekday PM peak hour and weekend mid-day peak hour intersection volumes have been shown in Figure 2.

#### Roadway Volumes

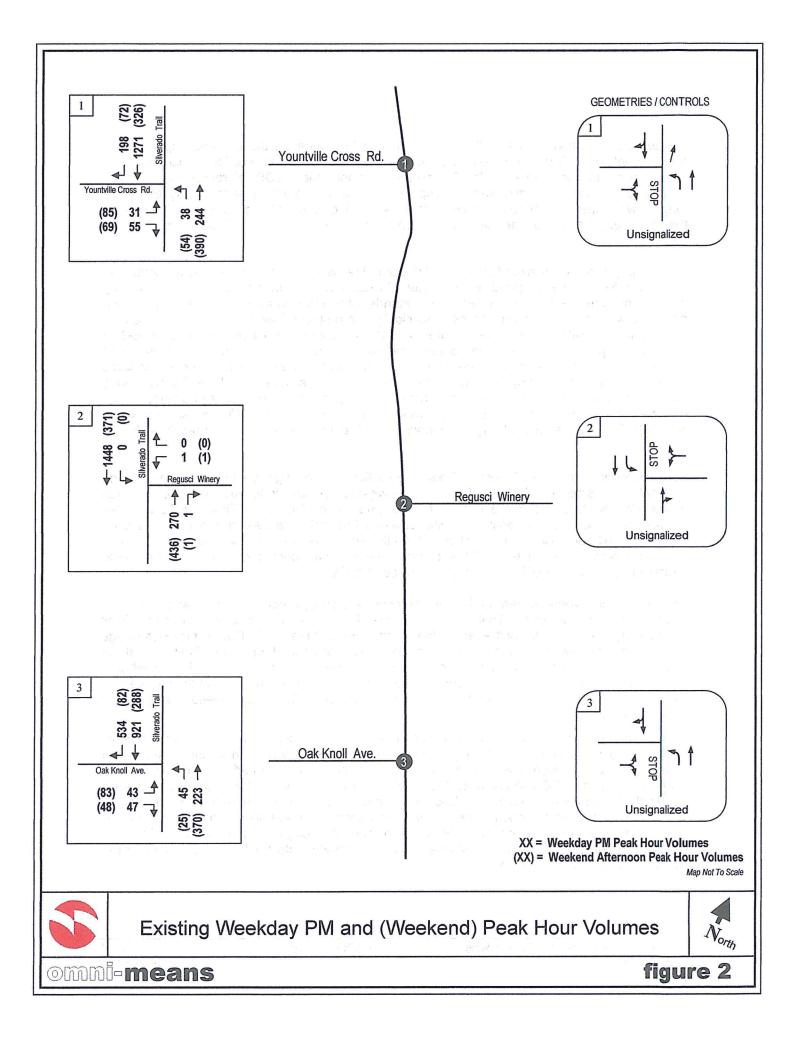
New average daily traffic (ADT) counts were conducted along Silverado Trail just south of Regusci Winery main access driveway. As recorded, average daily traffic on the roadway is currently 12,425 vehicles. Again, these traffic counts were conducted during the month of January when ADT volumes do not reflect peak month activity. Therefore, a comparison of peak month activity and non-peak month activity was evaluated for Silverado Trail based on Napa County historical volume data for County roadways. The ADT comparison indicates peak month volumes are 15 percent higher than during non- peak month activity. Consequently, ADT on Silverado Trail, Yountville Crossroad, and Oak Knoll Avenue was increased by 15 percent to reflect peak month activity. Based on Napa County's designation of Silverado Trail as a two-lane rural highway, an ADT of 14,290 reflects operations of LOS E.<sup>5</sup> Yountville Crossroad is currently carrying 3,455 ADT adjacent to (west of) Silverado Trail reflecting an LOS of B. Finally, Oak Knoll Avenue carries approximately 4,165 ADT west of Silverado Trail. Based on the County's two-lane collector designation these capacities would reflect LOS B operations. It is noted that County's roadway capacity/LOS criteria is based on the County's Baseline Data Report and is directly associated with the County's General Plan Update. The roadway capacity/LOS criteria in the document define capacities for rural arterials and collector streets found in the Napa Valley and overall County network and are based on the Florida Department of Transportation (FDOT) and Fehr and Peers research. Based on more recent research conducted as part of the 2010 Highway Capacity Manual and FDOT, a two-lane undivided roadway would have a capacity of 16,200 ADT (LOS D). Therefore, ADT volumes of 14,290 on Silverado Trail more closely relate to roadway LOS of B based on updated capacity models and research (see Appendices for Roadway LOS Table).<sup>6</sup>

<sup>&</sup>lt;sup>3</sup> Baymetrics Traffic Resources, Weekday peak period (4:00-6:00 p.m.) and Weekend (Saturday) peak period (1:00-4:00 p.m) vehicle turning movement counts at the Yountville Crossroad, Regusci Vineyards Winery Driveway, and Oak Knoll Avenue intersections at Silverado Trail, January 14 & 17, 2017.

<sup>&</sup>lt;sup>4</sup> Baymetrics Traffic Resources, Average daily traffic (ADT) counts on Silverado Trail south of Regusci Vineyards Winery driveway, January 14-17 & 25, 2017.

<sup>&</sup>lt;sup>5</sup> Napa County Baseline Data Report, Transportation and Circulation, Table 11-1, Napa County Roadway Segment Daily LOS Volume Thresholds, 2005.

<sup>&</sup>lt;sup>6</sup> Florida Department of Transportation (FDOT), 2012 Quality/Level of Service Handbook Tables, Table 2, Areas over 5,000 not in Urbanized Areas.



#### Existing Intersection Methodology/Description

Intersection operation is one of the primary factors in evaluating the carrying capacity of a roadway network. Traffic conditions are measured by Level of Service (LOS), which applies a letter ranking to successive levels of intersection performance. LOS 'A' represents optimum conditions with free-flow travel and no congestion. LOS 'F' represents severe congestion with long delays at the approaches. For intersections with minor street stop control, the LOS reflects the delays experienced by the minor street approach. Level of service definitions are shown in Table 1.

The existing project driveway location at Silverado Trail is a minor-street, stop-sign controlled one-lane driveway that is gated approximately 60 feet from the main roadway. After passing through the gated entrance, the driveway extends east approximately 2,250 feet to provide access to winery and residential areas. Specifically, the project driveway divides at this eastern point; winery operations are located on the north half of the site with residential areas located on the southern portion of the site. In addition, the paved driveway width is approximately 13-14 feet from Silverado Trail east to the winery and residential uses. Napa County standards require a minimum driveway width of 18-feet. However, consistent with Napa County Roads and Street standards, a large 10-foot wide gravel shoulder extends along the entire length of the driveway to provide for turn-outs for two-way traffic. A southbound left-turn lane exists on Silverado Trail the Regusci Winery main driveway with a storage capacity of approximately 150 feet.

The Yountville Crossroad/Silverado Trail intersection is stop-sign controlled for eastbound Yountville Crossroad at Silverado Trail. A two-way-left-turn lane is located on Silverado Trail immediately south of Yountville Crossroad that extends for 290 feet. This TWLTL provides northbound left-turn access onto Yountville Crossroad as well as access to other driveways on Silverado Trail south of the intersection. A northbound refuge/acceleration lane on Silverado Trail extends for approximately 100 feet to allow eastbound motorists turning left from Yountville Crossroad onto Silverado Trail to merge into through-traffic.

The Oak Knoll Avenue/Silverado Trail intersection is stop-sign controlled for eastbound Oak Knoll Avenue at Silverado Trail. A two-way-left-turn lane is located on Silverado Trail immediately north of Oak Knoll Avenue that extends for 350 feet. This TWLTL provides refuge acceleration for eastbound motorists turning left onto northbound Silverado Trail as well as access to other driveways on Silverado Trail north of the intersection. A northbound left-turn lane on Silverado Trail extends for approximately 125 feet immediately south of the intersection that allows motorists turning left from Silverado Trail onto Oak Knoll Avenue refuge from through-traffic.

Intersection levels-of-service have been based on the most recent Highway Capacity Manual (*HCM 2010*) operations methodology for unsignalized intersections. In addition, peak hour factors (PHF's) for each intersection approach have been incorporated into all existing and future intersection LOS calculations. The PHF is a measure of the traffic flow rate at each intersection approach. Based on field count data, these PHF's ranged from .50 to .98 dependent on each intersection. Intersection approaches with lower approach volumes typically have lower (and more conservative) PHF's. In addition, all through-traffic on Silverado Trail was adjusted to reflect 5% truck traffic and has been incorporated into the LOS calculations based on the most recent Caltrans data.

|                   |                                 |   | , , , , , , , , , , , , , , , , , , ,   | Stopped Delay              | /Vehicle (sec)               |
|-------------------|---------------------------------|---|---|----------------------------|------------------------------|
| evel of<br>ervice | Type of<br>Flow                 | Delay   | Maneuverability   | Signalized/<br>Roundabouts | Unsignalized<br>All-Way Stop |
| A                 | Stable<br>Flow                  | Very slight delay. Progression is<br>very favorable, with most vehicles<br>arriving during the green phase<br>not stopping at all.  | Turning movements are<br>easily made, and nearly all<br>drivers find freedom of<br>operation.   | < 10.0                     | < 10.0                       |
| В                 | Stable<br>Flow                  | Good progression and/or short<br>cycle lengths. More vehicles stop<br>than for LOS A, causing higher<br>levels of average delay.  | Vehicle platoons are<br>formed. Many drivers begin<br>to feel somewhat restricted<br>within groups of vehicles.   | >10.0<br>and<br>< 20.0     | >10.0<br>and<br>< 15.0       |
| С                 | Stable<br>Flow                  | Higher delays resulting from fair<br>progression and/or longer cycle<br>lengths. Individual cycle failures<br>may begin to appear at this level.<br>The number of vehicles stopping is<br>significant, although many still<br>pass through the intersection<br>without stopping.  | Back-ups may develop<br>behind turning vehicles.<br>Most drivers feel somewhat<br>restricted.   | >20.0<br>and<br>< 35.0     | >15.0<br>and<br>< 25.0       |
| D                 | Approaching<br>Unstable<br>Flow | The influence of congestion<br>becomes more noticeable. Longer<br>delays may result from some<br>combination of unfavorable<br>progression, long cycle lengths, or<br>high volume-to-capacity ratios.<br>Many vehicles stop, and the<br>proportion of vehicles not stopping<br>declines. Individual cycle failures<br>are noticeable. | Maneuverability is severely<br>limited during short periods<br>due to temporary back-ups.   | >35.0<br>and<br>< 55.0     | >25.0<br>and<br>< 35.0       |
| E                 | Unstable<br>Flow                | Generally considered to be the<br>limit of acceptable delay. Indicative<br>of poor progression, long cycle<br>lengths, and high volume-to-<br>capacity ratios. Individual cycle<br>failures are frequent occurrences.   | There are typically long<br>queues of vehicles waiting<br>upstream of the<br>intersection.  | >55.0<br>and<br>< 80.0     | >35.0<br>and<br>< 50.0       |
| F                 | For                             | Generally considered to be<br>unacceptable to most drivers.<br>Often occurs with over saturation.<br>May also occur at high volume-to-<br>capacity ratios. There are many<br>individual cycle failures. Poor<br>progression and long cycle lengths<br>may also be major contributing<br>factors.                                      | Jammed conditions. Back-<br>ups from other locations<br>restrict or prevent<br>movement. Volumes may<br>vary widely, depending<br>principally on the<br>downstream back-up<br>conditions. | > 80.0                     | > 50.0                       |

TABLE 1 INTERSECTION LEVEL-OF-SERVICE DEFINITIONS

References: 2010 Highway Capacity Manual

#### **Existing Intersection Operations**

Existing weekday PM peak and weekend mid-day peak hour existing (no project) level-ofservice has been shown in Table 2. As calculated, the Yountville Crossroad/Silverado Trail intersection is operating at LOS D (29.6 seconds) during the weekday PM peak hour and LOS B seconds) during the weekend mid-day peak hour. The Regusci Winery (11.4 Driveway/Silverado Trail intersection is operating at LOS D (28.1 seconds) during the weekday PM peak hour for the outbound driveway turning movements onto Silverado Trail. During the weekend mid-day peak hour, the driveway operates at LOS B (13.2 seconds). Finally, the Oak Knoll Avenue/Silverado Trail intersection is operating at LOS E (39.1 seconds) during the weekday PM peak hour and LOS B (14.5 seconds) during the weekend mid-day peak hour. Calculated intersection LOS applies to the minor street stop-sign controlled movements at Silverado Trail. It is noted that the more major crossroad intersections of Yountville Crossroad and Oak Knoll Avenue can experience major delays for minor street controlled traffic due to existing traffic components on Silverado Trail. Specifically, these factors on Silverado Trail include higher vehicle speeds, higher traffic volumes, and the lack of "gaps" in north-south traffic to allow safe access onto Silverado Trail. These conditions are very pronounced during the weekday PM peak hour period when commute traffic is leaving the Napa Valley in a predominantly southbound direction. There is a very high southbound right-turn movement (+500 vehicles) from southbound Silverado Trail onto Oak Knoll Avenue during the PM peak hour (in addition to high southbound through-traffic). These southbound movements on Silverado Trail cause long delays for stop-sign controlled eastbound left and right-turn movements from Oak Knoll Avenue and combine to cause longer vehicle delays for minor street stop-sign controlled traffic at Silverado Trail.

 TABLE 2

 EXISTING AND NEAR-TERM (NO PROJECT) CONDITIONS: INTERSECTION LEVELS-OF-SERVICE

 WEEKDAY PM PEAK AND WEEKEND MID-DAY PEAK HOUR<sup>1, 2</sup>

|   |                                      |                 | Wkdy. PM LOS/Delay       |                           | Wknd. Mid-Day LOS/Delay  |                           |
|---|--------------------------------------|-----------------|--------------------------|---------------------------|--------------------------|---------------------------|
|   | Intersection                         | Control<br>Type | Existing<br>(No Project) | Near-Term<br>(No Project) | Existing<br>(No Project) | Near-Term<br>(No Project) |
| 1 | Yountville Crossroad/Silverado Trail | Stop            | D 29.6                   | D 32.1                    | B 11.4                   | B 13.1                    |
| 2 | Regusci Driveway/Silverado Trail     | Stop            | D 28.1                   | D 29.5                    | B 13.2                   | B 13.4                    |
|   | Oak Knoll Ave./Silverado Trail       | Stop            | E 39.1                   | E 43.6                    | B 14.5                   | C 16.6                    |

(1) Based on Highway Capacity Manual (HCM) 2010, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds. Stated LOS refers to the minor street (stop-sign) controlled movement.

(2) Existing conditions represent the CEQA basis for measuring project impacts and already contain proposed use permit visitation, proposed employment, current winery production, and some marketing activities associated with Regusci Vineyards Winery operations.

#### Signal Warrant Evaluation

Based on the California Manual on Uniform Traffic Control Devices (CAMUTCD) peak hour signal warrant criteria, the two major crossroad unsignalized study intersections were evaluated for signalization.<sup>7</sup> The peak hour warrant(s) are one of several standards to help determine if installation of a traffic signal is appropriate. Qualifying for signalization using the peak hour warrants does not necessarily mean a signal should be installed. The decision to install a traffic signal should be based on further studies utilizing additional warrants as presented in the California

<sup>&</sup>lt;sup>7</sup> California Manual on Uniform Traffic Control Devices (CAMUTCD), Chapter 4C, Peak hour signal warrant (#3), 2012.

MUTCD. At this time, the Yountville Crossroad/Silverado Trail and Oak Knoll Avenue/Silverado Trail intersections would qualify for signalization under the peak hour warrant (the warrant graphs are provided in the Appendix). Driveway volumes at Regusci Winery are too low for warrant satisfaction.

## 3. Near-Term (No Project) Conditions

Near-Term Methodology

Both near-term (year 2020-no project) and cumulative (year 2030) volume projections for SR-29 were reviewed from the Napa Valley Transportation Authority's traffic volume forecasts found in the Napa County General Plan Update EIR.<sup>8</sup> The forecasted increase in volume-to-capacity (v/c) ratio from Year 2003 to Year 2030 on Silverado Trail (adjacent to Oak Knoll Avenue) was applied to the Year 2003 peak hour two-way volumes (1,212 vehicles). This yielded a future volume of 2,020 weekday PM peak hour vehicles on Silverado Trail in the Year 2030. This would equate to an increase in traffic volumes of approximately 66% over the 27-year period (2.4% per year) to the Year 2030 on Silverado Trail. Similarly, the County's GPU EIR project's a 17% increase on Yountville Crossroad (0.63% per year) and no increases in future traffic volumes on Oak Knoll Avenue.

In addition to Napa County General Plan Update EIR traffic projections, a recent transportation study conducted for the adjacent Beau Vigne Winery located south of Regusci Winery was reviewed for adjacent development projects and future traffic projections in the study area.<sup>9</sup> Local approved/pending projects in the immediate study area have been included in overall traffic growth at the request of Napa County Public Works staff.<sup>10</sup> Specifically, ongoing development projects occurring within Napa County include the following:

- Refuge Winery 3150 Silverado Trail, approximately 3.5 miles south of the project site; new winery with an annual production of 50,000 gallons; six full-time employees and four part-time employees; average of 124 visitors per day; average of 125 guests at special events;
- Taylor Winery 5991 Silverado Trail, approximately 1.4 miles north of the project site; new winery with an annual production of 15,000 gallons; one full-time employee and one part-time employee; average of 17 visitors per day; average of 30 guests at special events;
- Reynolds Winery 3720 Silverado Trail, approximately 3.4 miles south of the project site; use permit update to produce 20,000 additional gallons annually; 10 additional employees; average of 30 additional visitors per day; average of 125 guests at special events;
- Grassi Family Winery 1044 Soda Canyon Road, approximately 3.6 miles south of the project site, use permit update to produce 25,000 gallons annually; 10 employees; average of 12 visitors per day; average of 60 guests at special events;

<sup>&</sup>lt;sup>8</sup> Dowling Associates, Napa County General Plan Update, Technical Memorandum for Traffic and Circulation Supporting the Findings and Recommendations, February 9, 2008.

<sup>&</sup>lt;sup>9</sup> W-Trans, Focused Traffic Impact Study for the Beau Vigne Winery, County of Napa, September 28, 2015.

<sup>&</sup>lt;sup>10</sup> Ms. Dana Ayers, Associate Planner, County of Napa, personal communication related to County development projects, January 26, 2017.

- **Baldacci Family Winery** 6236 Silverado Trail, approximately 2 miles north of the project site; use permit update to produce 20,000 additional gallons annually; 10 additional employees; average of 100 additional visitors per day; average of 50 guests at special events;
- Ellman Family Winery 3286 Silverado Trail, approximately 3.2 miles south of the project site, use permit update to produce 30,000 gallons annually; 6 employees; average of 15 visitors per day; average of 25 guests at special events;
- Beau Vigne Winery 4079 Silverado Trail, approximately 3.0 miles south of the project site, use permit update to produce 6,000 additional gallons annually; 4 employees; average of 15 visitors per day; average of 25 guests at special events;
- Stag's Leap Winery 5766 Silverado Trail, approximately 0.3 miles north of the project site; use permit update to have an additional 25 employees; maximum of 250 guests at special events;
- Corona Winery 3165 Silverado Trail, approximately 3.4 miles south of the project site; new winery with an annual production of 100,000 gallons; 25 employees; average of 48 visitors per day; maximum of 125 guests at special events;
- Sam Jasper Winery—4059 Silverado Trail, approximately 3.0 miles south of the project site, new winery with annual production of 20,000 gallons, 10 employees, average of 25 visitors per day, maximum of 50 guests at special events.

With regard to near-term (no project) conditions, a three-year horizon window to the Year 2020 has been assumed. Based on the approved/pending projects reviewed by County staff, both weekday PM peak hour and weekend mid-day peak hour traffic volumes resulting from these projects were added to the street network.

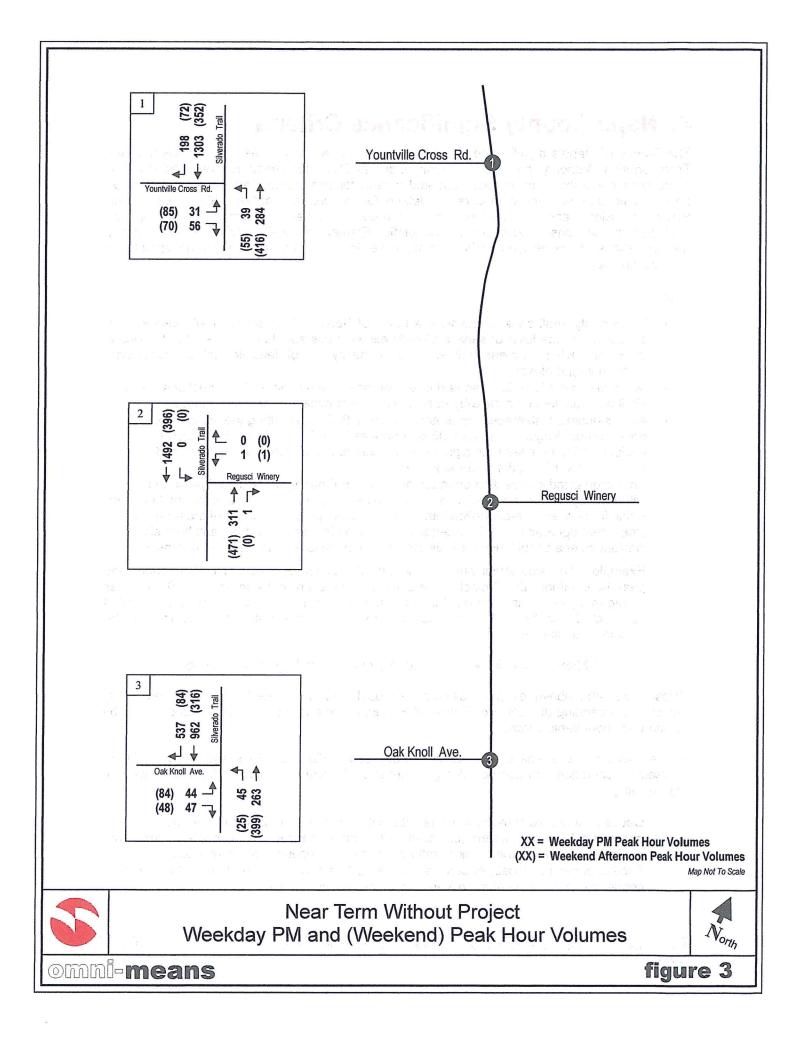
Near-term (no project) volumes for weekday PM peak hour and weekend mid-day peak hour have been shown in Figure 3.

#### Near-Term (No Project) Roadway/Intersection Operation

ADT on Silverado Trail would increase to 14,650 (LOS D) near the project driveway with near-term (no project) volumes. ADT on Yountville Crossroad would increase to 3,520 (LOS B) with ADT on Oak Knoll Avenue increasing to 4,265 (LOS B).

With near-term (no project) volumes, study intersection LOS has been calculated and are shown in Table 2. The Yountville Crossroad/Silverado Trail intersection would experience very slight increases in vehicle delays during the weekday PM peak hour and/or weekend mid-day peak hour. For the minor street outbound turning movements, LOS would continue to operate at LOS D (32.1 secs.) during the PM peak hour and LOS B (13.1 secs.) during the Saturday mid-day peak hour. The Regusci Winery Driveway/Silverado Trail intersection would operate at LOS D (29.5 seconds) during the weekday PM peak hour and LOS B (13.4 seconds) during the weekend mid-day peak hour. Finally, the Oak Knoll Avenue/Silverado Trail intersection would continue to operate at LOS E (43.6 secs.) during the PM peak hour and LOS C (16.6 secs.) during the Saturday mid-day peak hour. Stated LOS applies to all stop-sign controlled movements minor streets onto Silverado Trail.

Based on CAMUTCD peak hour signal warrant criteria (Warrant #3), both the Yountville Crossroad and Oak Knoll Avenue intersection at Silverado Trail would continue to meet minimum volumes criteria for signalization. The Regusci Winery Driveway intersection would not qualify for signalization with near-term (no project) volumes.



### 4. Napa County Significance Criteria

The County of Napa's significance criteria has been based on a review of the Napa Valley Transportation Authority and Napa County General Plan documentation on roadway and intersection operations. In addition, updated criteria for unsignalized intersections based on adopted criteria in the Fehr and Peers "Guidelines for Interpretation of General Plan Circulation Policies on Significance Criteria" has been applied to arterials and minor street stop-sign controlled intersections. Specifically, the Circulation Element of the County's General Plan and new guidelines for significance criteria outline the following significance criteria specific to intersection operation:

#### Intersections

- The County shall seek to maintain a Level of Service D or better at all intersections, except where the level of service already exceeds this standard (i.e. Level of Service E or F) and where increased intersection capacity is not feasible without substantial additional right-of-way;
- No single level of service standard is appropriate for un-signalized intersections, which shall be evaluated on a case-by-case basis to determine if signal warrants are met;
- An unsignalized intersection operates at LOS A, B, C, or D during the selected peak hours without Project trips, the LOS deteriorates to LOS E or F with the addition of Project traffic, the peak hour signal warrant criteria should also be evaluated and presented for informational purposes; or
- An unsignalized intersection operates at LOS E or F during the selected peak hours without Project trips, and the project contributes one percent or more of the total entering traffic for all-way-stop-controlled intersections, or ten percent or more of the traffic on a side-street approach for side-street stop-controlled intersections; the peak hour signal warrant criteria should also be evaluated and presented for informational purposes.

Example: The side-street approach at an intersection operates at LOS F during the peak hour without the Project. The existing volume on that approach is 200 vehicles during that peak hour. A Project is anticipated to add 10 vehicles to the stop-controlled approach during the peak hour. Therefore, the Project contribution percentage would be calculated as follows:

#### 10 trips / 200 existing side-street approach = 5% Project Contribution

Please note----the above example calculation would only be applied for any project study intersection operating at LOS E or F without Project traffic and the proposed project would be adding peak hour vehicle trips.

Further significance criteria are based on County and CEQA guidelines and apply mainly to intersection operation and access. A significant impact occurs if project traffic would result in the following:

- Cause an increase in traffic which is substantial in relation to existing traffic load and capacity of the street system (i.e. result in a substantial increase in either the number of vehicle trips, the volume capacity ratio on roads, or congestion at intersections);
- Exceed either individually or cumulatively, an LOS standard established by the county congestion management agency for designated roads or highways;

- Result in a change of traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);
- Result in inadequate emergency vehicle access;
- Project site or internal circulation on the site is not adequate to accommodate pedestrians and bicycles;

## 5. Proposed Project Impacts

#### **Proposed Winery Use Modifications**

The proposed Regusci Vineyards Winery Use Permit Modification project would consist of both physical improvements to the project site as well as associated winery activities. Based on discussions with the project applicant, current activities at the winery related to employee staffing and visitors frequently exceed existing entitlements. Proposed entitlement changes would include up to 16 employees (weekday) and 10 employees (weekend). Tour and tasting visitation would include up to 150 guests per day (maximum-weekend) and 400 guests per week (maximum). It is noted that the 150 guests per day would only occasionally be reached by the winery in association with tours and tasting. A much more realistic (or average) visitation number would be 80 guests per day and this would typically occur during a weekend period (Saturday or Sunday) and not on a weekday. The winery production from 25,000 gallons to 50,000 gallon per year. In addition, the winery has included a marketing plan with up to 16 events per year.

Proposed project components can be described as follows:

#### Project Components (Winery Operations):

- Production Gallons: 50,000 (annually)
- Employees Weekday: 12 full-time, 4 part-time
  - Weekend: 6 full-time, 4 part-time
- Visitors: Weekday: 50 visitors Weekend: 150 visitors
   Trucks: Weekday: 2 trucks per day Weekend: 2 trucks per day

Daily operations for the proposed Regusci Vineyards Winery project would involve an on-site winery operation with a maximum annual production of 50,000 gallons. All fruit would be processed on-site during the year with the majority occurring during the harvest/crush season. An average of 50 weekday visitors is expected increasing to an average of 80 daily visitors on a weekend (with a maximum 150 guests Saturday or Sunday). Visitor hours would be limited between 10:00 a.m. – 6:00 p.m. and would be by appointment only. It is noted that there is an existing single-family residence (occupied) on the site. Vehicle trips associated with this residence have been included in existing daily and peak hour counts conducted for proposed project analysis.

The proposed project's marketing plan can be described as follows:<sup>11</sup>

#### Project Components (Marketing):

- Ten (10) events annually: maximum of 50 guests;
- Five (5) events annually: maximum of 150 guests;
- One (1) event annually: maximum of 200 guests.

#### Project Trip Generation/Distribution

The Regusci Vineyards Winery total net increase in weekday and weekend peak hour and daily traffic volumes have been calculated and are shown in Table 3. Daily trip generation has been based on employee peaking factors and auto occupancy rates for visitors using recent winery research conducted by the Napa County Planning, Building, and Environmental Services Department.<sup>12</sup> Based on maximum employee, visitor/guest, and production data the proposed project would be expected to generate 85 weekday daily trips with 32 PM peak hour trips (8 in, 24 out). During a typical weekend (Saturday), the project would be expected to generate a maximum of 133 daily trips with 34 mid-day (afternoon) peak hour trips (17 in, 17 out).

During the approximate six-week harvest crush season, the proposed project is expected to generate a maximum of 142 Saturday daily trips. Based on the largest marketing event attendance of 200 persons (once per year), there would total generation of 157 event trips (unless shuttle buses/TDM are used).

To determine traffic conditions with the proposed project, the calculated project trips were added to existing volumes. Based on observed turning percentages at the Regusci Vineyards Winery driveway, the weekday PM peak hour project trips were distributed 35% to/from the north and 65% to/from the south on Silverado Trail. Saturday mid-day peak hour project trip distribution was distributed with 50% to/from the north and 50% to/from the south on Silverado Trail.

Existing plus project and near-term plus project volumes have been shown in Figure 4 and 5.

<sup>11</sup> Use Permit Modification Application, Project Description, Regusci Vineyards Winery, 5584 Silverado Trail, Napa County, 2016.

<sup>12</sup>County of Napa, Conservation, Development, and Planning Department, "Use Permit Application Package," Napa County Winery Traffic Generation Characteristics, 2012.

 TABLE 3

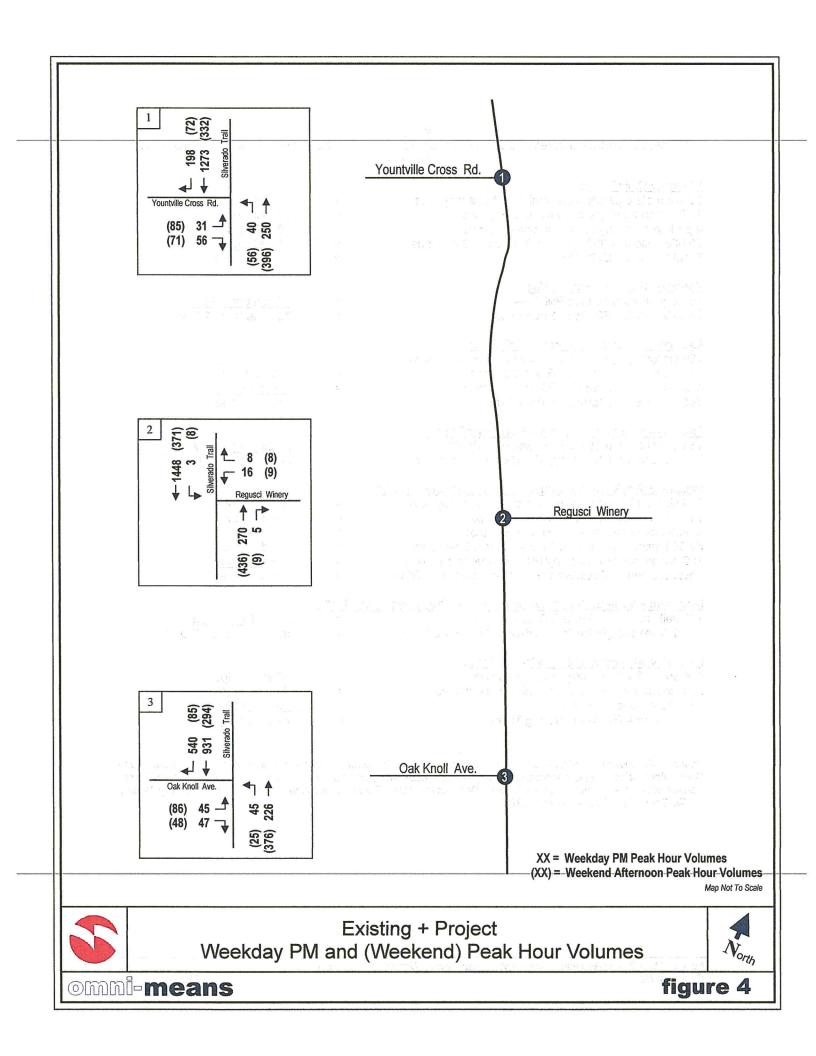
 PROPOSED REGUSCI VINEYARDS WINERY PROJECT:NET INCREASE IN DAILY AND PEAK HOUR TRIP

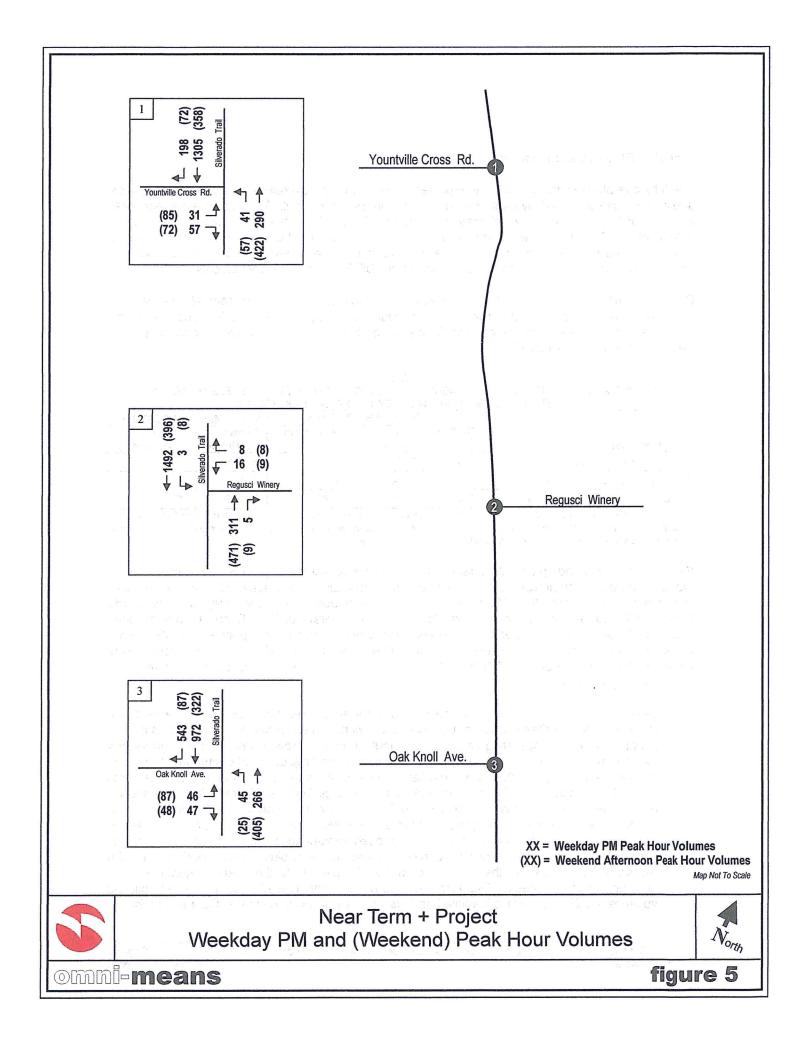
 GENERATION

| Weekday Daily Traffic:   |           |                                 |
|--|-----------|---------------------------------|
| 50 visitors/2.6 persons per vehicle x 2 one-way trips                                    | =         | 39 daily trips                  |
| 12 full-time employees x 3.05 one-way trips  | =         | 37 daily trips                  |
| 4 part-time employees x 1.90 one-way trips   | =         | 8 daily trips                   |
| 50,000 gallons/1,000 x .009 daily trucks x 2 o-w trips                                   | =         | 1 daily trips                   |
| Total Weekday Daily Trips  | =         | 85 daily trips                  |
|  |           |                                 |
| Weekday PM Peak Hour Traffic:  |           |                                 |
| 85 daily trips x 0.38 trips PM Peak:   | =         | <u>32 peak hour trips</u>       |
| Total Weekday PM Peak Hour Trips   | Ξ         | 32 trips (8 in, 24 out)         |
|  |           |                                 |
| Maximum Weekend (Saturday) Daily Traffic:  |           |                                 |
| 150 visitors/2.8 persons per vehicle x 2 one-way trips                                   | =         | 107 daily trips                 |
| 6 full-time employees x 3.05 one-way trips   | =         | 18 daily trips                  |
| 4 part-time employees x 1.90 one-way trips   | =         | 8 daily trips                   |
| Total Weekend (Saturday) Daily Trips   | =         | 133 daily trips                 |
|  |           |                                 |
| Maximum Weekend (Saturday) Peak Hour Traffic:  |           |                                 |
| 133 daily trips x 0.25 trips MD Saturday Peak:   | =         | 34 peak hour trips              |
| Total Weekend (Saturday) Mid-Day Peak Hour Trips   | =         | 34 trips (17 in, 17 out)        |
| Maximum Machand (Ostunday) Daily Harvest/Orysh Traffer                                   |           |                                 |
| Maximum Weekend (Saturday) Daily Harvest/Crush Traffic:                                  | _         |                                 |
| 150 visitors/2.8 persons per vehicle x 2 one-way trips                                   | =         | 107 daily trips                 |
| 8 full time employees x 3.05 one-way trips<br>4 part-time employees x 1.90 one-way trips | =         | 24 daily trips<br>8 daily trips |
| 50,000 gallons/1,000 x .009 daily trucks x 2 o-w trips                                   | =         | 1 daily trips                   |
| 150 annual ton grapes (o-h)/144 daily trucks x 2 o-w trips                               | =         | 2 daily trips                   |
| Total Weekend (Saturday) Daily Harvest/Crush Trips                                       | -         | 142 daily trips                 |
| Total Weekend (Saturday) Daily Harvesbordsh Hips   | -         | 142 daily trips                 |
| Maximum Weekend (Saturday) Daily Harvest/Crush Peak Hou                                  | r Traffic |                                 |
| 142 daily trips x 0.25 trips MD Saturday Peak:   | =         | <u>36 peak hour trips</u>       |
| Total Weekend (Saturday) Mid-Day Peak Hour Trips   | =         | 36 trips (18 in, 18 out)        |
| Total Weekena (outaraay) ma bay Feak hoar hipo   |           |                                 |
| Largest Marketing Event – Additional Traffic   |           |                                 |
| 4 event staff x 2 one-way trips per person   | =         | 8 event trips                   |
| 200 visitors / 2.8 visitors per vehicle x 2 o-w trips                                    | =         | 143 event trips                 |
| 3 trucks x 2 one-way trips   | =         | 6 event trips                   |
| Total Largest Event Marketing Trips:   | =         | 157 event trips                 |
|  |           | •                               |

Source: Production, employee, and visitor data provided by Mr. George Monteverdi (applicant representative), Use Permit Application, Regusci Vineyards Winery, 2016. Daily and peak hour calculations based on County of Napa, Conservation, Development, and Planning Department, "Use Permit Application Package," Napa County Winery Traffic Generation Characteristics, 2015

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#### Project Effects on Roadway/Intersection Operation

#### **Existing Plus Project Conditions**

The fully operational winery would be expected to generate approximately 55 additional daily trips south of the site and 30 daily trips north of the site on Silverado Trail. This would represent a net increase of 0.6% to the daily volumes on Silverado Trail. The combined existing plus project volume of 14,375 daily trips would continue to operate equivalent to LOS 'D'. Yountville Crossroad would continue to operate at LOS B with a daily volume of 3,470 vehicles with proposed project traffic. Oak Knoll Road would continue to operate at LOS B with 4,195 daily vehicles.

During the peak winery activity periods, the winery would be expected to generate 32 weekday PM peak hour trips and 34 Saturday mid-day peak hour project trips. Weekday PM peak hour and weekend mid-day peak hour intersection levels of service were evaluated with proposed project traffic and are shown in Table 4.

| TABLE 4  |
|--|
| EXISTING AND NEAR-TERM WITH PROJECT CONDITIONS: INTERSECTION LEVELS-OF-SERVICE |
| WEEKDAY PM PEAK AND WEEKEND MID-DAY PEAK HOUR <sup>1, 2</sup>                  |

|   |                                      |                 | Wkdy. PM LOS/Delay       |                           | Wknd. Mid-Day LOS/Delay  |                           |
|---|--------------------------------------|-----------------|--------------------------|---------------------------|--------------------------|---------------------------|
|   | Intersection                         | Control<br>Type | Existing<br>(W/ Project) | Near-Term<br>(W/ Project) | Existing<br>(W/ Project) | Near-Term<br>(W/ Project) |
| 1 | Yountville Crossroad/Silverado Trail | Stop            | D 30.1                   | D 32.5                    | B 11.4                   | B 13.2                    |
| 2 | Regusci Driveway/Silverado Trail     | Stop            | C 24.4                   | D 25.7                    | B 12.6                   | B 13.0                    |
| 3 | Oak Knoll Ave./Silverado Trail       | Stop            | E 40.7                   | E 45.7                    | B 14.8                   | C 15.5                    |

(1) Based on Highway Capacity Manual (HCM) 2010, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds. Stated LOS refers to the minor street (stop-sign) controlled movement.

With existing (counted) plus fully operational winery traffic volumes, project study intersections would be operating at similar LOS as under existing (no project) conditions. During the weekday PM peak hour, both the Yountville Crossroad/Silverado Trail and Regusci Vineyards Driveway/Silverado Trail intersections would continue to operate at LOS D and C, respectively. The Oak Knoll Avenue/Silverado Trail intersection would continue to operate at LOS E with proposed project traffic. During the weekend mid-day peak hour, all three study intersections would continue to operate at LOS B or C with slight increases in vehicle delay as a result of proposed project traffic.

Based on updated County significance criteria for side-street stop controlled intersections; the intersection of Oak Knoll Avenue/Silverado Trail has been evaluated for proposed project impacts since it is operating at LOS E without proposed project trips. County guidelines indicate that a significant impact would be identified if the project would contribute 10 percent or more vehicle trips to the stop-controlled approach of Oak Knoll Avenue at Silverado Trail during the selected peak hours. Currently, the Oak Knoll Avenue/Silverado Trail intersection meets the peak hour signal warrant criteria under existing conditions without proposed project trips. (The addition of proposed project trips would not change its status of meeting the peak hour signal warrant criteria). Proposed project trips would merely add to this existing peak hour signal warrant condition. Under existing plus project conditions for the weekday PM peak hour, the project would add 2.2 percent to the overall eastbound peak hour approach volumes on Oak Knoll Avenue at Silverado Trail (2 project trips / 90 existing volumes = 2.2%) and this is identified as *less-than-significant* based on County criteria.

The Oak Knoll Avenue/Silverado Trail intersection meets the peak hour signal warrant criteria under existing conditions. County guidelines indicate potential mitigation may include adding a signal if conditions are appropriate, geometric modifications to the intersection configuration, changes to the Project to reduce its peak hour trip generation, or converting an intersection to a roundabout per Policy CIR-13.5.

## Near-Term plus Project Conditions

With near-term plus project conditions, daily traffic volumes on Silverado Trail would increase to 14,735 ADT. The combined near-term plus project volume of 14,735 daily trips would continue to operate equivalent to LOS 'D'. Yountville Crossroad would continue to operate at LOS B with a daily volume of 3,535 vehicles with proposed project traffic. Oak Knoll Avenue would continue to operate at LOS B with 4,365 daily vehicles.

The intersections of Yountville Crossroad/Silverado Trail and the Regusci Vineyards Winery Driveway/Silverado Trail would continue to operate at acceptable levels (LOS D) during both the weekday PM peak hour and weekend mid-day peak hour periods. The Oak Knoll Avenue/Silverado Trail intersection would continue to operate at LOS E during the weekday PM peak hour.

As under existing plus project conditions, near-term plus project traffic would add to existing peak hour signal warrant satisfaction at the Yountville Crossroad and Oak Knoll Avenue intersections at Silverado Trail.

## 6. Site Access/Design Parameters

#### Sight Distance

Vehicle sight distance at the existing Regusci Vineyards Winery Driveway/Silverado Trail intersection was evaluated. The required vehicle visibility or "corner sight distance" is a function of travel speeds on Silverado Trail. Caltrans design standards indicate that for appropriate corner sight distance, "a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the cross road and the driver of an approaching vehicle in the right lane of the main highway". Caltrans design guidelines also indicate that the minimum corner sight distance "shall be equal to the stopping sight distance" where possible.

New radar speed surveys of Silverado Trail were conducted for the roadway in the project area.<sup>13</sup> The "critical" vehicle speed (the speed at which 85% of all surveyed vehicles travel at or below) along Silverado Trail was measured at 59 mph at the project driveway. The posted speed limit in the project driveway area is 55 mph. Caltrans' design standards indicate that these vehicle speeds require a stopping sight distance of 570-580 feet both north and south of the driveway measured along the travel lanes of Silverado Trail.<sup>14</sup> Based on field measurements, sight distance from the Regusci Vineyards Winery driveway to the north on Silverado Trail is well in excess of 800 feet. Sight distance from the existing driveway to the south is in excess of 1,000 feet. Therefore, the sight distance recommendations would be met for the speed limit and measured vehicle speeds

<sup>&</sup>lt;sup>13</sup> Omni Means Engineers & Planners, Radar vehicle speed surveys, Silverado Trail, February 10, 2017.

<sup>&</sup>lt;sup>14</sup> Caltrans, Highway Design Manual, Table 405.1A, Corner (Stopping) Sight Distance, March 7, 2014...

#### Left-Turn Lane/Right-Turn Lane Warrants

No left-turn lane warrant checks would be necessary with proposed use modification uses. As noted, a dedicated southbound left-turn lane on Silverado Trail currently serves the Regusci Vineyards project driveway providing a 200-foot taper/left-turn lane.

The projected right turn volumes at the site driveway are well below minimum thresholds at which right turn lane would be required (right turn lane warrant graphs are included in the Appendix).<sup>15</sup>

#### **Project Access and Circulation**

The existing Regusci Vineyards Winery project driveway access to/from Silverado Trail would be improved from existing conditions to County standards (see Project Site Plan----Figure 6). The main project driveway providing access to winery-related uses north of the main residential areas would be paved to a width of 18-feet to minimum County standards from Silverado Trail to the winery parking areas. The vehicle circulation area in front of the main winery buildings would allow access for emergency vehicles (fire trucks) and parking areas west of the winery facilities.

The Napa Countywide Bicycle Plan has been completed and adopted by the Napa Valley Transportation Authority (NVTA) and the County.<sup>16</sup> The plan encourages new developments to incorporate bicycle friendly design. Silverado Trail has 10-foot (approximately) Class II bikes in both directions. It is very likely some visitors may utilize bicycles to access the proposed project. The project would provide bicycle racks for visitors to the proposed winery.

#### **Marketing Events**

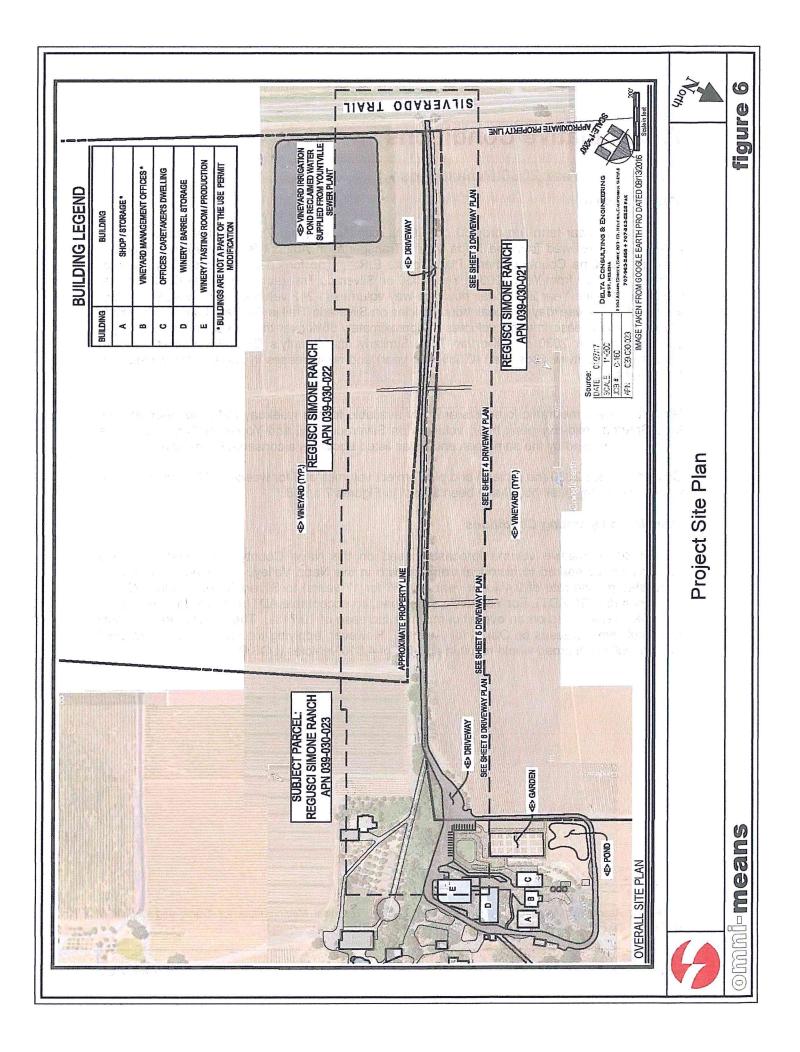
As noted in the project application, in addition to normal tours and tastings the winery proposes to host 16 marketing events that would range between 50-200 guests. These marketing events would include 10 events with 50 guests, five (5) events with150 guests, and one (1) event with 200 guests. Based on standard County auto occupancy rates, the largest annual event of 200 guests would be expected to generate approximately 157 trips (79 in, 78 out) including visitors, winery staff, and delivery trucks (unless shuttle buses/TDM are used). These events are typically of sufficient duration in length that the inbound and outbound trips occur in separate hours, thus the number of trips on the street network at one time are half of the total volumes. These events are usually held outside of typical peak traffic periods (during the middle of the day or later than 6:00 p.m.) and therefore generally do not impact peak hour operations and no other visitation or events would occur during the annual events.

As a proposed project requirement, marketing events should not start/end during the weekday PM peak hour period (4:30-5:30 p.m.) nor weekend mid-day peak hour period (1:45-2:45 p.m.). In addition, the winery should suspend visitation related to tours and tastings on the days when the winery hosts large marketing events (150 guests or larger) that are held during the afternoon period. These measures would reduce any traffic impacts related to large marketing events to *less-than-significant* levels.

<sup>15</sup> Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide," November, 1985.
<sup>16</sup> Nana County, Country Country of Biovelo Plan (2012), Planning Ama North Valley, May 2012.

<sup>16</sup> Napa County, Countywide Bicycle Plan (2012), Planning Area-North Valley, May 2012.

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### 7. Cumulative Conditions

#### **Cumulative Year 2030 Projections**

#### Model Forecast

As outlined in near-term (no project) conditions, cumulative (year 2030) volume projections for SR-29 were reviewed from the Napa Valley Transportation Authority's traffic volume forecasts found in the Napa County General Plan Update EIR.<sup>17</sup> The forecasted increase in volume-to-capacity (v/c) ratio from Year 2003 to Year 2030 on Silverado Trail (adjacent to Oak Knoll Avenue) was applied to the Year 2003 peak hour two-way volumes (1,212 vehicles). This yielded a future volume of 2,020 weekday PM peak hour vehicles on Silverado Trail in the Year 2030. This would equate to an increase in traffic volumes of approximately 66% over the 27-year period (2.4% per year) to the Year 2030 on Silverado Trail. Similarly, the County's GPU EIR project's a 17% increase on Yountville Crossroad (0.63% per year) and no increases in future traffic volumes on Oak Knoll Avenue.

Since future volume traffic forecasts are only available for the weekday PM peak hour and not for a Saturday mid-day peak hour, volumes on Silverado Trail and Yountville Crossroad were uniformly increased by the same percentage as listed above as a conservative measure.

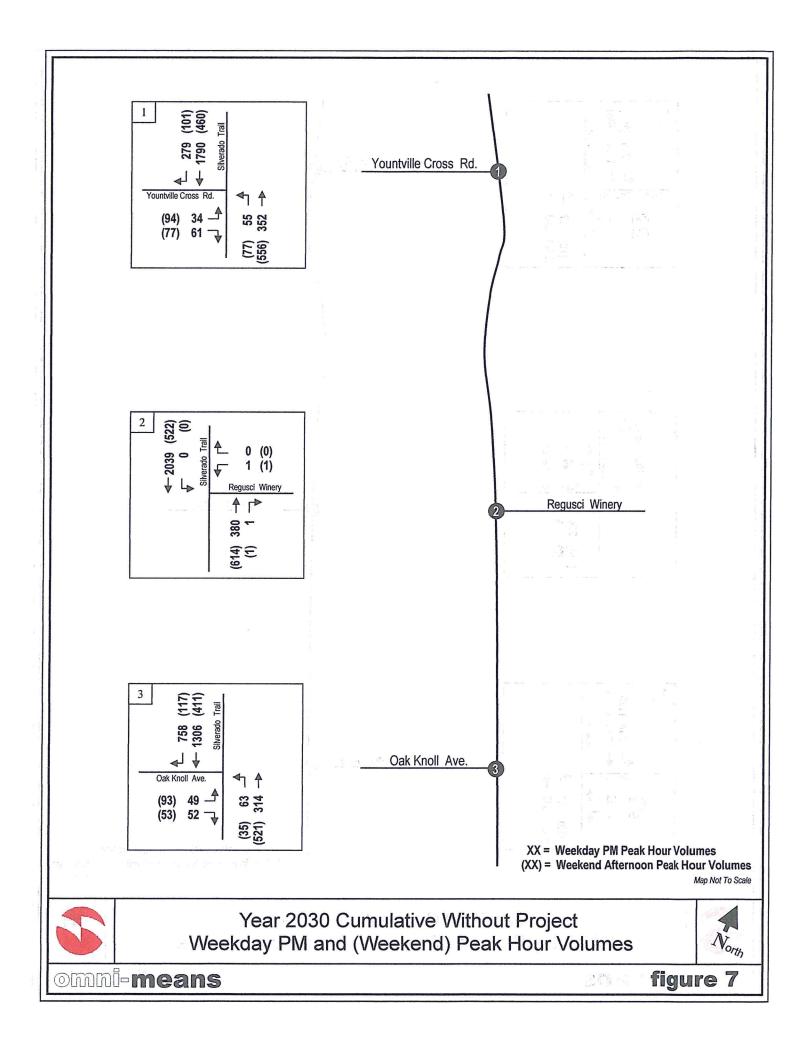
Cumulative year 2030 (no project) and plus project volumes and for weekday PM peak hour and weekend mid-day peak hour have been shown in Figures 7 and 8.

#### **Cumulative Operating Conditions**

Year 2030 cumulative volume forecasts based on the Napa County GP Update are very conservative compared to historical traffic growth in the Napa Valley. However, applying the forecasted growth rate of 2.4% per year (40.8% for 17 years) to Silverado Trail yields LOS 'F' conditions (20,120 ADT). For Yountville Crossroad, an acceptable ADT of 3,825 daily trips (LOS B) would result based on an overall cumulative increase of 10.71%. The GP Update forecasts no cumulative increases on Oak Knoll Avenue. However, applying the same growth rate used for Yountville Crossroad would result in an ADT of 4,610 vehicles (LOS B).

<sup>17</sup> Dowling Associates, Napa County General Plan Update, Technical Memorandum for Traffic and Circulation Supporting the Findings and Recommendations, February 9, 2007.

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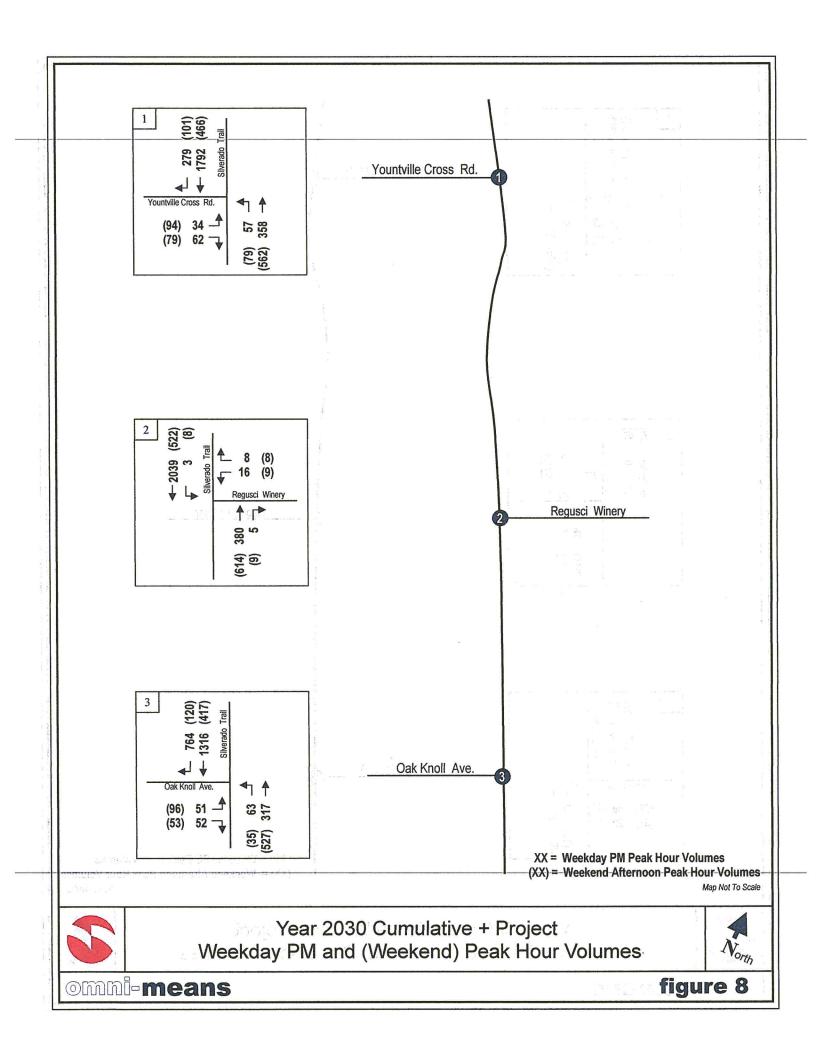


Table 5 shows projected weekday PM peak hour and weekend mid-day peak hour intersection operation under cumulative year 2030 (no project) and with project conditions. As calculated, the large increase in growth projected from the Napa County GP update would cause all three study intersections to operate at LOS E or F during the weekday PM peak hour under Year 2030 (no project) conditions. During the weekend mid-day peak hour, all three intersections would be operating at acceptable levels (LOS B-C) under the same conditions.

Under Year 2030 plus project conditions, the addition of project trips would add slightly to vehicle delays for all three intersections operating at unacceptable levels (LOS E-F) during the weekday PM peak hour period.

Based on updated County significance criteria for arterial segment operation, the segment of Silverado Trail at the Regusci Vineyards Winery driveway has been evaluated for proposed project impacts since it would be operating at LOS F under cumulative conditions without proposed project trips (based on daily traffic volumes). Under cumulative conditions, County guidelines indicate that a significant impact would be found if the proposed project contributes five percent or more to the total growth in cumulative traffic. The proposed project's contribution to daily segment volumes has been calculated as follows:

Project Contribution % = 85 weekday daily trips / (20,120 ADT cumulative segment - 14,290 ADT existing segment = 5,830 net ADT cumulative segment increase) = 0.014 or 1.4% County significance guidelines indicate a *less-than-significant* project impact based on less than five percent being added to the net increase in daily cumulative segment volumes on Silverado Trail.

|   |                                      |                 | Wkdy. PM LOS/Delay       |                          | Wknd. Mid-Day LOS/Delay  |                           |
|---|--------------------------------------|-----------------|--------------------------|--------------------------|--------------------------|---------------------------|
|   | Intersection                         | Control<br>Type | Yr. 2030<br>(No Project) | Yr. 2030<br>(W/ Project) | Yr. 2030<br>(No Project) | Near-Term<br>(W/ Project) |
| 1 | Yountville Crossroad/Silverado Trail | Stop            | F 275.4                  | F 280.2                  | C 15.5                   | C 19.5                    |
| 2 | Regusci Driveway/Silverado Trail     | Stop            | F 53.1                   | E 49.7                   | C 15.8                   | C 15.0                    |
| 3 | Oak Knoll Ave./Silverado Trail       | Stop            | F 198.2                  | F 214.9                  | C 19.7                   | C 20.2                    |

# TABLE 5CUMULATIVE YEAR 2030 (NO PROJECT) AND PLUS PROJECT CONDITIONS:INTERSECTION LEVEL OF SERVICE; WEEKDAY PM PEAK AND WEEKEND MID-DAY PEAK HOUR<sup>1, 2</sup>

(1) Based on Highway Capacity Manual (HCM) 2010, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds. Stated LOS refers to the minor street (stop-sign) controlled movement.

Using the updated County significance criteria for side-street stop controlled intersections; the intersections of Yountville Crossroad/Silverado Trail and Oak Knoll Avenue/Silverado Trail have been evaluated for proposed project impacts since they are operating at LOS F under Year 2030 cumulative plus project conditions. County guidelines indicate that a significant impact would be identified if the project would contribute five percent or more vehicle trips to the net increase in cumulative plus project conditions for the weekday PM peak hours. Under Year 2030 cumulative plus project conditions for the weekday PM peak hour, the project would contribute less than five percent to the net increase in cumulative volumes at the Yountville Crossroad/Silverado Trail intersection (11 project trips / 756 cumulative volumes = 1.4%). Similarly, the proposed project would contribute less than five percent at the Oak Knoll Avenue/Silverado Trail intersection (21 project trips / 769

cumulative volume = 2.7%). These findings are identified as a *less-than-significant* based on County criteria.

The Oak Knoll Avenue/Silverado Trail intersection currently meets the peak hour signal warrant under existing (no project) conditions. As per the County's policy, potential mitigation may include a signal if conditions are appropriate or converting the intersection to a roundabout per Policy CIR-13.5. Additional improvements to the street network are anticipated and have been included in the General Plan's Improved 2030 Network model. As noted, the County has also adopted several measures identified in the General Plan to reduce vehicle trips through public transit and Transportation Demand Management (TDM) strategies: "The project should support programs to reduce single occupant vehicle use and encourage alternative travel modes."

In keeping with the above policy, the winery project provides bicycle racks for visitors who
may arrive by bike. The project should also promote the use of public transportation and
carpooling of employees (by adjusting work schedules, etc.) to facilitate the use of other
transportation modes. The use of existing Napa County shuttle, limousine, or hire-car by
guests could help to reduce project trips at the Oak Knoll Avenue/Silverado Trail
intersection.

## 8. Summary and Conclusions

#### Daily Roadway Operations

The proposed use permit components associated with the Regusci Vineyards Winery project upon completion would generate up to 85-133 daily trips during the weekday and weekend periods (respectively). The project's daily traffic contribution would represent 0.6 percent of the existing ADT volumes on Silverado Trail which would operate at LOS D conditions (14,375 ADT) with proposed project traffic. Both Yountville Crossroad and Oak Knoll Avenue would continue to operate at acceptable levels (LOS B) with proposed project traffic. The same project contribution and roadway LOS conditions on Yountville Crossroad and Oak Knoll Avenue would be true under near-term plus project conditions.

#### **Peak Hour Intersection Operations**

During the PM peak hour winery activity periods the winery would generate 32 weekday PM peak hour trips. During the Saturday mid-day peak hour, the project would generate 34 total trips.

With PM peak hour and mid-day peak hour project trips, the Yountville Crossroad/Silverado Trail and Regusci Winery Driveway/Silverado Trail intersections would operate at acceptable conditions (LOS D or better) under both existing and near-term conditions. The intersection of Oak Knoll Avenue/Silverado Trail is currently operating at LOS E during the weekday PM peak hour under existing conditions. With proposed project traffic, the intersection would continue to operate at LOS E.

County guidelines indicate that a significant impact would be identified if the project would contribute 10 percent or more vehicle trips to the stop-controlled approach of Oak Knoll Avenue at Silverado Trail during the selected peak hours. Currently, the Oak Knoll Avenue/Silverado Trail intersection meets the peak hour signal warrant criteria under existing conditions without proposed project trips. Proposed project trips would merely add to this existing peak hour signal warrant condition. Under existing plus project conditions for the weekday PM peak hour, the project would add 2.2 percent to the overall eastbound peak

hour approach volumes on Oak Knoll Avenue at Silverado Trail (2 project trips / 90 existing approach volumes = 2.2%) and this is identified as *less-than-significant* based on County criteria. The same project contribution (two percent or less) would be true under near-term plus project conditions.

#### Warrant and Vehicle Sight Distance

No left-turn lane warrant check at the project driveway is necessary. An existing southbound leftturn lane on Silverado Trail at the Regusci Vineyard Winery driveway currently provides approximately 200 feet of taper/left-turn lane storage. The proposed project's northbound right-turn volumes are below the minimum thresholds for which a right-turn lane would be warranted.

Vehicle sight distance at the proposed project's driveway would be adequate. New radar speed surveys were conducted on Silverado Trail (in both directions) at the driveway location. As recorded, the 85th percentile or "critical speed" was measured at 59 mph (speed limit 55 mph). Caltrans would require a stopping sight-distance of 570-580 feet based on the recorded vehicle speeds. Based on field measurements, sight distance both north and south of the project driveway exceeds +800 feet in both directions.

#### Vehicle Circulation/Access

The existing Regusci Vineyards Winery project driveway access to/from Silverado Trail would be improved from existing conditions to County standards. The main project driveway providing access to winery-related uses north of the main residential areas would be paved to a width of 20-feet to minimum County standards from Silverado Trail to the winery parking areas. The vehicle circulation area in front of the main winery buildings would allow access for emergency vehicles (fire trucks) and parking areas west of the winery facilities.

The Napa Countywide Bicycle Plan has been completed and adopted by the Napa Valley Transportation Authority (NVTA) and the County.<sup>18</sup> The plan encourages new developments to incorporate bicycle friendly design. Silverado Trail has 10-foot (approximately) Class II bikes in both directions. It is very likely some visitors may utilize bicycles to access the proposed project. The project would provide bicycle racks for visitors to the proposed winery.

#### **Marketing Events**

In addition to normal tours and tastings, the winery proposes to host 16 marketing events that would range between 50-200 guests. These marketing events would include 10 events with 50 guests, five (5) events with150 guests, and one (1) event with 200 guests. Based on standard County auto occupancy rates, the largest annual event of 200 guests would be expected to generate approximately 157 trips (79 in, 78 out) including visitors, at one time are half of the total volume (unless shuttle buses/TDM are used). These events are usually held outside of typical peak traffic periods (during the middle of the day or later than 6:00 p.m.) and therefore generally do not impact peak hour operations and no other visitation or events would occur during the annual events.

 As a proposed project requirement, marketing events should not start/end during the weekday PM peak hour period (4:30-5:30 p.m.) nor weekend mid-day peak hour period

<sup>&</sup>lt;sup>18</sup> Napa County, Countywide Bicycle Plan (2012), Planning Area-North Valley, May 2012.

(1:45-2:45 p.m.). In addition, the winery should suspend visitation related to tours and tastings on the days when the winery hosts large marketing events (150 guests or larger) that are held during the afternoon period. These measures would reduce any traffic impacts related to large marketing events to *less-than-significant* levels.

#### Cumulative Year 2030 Conditions

Under Year 2030 cumulative (no project) conditions, projected growth in traffic volumes on Silverado Trail based on the Napa County General Plan Update would result in Silverado Trail operating at LOS F (20,120 ADT). Both Yountville Crossroad and Oak Knoll Avenue would operate at acceptable conditions (LOS B) with Year 2030 plus project traffic.

Based on updated County significance criteria for arterial segment operation, the segment of Silverado Trail at the Regusci Vineyards Winery driveway has been evaluated for proposed project impacts since it would be operating at LOS F under cumulative conditions without proposed project trips (based on daily traffic volumes). Under cumulative conditions, County guidelines indicate that a significant impact would be found if the proposed project contributes five percent or more to the total growth in cumulative traffic. The proposed project's contribution to daily segment volumes has been calculated as follows:

Project Contribution % = 85 weekday daily trips / (20,120 ADT cumulative segment - 14,290 ADT existing segment = 5,830 net ADT cumulative segment increase) = 0.014 or 1.4% County significance guidelines indicate a *less-than-significant* project impact based on less than five percent being added to the net increase in daily cumulative segment volumes on Silverado Trail.

With regard to study intersection operation; all three locations would be operating at unacceptable levels (LOS E-F) during the weekday PM peak hour. During the Saturday mid-day peak hour, all three intersections would operate at acceptable levels.

Using the updated County significance criteria for side-street stop controlled intersections; the intersections of Yountville Crossroad/Silverado Trail and Oak Knoll Avenue/Silverado Trail have been evaluated for proposed project impacts since they are operating at LOS F under Year 2030 cumulative plus project conditions. County guidelines indicate that a significant impact would be identified if the project would contribute five percent or more vehicle trips to the net increase in cumulative volumes at the intersection during the weekday PM peak hours. Under Year 2030 cumulative plus project conditions for the weekday PM peak hour, the project would contribute less than five percent to the net increase in cumulative volumes at the Yountville Crossroad/Silverado Trail intersection (11 project trips / 756 cumulative volumes = 1.4%). Similarly, the proposed project would contribute less than five percent at the Oak Knoll Avenue/Silverado Trail intersection (21 project trips / 769 cumulative volume = 2.7%). These findings are identified as a *less-than-significant* based on County criteria.

The Oak Knoll Avenue/Silverado Trail intersection currently meets the peak hour signal warrant under existing (no project) conditions. As per the County's policy, potential mitigation may include a signal if conditions are appropriate or converting the intersection to a roundabout per Policy CIR-13.5. Additional improvements to the street network are anticipated and have been included in the General Plan's Improved 2030 Network model. As noted, the County has also adopted several measures identified in the General Plan to reduce vehicle trips through public

transit and Transportation Demand Management (TDM) strategies: "The project should support programs to reduce single occupant vehicle use and encourage alternative travel modes."

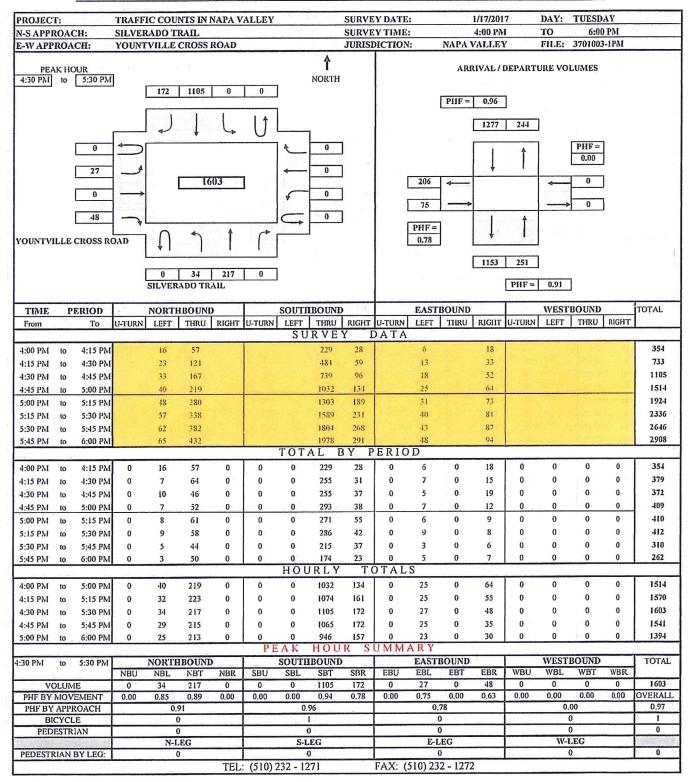
 In keeping with the policy, the winery project provides bicycle racks for visitors who may arrive by bike. The project should also promote the use of public transportation and carpooling of employees (by adjusting work schedules, etc.) to facilitate the use of other transportation modes. The use of existing Napa County shuttle, limousine, or hire-car by guests could help to reduce project trips at the Oak Knoll Avenue/Silverado Trail intersection.

### **TECHNICAL APPENDICES:**

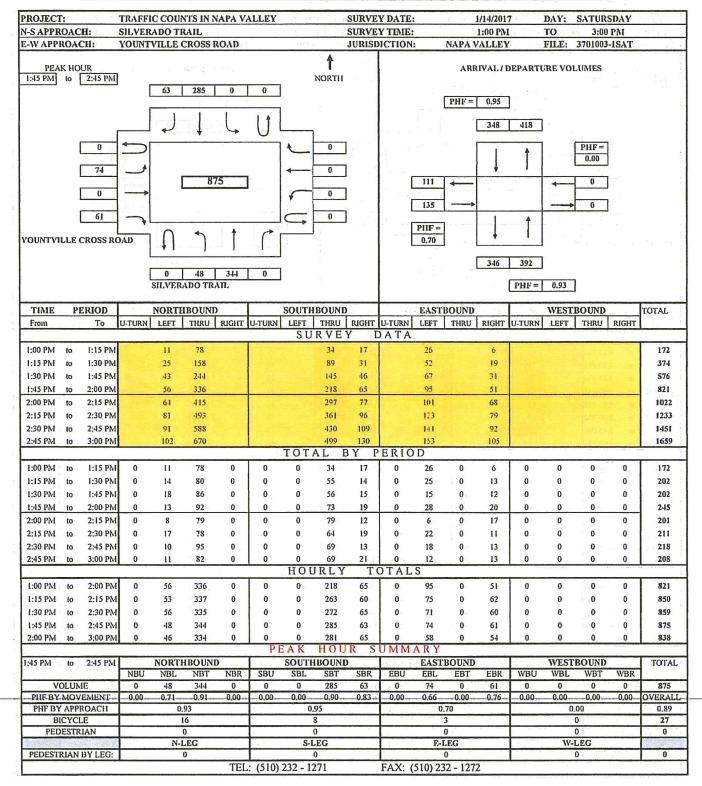
- Weekday PM and Weekend Mid-Day Peak Hour Intersection Counts
- Vehicle Speed Survey Sheets
- Weekday PM and Weekend Mid-Day Intersection LOS Calculation Sheets
- Right-Turn Guideline Diagram
- Roadway LOS Capacity Table (FDOT)

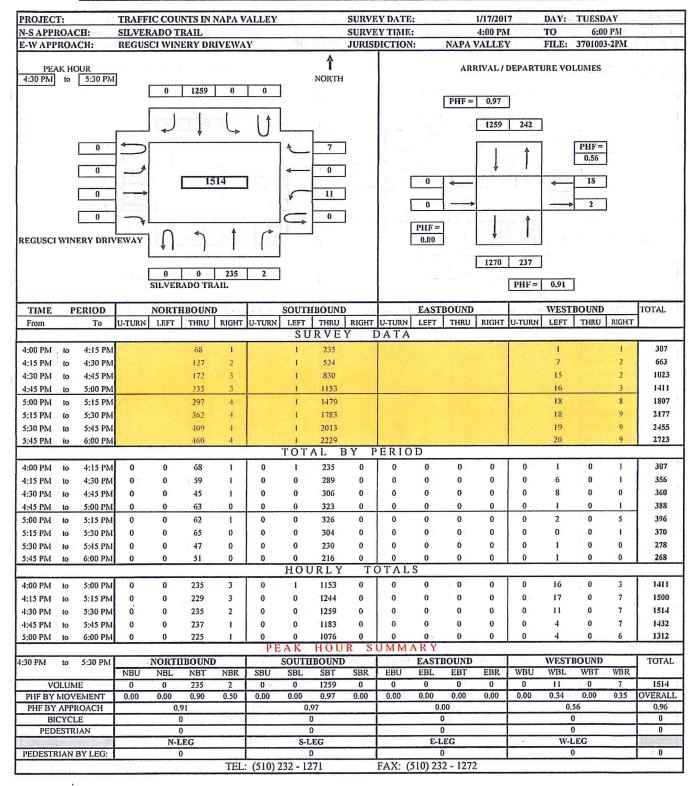
### B.A.Y.M.E.T.R.I.C.S.

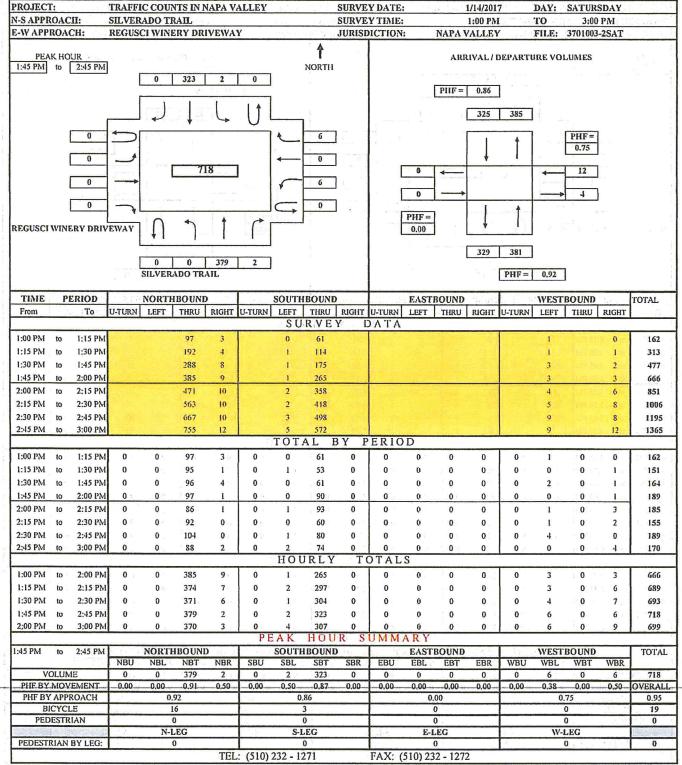
#### INTERSECTION TURNING MOVEMENT SUMMARY

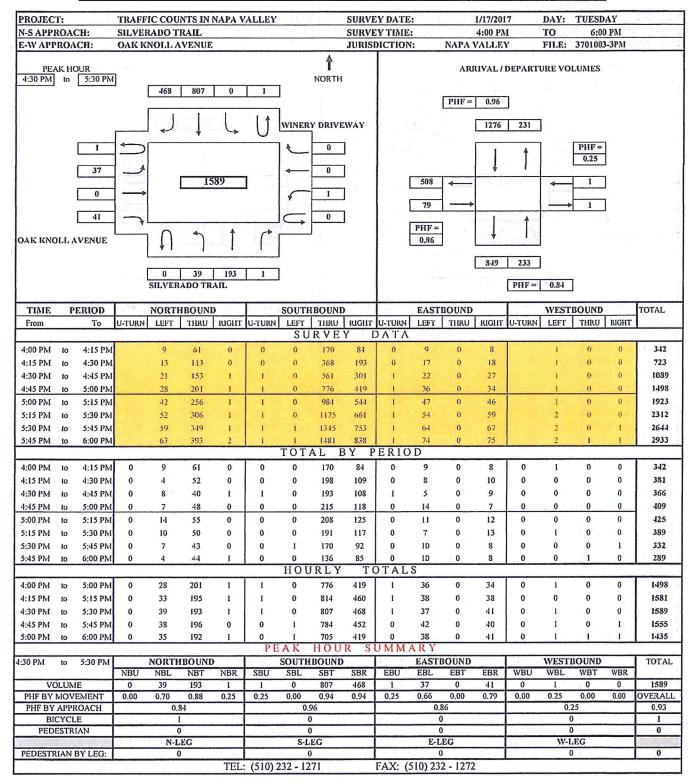


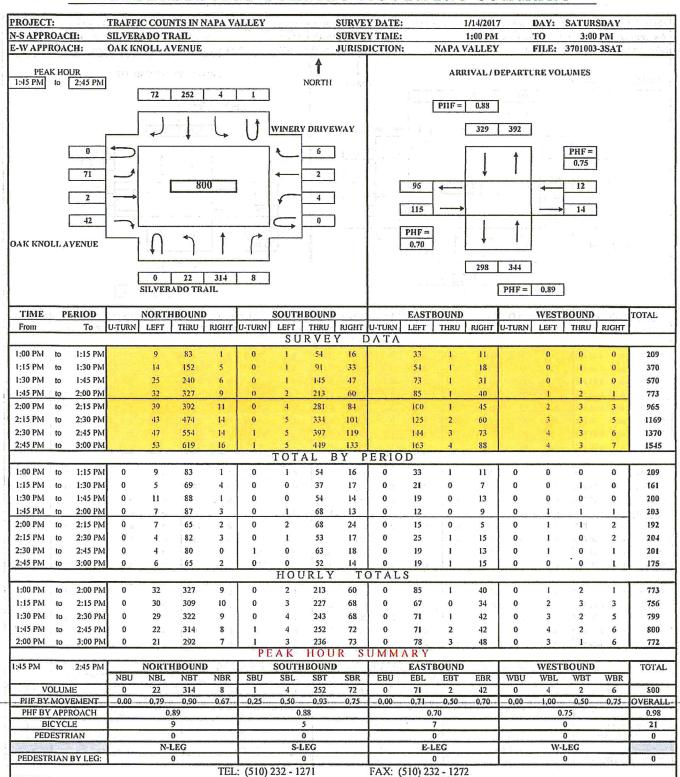
B.A.Y.M.E.T.R.I.C.S.











#### RADAR SPEED SURVEY SUMMARY

| Road:        | Silverado Trail                           |
|--------------|---|
| Location:    | approaching Regusci Winery<br>Concord, CA |
| Speed Limit: | 55 mph                                    |

| Date:     | 2/10/17      |
|-----------|--------------|
| <br>Time: | 6:30-7:00 pm |
| Weather:  | Clear        |

| Northbound Speeds   | Southbound Speeds  | Both Direction Speeds   |
|---|--|---|
| $ \begin{array}{c} 68 & -0 \\ 67 & -0 \\ 66 & -0 \\ 63 & -0 \\ 63 & -0 \\ 62 & -1 \\ 2 \\ 60 & -0 \\ 59 & -0 \\ 59 & -0 \\ 55 & -2 \\ 54 & -1 \\ 50 & -0 \\ 45 \\ 57 & -0 \\ 55 & -2 \\ 54 & -1 \\ 53 \\ 51 & -1 \\ 50 & -0 \\ 49 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 47 & -0 \\ 46 & -1 \\ 48 & -0 \\ 48 & -0 \\ 48 & -0 \\ 49 & -1 \\ 48 & -0 \\ 49 & -1 \\ 48 & -0 \\ 48 & -0 \\ 48 & -0 \\ 48 & -0 \\ 48 & -0 \\ 48 & -0 \\ 49 & -1 \\ 48 & -0 \\ 48 & -0 \\ 48 & -0 \\ 39 & -0 \\ 39 & -0 \\ 39 & -0 \\ 30 & -0 \\ 30 & -0 \\ 29 & -0 \\ 28 & -0 \\ 31 & -0 \\ 30 & -0 \\ 29 & -0 \\ 22 & -0 \\ 21 & -0 \\ 22 & -0 \\ 22 & -0 \\ 22 & -0 \\ 22 & -0 \\ 22 & -0 \\ 21 & -0 \\ 10 & -0 \\ 10 & -0 \\ 10 & -0 \\ 11 & -0 \\ 10 & -0 \\ 11 & -0 \\ 10 & -0 \\ 11 & -0 \\ 10 & -0 \\ 11 & -0 \\ 10 & -0 \\ 11 &$ | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$   | 68       0       -0       -0         65       0       -0       -0         63       0       -0       -0         63       -0       -0       -0         63       -0       -0       -0         63       -0       -0       -0         63       -0       -0       -0         53       -0       -0       -0         55       -0       -0       -0         53       -0       -0       -0         54       -0       -0       -0         44       -0       -0       -0         45       -0       -0       -0         44       -0       -0       -0         38       -0       -0       -0         37       -0       -0       -0         38       -0       -0       -0         37       -0       -0       -0         28       -0       -0       -0         27       -0       -0       -0         28       -0       -0       -0         29       -0       -0       -0         24 |
| No. of Surveys = $25$ Average Speed = $55.2$ $50$ th Percentile = $56.0$ $85$ th Percentile = $58.0$ $90$ th Percentile = $59.8$ $95$ th Percentile = $61.0$  | No. of Surveys =       25         Average Speed =       54.9         50th Percentile =       55.0         85th Percentile =       59.0         90th Percentile =       60.2         95th Percentile =       61.0 | No. of Surveys = $50$ Average Speed = $55.1$ $50$ th Percentile = $55.0$ $85$ th Percentile = $59.0$ $90$ th Percentile = $61.0$ $95$ th Percentile = $61.0$  |
| Pace Speed =34-43% in Pace =71Vehicles in Pace =71  | Pace Speed =35-44% in Pace =86Vehicles in Pace =86   | Pace Speed =34-43% in Pace =78Vehicles in Pace =156   |
| Sample Variance = $13.61$ Stndrd. Deviation = $3.69$ Range 1*S = $0.76$ Range 2*S = $0.96$ Range 3*S = $1.00$   | Sample Variance = $18.36$ Stndrd. Deviation = $4.99$ Range 1*S = $0.8$ Range 2*S = $1$ Range 3*S = $1$   | Sample Variance = $15.69$ Stndrd. Deviation = $3.96$ Range 1*S = $0.72$ Range 2*S = $0.92$ Range 3*S = $1$  |

**OMNI-MEANS ENGINEERS & PLANNERS** 

#### 같다. 영양과 제도 집안했는 것 같아.

#### HCM 2010 TWSC 1: Silverado Trail & Yountville CrossRd

PM Existing Weekday Conditions 06/08/2017

| ntersection<br>nt Delay, s/veh 1 | .7                         |                                  |                   |                       |  |         | in the second                           |  |
|----------------------------------|----------------------------|----------------------------------|-------------------|-----------------------|--|---------|---|--|
| the second second                |                            | Par                              | NE                | LIDT                  |  | ODT     | 000                                     |  |
| Movement                         | EBL                        | EBR                              | NBL               | NBT                   | - Andrew State   | SBT     | SBR                                     | A second star and second   |
| Lane Configurations              | W                          |                                  | 5                 | 1                     |  | 1       | 400                                     |  |
| Traffic Vol, veh/h               | 31                         | 55                               | 38                | 244                   |  | 1271    | 198                                     |  |
| Future Vol, veh/h                | 31                         | 55                               | 38                | 244                   | a state of the second  | 1271    | 198                                     |  |
| Conflicting Peds, #/hr           | 0                          | 0                                | 0                 | 0                     | and a state of the second  | 0       | 0                                       |  |
| Sign Control                     | Stop                       | Stop                             | Free              | Free                  |  | Free    | Free                                    |  |
| RT Channelized                   | -                          | Stop                             | -                 | None                  |  | 1-1-1-1 | None                                    |  |
| Storage Length                   | 0                          | and a state of the state         | 230               | -                     |  | -       | -                                       |  |
| Veh in Median Storage, #         | 0                          |                                  |                   | 0                     |  | 0       |   |  |
| Grade, %                         | 0                          | -                                | -                 | 0                     |  | 0       | - 00                                    |  |
| Peak Hour Factor                 | 92                         | 92                               | 92                | 92                    |  | 92      | 92,                                     | Contraction and the second   |
| Heavy Vehicles, %                | 2                          | 2                                | 2                 | 2                     | Carls shared a second  | 2       | 2                                       |  |
| Mvmt Flow                        | 34                         | 60                               | 41                | 265                   |  | 1382    | 215                                     |  |
|                                  |                            |                                  |                   |                       |  | 1       |   |  |
| Major/Minor                      | Minor2                     |                                  | Major1            |                       | N  | Aajor2  |   |  |
| Conflicting Flow All             | 1837                       | 1489                             | 1597              | 0                     |  | -       | 0                                       | n <u>185</u>   |
| Stage 1                          | 1489                       | The Rest .                       | 11 100 -          | 12514                 |  |         | -                                       | Landon Maria   |
| Stage 2                          | 348                        | т. т. <u>т</u> . //              | -                 | -                     |  | -       | -                                       |  |
| Critical Hdwy                    | 6.42                       | 6.22                             | 4.12              | 100 S - 100           |  |         |   |  |
| Critical Hdwy Stg 1              | 5.42                       | 5 <b>-</b>                       | ; I <b>-</b>      | -                     |  | -       | -                                       |  |
| Critical Hdwy Stg 2              | 5.42                       |                                  | - Hotel -         | -                     |  |         | 10.2                                    |  |
| Follow-up Hdwy                   | 3.518                      | 3.318                            | 2.218             | =                     |  | -       | -                                       |  |
| Pot Cap-1 Maneuver               | 83                         | 152                              | 410               | 1.0                   |  | 1.      | - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 |  |
| Stage 1                          | 206                        |                                  | -                 | <b>_</b> <sup>2</sup> |  | -       | -                                       |  |
| Stage 2                          | 715                        | 81 8-                            | Tild of           |                       |  |         | (1999-1997)<br>1997-1997                |  |
| Platoon blocked, %               |                            |                                  |                   | -                     |  | ·       | -                                       |  |
| Mov Cap-1 Maneuver               | 75                         | 152                              | 410               | Concession in the     |  | No.     |   |  |
| Mov Cap-2 Maneuver               | 166                        | . · · · ·                        | : · · · ·         |                       |  | - 1 e   | -                                       |  |
| Stage 1                          | 206                        | -                                | antestas-         | 1.046                 |  |         | 1.444                                   |  |
| Stage 2                          | 644                        | k re-                            | -                 | -                     | 8  |         | -                                       |  |
| and Parket March                 |                            |                                  |                   |                       |  |         |   |  |
| Approach                         | EB                         |                                  | NB                |                       |  | SB      |   | ter and the second   |
| HCM Control Delay, s             | 29.6                       | investigation and                | 2                 |                       | and the second second second   | 0       |   |  |
| HCM LOS                          | 23.0<br>D                  | a and a second particular second | 4                 |                       |  | U       |   | Service and the service of the servi |
| TIONIEOO                         |                            |                                  |                   | and the second        |  |         |   |  |
| NP 1 (0.4 - )                    | NDI                        |                                  |                   |                       |  |         |   |  |
| Minor Lane/Major Mvmt            | NBL<br>410                 | NBT EBLn1                        | SBT SBR           | SHOULD STREET         |  |         |   |  |
| Capacity (veh/h)                 |                            | - 238                            | - 1980 - 1985 - E |                       |  |         |   | A Deedkielerien  |
| HCM Lane V/C Ratio               | 0.101                      | - 0.393                          |                   |                       | ist of the balance   |         |   |  |
| HCM Control Delay (s)            | 14.8                       | - 29.6                           |                   |                       | = elitectore dille =   |         |   |  |
| HCM Lane LOS                     | B                          | - D<br>- 1.8                     | -                 |                       |  |         |   |  |
| HCM 95th %tile Q(veh)            | 0.3                        | 1.8                              |                   |                       |  |         |   |  |
|                                  |                            |                                  |                   |                       |  |         |   |  |
|                                  | 2 8<br>1                   |                                  |                   |                       | n an stair an stair an stair an stàir a<br>Tha an stàir |         |   | an a   |
| Baseline                         |                            |                                  |                   |                       |  |         |   | Synchro 9 Repo   |
|                                  | 68 ° 2<br>1 <sup>4</sup> 1 |                                  |                   |                       |  |         |   | Page   |
|                                  |                            |                                  |                   |                       |  |         |   | . 490  |
|                                  |                            |                                  |                   |                       |  |         |   |  |

| Intersection             |           |                 |      |   |           |                       |                |  |
|--------------------------|-----------|-----------------|------|---|-----------|-----------------------|----------------|--|
| Int Delay, s/veh         | 0         |                 |      |   |           |                       | _              |  |
| Movement                 | WBL       | WBR             |      | NBT   | NBR       | SBL                   | SBT            |  |
| Lane Configurations      | 1         |                 |      | Â   |           | Ţ                     | 1              |  |
| Traffic Vol, veh/h       | 1         | 0               |      | 270   | 1         | 0                     | 1448           |  |
| Future Vol, veh/h        | 1         | 0               |      | 270   | 1         | 0                     | 1448           |  |
| Conflicting Peds, #/hr   | 0         | 0               |      | 0   | 0         | 0                     | 0              |  |
| Sign Control             | Stop      | Stop            |      | Free  | Free      | Free                  | Free           |  |
| RT Channelized           | antivitie | None            |      | ALL BOOMS   | None      | in de colorie         | None           |  |
| Storage Length           | 0         | -               |      | -   | -         | 150                   | -              |  |
| /eh in Median Storage, # | 0         | <b>新教育的资料的是</b> |      | 0   | Watt-     |                       | 0              |  |
| Grade, %                 | 0         | -               |      | 0   | -         | -                     | 0              |  |
| Peak Hour Factor         | 92        | 92              |      | 92  | 92        | 92                    | 92             |  |
| Heavy Vehicles, %        | 2         | 2               |      | 2   | 2         | 2                     | 2              |  |
| Mymt Flow                | 1         | 0               |      | 293   | 1         | 0                     | 1574           |  |
|                          |           |                 |      |   |           |                       |                |  |
| Major/Minor              | Minor1    |                 |      | Major1  |           | Major2                |                |  |
| Conflicting Flow All     | 1868      | 294             |      | 0   | 0         | 295                   | 0              |  |
| Stage 1                  | 294       |                 |      | STATE STATE   | San - I   |                       | (animal of     |  |
| Stage 2                  | 1574      | -               |      | -   | -         | -                     | -              |  |
| Critical Hdwy            | 6.42      | 6.22            |      | MARCH CONVCT  | 1) (J     | 4.12                  | 1000           |  |
| Critical Hdwy Stg 1      | 5.42      | -               |      |   | -         | •                     | -              |  |
| Critical Hdwy Stg 2      | 5.42      |                 |      |   | Service 1 | Statistics and the    | and the second |  |
| Follow-up Hdwy           | 3.518     | 3.318           |      | -   | -         | 2.218                 | -              |  |
| Pot Cap-1 Maneuver       | 80        | 745             |      | I CARACTERIA  | h dis-    | 1266                  | (21)           |  |
| Stage 1                  | 756       | -               |      | -   | -         | -                     | -              |  |
| Stage 2                  | 187       |                 |      |   | 1900-9    | - 10.00               | Q 80 23        |  |
| Platoon blocked, %       |           |                 |      | -   | -         |                       | -              |  |
| Nov Cap-1 Maneuver       | 80        | 745             |      |   | Seised 2  | 1266                  | 100 149        |  |
| Nov Cap-2 Maneuver       | 157       | -               |      |   | -         | -                     | -              |  |
| Stage 1                  | 756       |                 |      |   |           | and the second second | 0.000          |  |
| Stage 2                  | 187       | -               |      | -   | -         | -                     | -              |  |
|                          |           |                 |      |   |           |                       |                |  |
| Approach                 | WB        |                 |      | NB  |           | SB                    |                |  |
| CM Control Delay, s      | 28.1      |                 |      | 0   |           | 0                     | N POP N        |  |
| HCM LOS                  | D         |                 |      |   |           |                       |                |  |
|                          |           |                 |      |   |           |                       |                |  |
| Minor Lane/Major Mvmt    | NBT       | NBRWBLn1        | SBL  | SBT   | 1. A. F.  |                       |                |  |
| Capacity (veh/h)         |           | - 157           | 1266 | - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 199<br>- 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 | S. Carlos |                       | 196 P.C        |  |
| ICM Lane V/C Ratio       | -         | - 0.007         | -    | -   |           |                       |                |  |
| CM Control Delay (s)     |           | - 28.1          | 0    |   |           |                       |                |  |
| ICM Lane LOS             | -         | - D             | A    | -   |           |                       |                |  |
| HCM 95th %tile Q(veh)    |           | - 0             | 0    |   |           |                       |                |  |

| ntersection              | 0.0       |               |  |          |  |                              |  |
|--------------------------|-----------|---------------|--|----------|--|------------------------------|--|
| nt Delay, s/veh          | 2.3       |               |  |          |  |                              |  |
| lovement                 | EBL       | EBR           | NBL  | NBT      | SBT  | SBR                          |  |
| ane Configurations       | M         |               | ሻ  | <b>↑</b> | A  |                              | and the second s |
| Traffic Vol, veh/h       | 43        | 47            | 45   | 223      | 921  | 534                          |  |
| uture Vol, veh/h         | 43        | 47            | 45   | 223      | 921  | 534                          |  |
| Conflicting Peds, #/hr   | 0         | 0             | 0  | 0        | 0  |                              |  |
| Sign Control             | Stop      | Stop          | Free   | Free     | Free   |                              |  |
| RT Channelized           |           | None          | Brad a   | None     | Sector Sector Sector   | None                         |  |
| Storage Length           | 0         | ÷             | 125  | -        |  | -                            |  |
| /eh in Median Storage, # | 0         | 10 - C        |  | 0        | 0  | 1970 - M                     |  |
| Grade, %                 | 0         | -             | 7  | 0        | 0  |                              |  |
| Peak Hour Factor         | 92        | 92            | 92   | 92       | 92   |                              |  |
| leavy Vehicles, %        | 2         | 2             | 2  | 2        | 2  |                              | in jata in jagang  |
| Nvmt Flow                | 47        | 51            | 49   | 242      | 1001   | 580                          |  |
|                          |           |               |  |          |  |                              |  |
| Major/Minor              | Minor2    |               | Major1   | Sec. 20  | Major2   |                              |  |
| Conflicting Flow All     | 1631      | 1291          | 1582   | 0        |  | and the second second second |  |
| Stage 1                  | 1291      | 1997 NOV 22   | -  | 1000     | A State State of the second  | N. The                       |  |
| Stage 2                  | 340       | -             | -  | -        | -  |                              |  |
| Critical Hdwy            | 6.42      | 6.22          | 4.12   |          |  | 521023                       |  |
| Critical Hdwy Stg 1      | 5.42      | -             |  | -        |  | 8.1 . <b>H</b>               |  |
| Critical Hdwy Stg 2      | 5.42      | 200 C         | and the second sec | -        | and the second se  | Seators and                  | Life Here Sid 2  |
| Follow-up Hdwy           | 3.518     | 3.318         | 2.218  | -        | -  |                              |  |
| Pot Cap-1 Maneuver       | 112       | 199           | 416  |          | A PROPERTY AND A PROPERTY | 5.00 miles                   |  |
| Stage 1                  | 258       | -             | -  | -        | i-   | - 10                         |  |
| Stage 2                  | 721       | 1999          | A second state   | 1 m -    |  | in the C                     |  |
| Platoon blocked, %       |           |               |  | -        | -  | -                            |  |
| Nov Cap-1 Maneuver       | 99        | 199           | 416  | Nin 22   | - The state of the second s  | 1 6 . 3                      |  |
| Nov Cap-2 Maneuver       | 202       | -             | -  | -        | -  | ÷ -                          |  |
| Stage 1                  | 258       |               | and south a  |          | Caller Constant States and State   | Transfer T                   |  |
| Stage 2                  | 636       | -             |  | -        |  | e. <del>.</del>              | 12 (1  |
|                          |           |               |  |          |  |                              |  |
| Approach                 | EB        |               | NB   |          | SB   |                              |  |
| HCM Control Delay, s     | 39.1      |               | 2.5  |          | 0  | the second second second     |  |
| HCM LOS                  | E         |               |  |          |  |                              |  |
|                          |           |               |  |          |  |                              |  |
| Minor Lane/Major Mvmt    | NBL       | NBT EBLn1     | SBT SBR  |          |  | A Research Char              |  |
| Capacity (veh/h)         | 416       | - 200         |  |          | A STATE OF A  |                              | (Inder) Mosers   |
| HCM Lane V/C Ratio       | 0.118     | - 0.489       |  |          |  |                              |  |
| HCM Control Delay (s)    | 14.8      | - 39.1        |  |          |  |                              |  |
| HCM Lane LOS             | 14.0<br>B | - 39.1<br>- E | ALCONTRACT.  |          |  |                              |  |
|                          |           |               |  |          |  |                              |  |

| Intersection             |          |  |                          |                  |                               |                 |  |
|--------------------------|----------|--|--------------------------|------------------|-------------------------------|-----------------|--|
| Int Delay, s/veh         | 2.2      |  |                          |                  |                               |                 |  |
| Movement                 | EBL      | EBR                                      | NBL                      | NBT              | SBT                           | SBR             |  |
| Lane Configurations      | W        | 24                                       | η                        | Ŷ                | (j)                           |                 |  |
| Traffic Vol, veh/h       | 85       | 69                                       | 54                       | 390              | 327                           | 72              |  |
| Future Vol, veh/h        | 85       | 69                                       | 54                       | 390              | 327                           | 72              |  |
| Conflicting Peds, #/hr   | 0        | 0  | 0                        | 0                | 0                             | 0               |  |
| Sign Control             | Stop     | Stop                                     | Free                     | Free             | Free                          | Free            |  |
| RT Channelized           |          | Stop                                     | State of the             | None             | states and states where       | None            |  |
| Storage Length           | 0        | -  | 230                      | -                | -                             | -               |  |
| Veh in Median Storage, # | 0        | nn freshelle († 14                       | Stan of the              | 0                | 0                             |                 |  |
| Grade, %                 | 0        | -  | · · · · · ·              | 0                | 0                             | -               |  |
| Peak Hour Factor         | 92       | 92                                       | 92                       | 92               | 92                            | 92              |  |
| Heavy Vehicles, %        | 2        | 2  | 2                        | 2                | 2                             | 2               |  |
| Mymt Flow                | 92       | 75                                       | 59                       | 424              | 355                           | 78              |  |
|                          |          |  |                          |                  |                               |                 |  |
| Major/Minor              | Minor2   |  | Major1                   |                  | Major2                        |                 |  |
| Conflicting Flow All     | 936      | 395                                      | 434                      | 0                | -                             | 0               |  |
| Stage 1                  | 395      | -  | 101                      | 1010220          |                               | and a last      |  |
| Stage 2                  | 541      |  | -                        |                  |                               | -               |  |
| Critical Hdwy            | 6.42     | 6.22                                     | 4.12                     | Cause h          |                               | 910 <u>1</u> 2  |  |
| Critical Hdwy Stg 1      | 5.42     | -  | -                        | _                |                               | -               |  |
| Critical Hdwy Stg 2      | 5.42     | 1001-01-01-01-01-01-01-01-01-01-01-01-01 | and an interaction       | 200132           |                               | 0.001           |  |
| Follow-up Hdwy           | 3.518    | 3.318                                    | 2.218                    | -                |                               | б. —            |  |
| Pot Cap-1 Maneuver       | 294      | 654                                      | 1126                     | 905-729          | ne and the second             | Sent 1          |  |
| Stage 1                  | 681      | -  | -                        | -                | -                             | -               |  |
| Stage 2                  | 583      | States and state                         | and the second second    | NIGEN <u>G</u> R |                               | a the set       |  |
| Platoon blocked, %       | 000      |  |                          | -                | -                             |                 |  |
| Mov Cap-1 Maneuver       | 279      | 654                                      | 1126                     | the lat          | needen in (Hiller, ees and Pi | Billion and     |  |
| Mov Cap-2 Maneuver       | 403      | -  | -                        | -                | -                             | -               |  |
| Stage 1                  | 681      | notes the column                         | anterier tere <u>e</u> t |                  |                               | in the set      |  |
| Stage 2                  | 552      | -  | -                        | ene termitican   | -                             | -               |  |
| Oldge 2                  | UUL      |  |                          |                  |                               |                 |  |
| Approach                 | EB       |  | NB                       | (Marian          | SB                            |                 |  |
| HCM Control Delay, s     | 11.4     |  | 1                        |                  | 0                             | -<br>The second |  |
| HCM LOS                  | B        |  |                          |                  | U                             |                 |  |
|                          |          |  |                          |                  |                               |                 |  |
| Vinor Lane/Major Mvmt    | NBL      | NBT EBLn1                                | SBT SBR                  |                  |                               | New York        |  |
| Capacity (veh/h)         | 1126     | - 730                                    |                          |                  |                               |                 |  |
| HCM Lane V/C Ratio       | 0.052    | - 0.229                                  |                          |                  |                               |                 |  |
| HCM Control Delay (s)    | 8.4      | - 11.4                                   |                          |                  |                               |                 |  |
| HCM Lane LOS             | 0.4<br>A | - 11.4<br>- B                            |                          |                  |                               |                 |  |
| HCM 25th %tile Q(veh)    | 0.2      | - 0.9                                    |                          |                  |                               |                 |  |
|                          | 0.2      | - 0.9                                    |                          |                  |                               |                 |  |

#### HCM 2010 TWSC 2: Silverado Trail & Regusci Winery Dr

| Intersection             |   |  |                   |   |  |  |   |  |
|--------------------------|---|--|-------------------|---|--|--|---|--|
| nt Delay, s/veh          | 0   |  |                   |   |  |  |   |  |
| Vovement                 | WBL   | WBR  |                   | NB  | NBR  | SBL                                      | SBT   |  |
| ane Configurations       | W/  | and a second | al constraint and | î   |  | ካ  | 4   | and the second |
| Fraffic Vol, veh/h       | 1   | 0  |                   | 43  |  | Ō  | and the second se |  |
| uture Vol, veh/h         | 1   | 0  |                   | 43  | 5 1  | 0  | 371   |  |
| Conflicting Peds, #/hr   | 0   | 0  |                   | A la commente   | ) 0  | 0  | 0   |  |
| Sign Control             | Stop  | Stop   |                   | Free  | Free   | Free                                     | Free  |  |
| RT Channelized           | Marial A.   | None   |                   |   | - None   | 1  | None  |  |
| Storage Length           | 0   | -  |                   |   |  | 150                                      | -   |  |
| Veh in Median Storage, # | 0   | the later of the   |                   | Sec. Sec.   | ) -  | en e | 0   |  |
| Grade, %                 | 0   | -  |                   |   | ) -  | -  | 0   |  |
| Peak Hour Factor         | 92  | 92   |                   | 9:  | 2 92   | 92                                       | 92  |  |
| Heavy Vehicles, %        | 2   | 2  |                   |   | 2 2  |  |   |  |
| Mvmt Flow                | 1   | 0  |                   | 47  |  | 0  |   |  |
|                          |   | 1997 - Carlos Carlos Carlos (1994)   |                   |   |  |  |   |  |
| Major/Minor              | Minor1  |  |                   | Major   |  | Major2                                   |   |  |
| Conflicting Flow All     | 877   | 474  |                   | and the same the second se  | ) 0  |  | 0   |  |
| Stage 1                  | 474   | Se in the second second  |                   | all the second  |  |  |   |  |
| Stage 2                  | 403   | -  |                   |   |  | -  | and the state of the   |  |
| Critical Hdwy            | 6.42  | 6.22   |                   |   |  | 4.12                                     | indiana a   |  |
| Critical Hdwy Stg 1      | 5.42  | 0.22   |                   |   |  |  | 110986 BB-88  |  |
| Critical Hdwy Stg 2      | 5.42  |  |                   |   |  |  | an Gir  |  |
| Follow-up Hdwy           | 3.518   | 3.318  |                   |   | a na hainn an a | 2.218                                    | 0.478 (1993)<br>• 1.1*  |  |
| Pot Cap-1 Maneuver       | 319   | 590  |                   |   | in the Topy                                      | 1087                                     | Nantriana   |  |
| Stage 1                  | 626   | 000  |                   |   | SCOTT OF   | 1007                                     | 100 100 100 20 20 100 20 20 100 20 20 20 20 20 20 20 20 20 20 20 20 2   |  |
| Stage 2                  | 675   | - Serection of Contract  |                   |   |  | Statistics and a                         | ali se la seconda   |  |
| Platoon blocked, %       | 015   |  |                   |   |  |  | her Ettil   |  |
| Mov Cap-1 Maneuver       | 319   | 590  |                   |   | -  | 1087                                     | dia dia kina  |  |
| Mov Cap-2 Maneuver       | 442   | 090  |                   |   | 1247 Januar                                      | 1007                                     | State State   |  |
|                          | 626   | -  |                   |   | access in the                                    | -  | - i   |  |
| Stage 1                  | 675   |  |                   |   |  | 1000-2000-000                            |   |  |
| Stage 2                  | 075   | -  |                   |   | Astronici  | -<br>Atlantinae                          | est borling   |  |
| Approach                 | WB  |  |                   | N   | ,  | SB                                       | Service of  |  |
| HCM Control Delay, s     | 13.2  |  |                   | the second s  | )  | 0  |   |  |
| HCM LOS                  | 13.2<br>B   |  |                   |   |  | U  |   |  |
|                          | Ð   |  |                   |   |  |  |   |  |
| Minor Lane/Major Mvmt    | NBT   | NBRWBLn1   | SBL               | SBT   |  |  |   |  |
| Capacity (veh/h)         | and the providence of the second s | - 442  | 1087              | Complete State ( a fair of a  |  |  |   |  |
| HCM Lane V/C Ratio       | 616-MBL (***  | - 442  |                   | 2.9/1 <b>-</b> 2.9/16/2   |  |  |   |  |
|                          | -   |  | -                 | -   |  |  |   |  |
| HCM Control Delay (s)    | 2017 Sec 5  | - 13.2   | 0                 | 1997 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - |  | · · · · · · · · · · · · · · · · · · ·    |   |  |
| HCM Lane LOS             | -<br>   | - B  | A                 | -   |  |  |   |  |
| HCM 95th %tile Q(veh)    |   | - 0  | 0                 |   |  |  |   |  |

Baseline

| Intersection             |            |   |  | General States           |                           |   |                 |  |
|--------------------------|------------|---|--|--------------------------|---------------------------|---|-----------------|--|
| Int Delay, s/veh         | 2.3        |   | The middle ends  | an ann                   | 1213                      | na ng na na salat kat   |                 | na na na seconda de la companya de l<br>Transforma de la companya de la comp |
| Viovement                | EBL        | EBR   | N  | 3L 1                     | NBT                       | SBT   | SBR             |  |
| ane Configurations       | W.         | er el dense de la conse                             |  | 5                        | Ŷ                         | ß   | ę – – – – – – – |  |
| Traffic Vol, veh/h       | 83         | 48  |  | 25                       | 370                       | 288   | 82              |  |
| Future Vol, veh/h        | 83         | 48  |  | 25                       | 370                       | 288   | 82              |  |
| Conflicting Peds, #/hr   | 0          | 0   |  | 0                        | 0                         | 0   | 0               | and the spin of an either  |
| Sign Control             | Stop       | Stop  | Fr   | ee F                     | Free                      | Free  | Free            |  |
| RT Channelized           | STORAGE ST | None  |  | - N                      | one                       |   | None            |  |
| Storage Length           | 0          | -   | 1  | 25                       | -                         |   | -               |  |
| /eh in Median Storage, # | ¥ 0        |   |  | 12-16                    | 0                         | 0   | SAN 43          |  |
| Grade, %                 | 0          | -   |  | -                        | 0                         | 0   | -               |  |
| Peak Hour Factor         | 92         | 92  |  | 92                       | 92                        | 92  | 92              |  |
| Heavy Vehicles, %        | 2          | 2   |  | 2                        | 2                         | 2   |                 |  |
| Nymt Flow                | 90         | 52  |  |                          | 402                       | 313   | 89              |  |
|                          |            |   |  |                          |                           |   |                 |  |
| Major/Minor              | Minor2     |   | Majo   | r1                       |                           | Major2  |                 |  |
| Conflicting Flow All     | 815        | 358   | and the second se  | 02                       | 0                         | -   | 0               |  |
| Stage 1                  | 358        | -   | in the second  | -                        | 192.0                     | anna chianna anna   | Shi sher        |  |
| Stage 2                  | 457        | -   |  | -                        | -                         | -   | -               |  |
| Critical Hdwy            | 6.42       | 6.22  | 4.   | 12                       |                           | WHERE SAME TO THE   | Since The       |  |
| Critical Hdwy Stg 1      | 5.42       | 0.22  | Several  | -                        | -                         | eeunoonologi yoo aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa   | -               |  |
| Critical Hdwy Stg 2      | 5.42       | anni straidhean 120 gur                             |  | De la comisión           | 10 2 10                   | ing and a second state of the second  | All the page    |  |
| Follow-up Hdwy           | 3.518      | 3.318   | 2.2  | 18                       | -                         |   | -               |  |
| Pot Cap-1 Maneuver       | 347        | 686   | 11   |                          |                           |   | alienting in    |  |
| Stage 1                  | 707        | 000   |  |                          | 100 65 (16)<br>-          |   |                 |  |
| Stage 2                  | 638        |   |  | . <del>.</del><br>553389 | -<br>Newson               |   | idean en        |  |
| Platoon blocked, %       | 000        |   |  | A CAR                    |                           |   |                 |  |
| Nov Cap-1 Maneuver       | 339        | 686   | 11   | 57                       | -                         | -<br>The second s |                 |  |
|                          |            | 000   | Contract Contract Co   | Л                        | 2.55KL                    | STATISTICS AND A DESCRIPTION OF   |                 |  |
| Nov Cap-2 Maneuver       | 456        | -   |  | inoren                   | , <del>.</del><br>Shinizi | -   | -               |  |
| Stage 1                  | 707        | 204 18 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19 |  |                          | 665                       |   |                 |  |
| Stage 2                  | 623        | -   |  | -                        | -<br>(28-260)             |   | distainin       |  |
|                          |            |   |  | 10                       |                           | 00  |                 |  |
| pproach                  | EB         |   | The state of the s | IB                       |                           | SB  |                 |  |
| ICM Control Delay, s     | 14.5       |   | 0  | .5                       |                           | 0   |                 |  |
| HCM LOS                  | В          |   |  |                          |                           |   |                 |  |
| Provide and Advantage of | NIDI       | NDT CDL 4   | 007 05   | D                        | 9.4227                    |   |                 |  |
| Minor Lane/Major Mvmt    | NBL        | NBT EBLn1   | SBT SE   |                          | 1000                      |   |                 |  |
| Capacity (veh/h)         | 1157       | - 520   |  | -                        |                           |   |                 |  |
| ICM Lane V/C Ratio       | 0.023      | - 0.274   | -  | -                        |                           |   |                 |  |
| ICM Control Delay (s)    | 8.2        | - 14.5  | 1946 - 1946  | -                        |                           |   |                 |  |
| ICM Lane LOS             | A          | - B   | -  | -                        |                           |   |                 |  |
| HCM 95th %tile Q(veh)    | 0.1        | - 1.1   |  | 7-                       |                           |   |                 |  |

| nt Delay, s/veh          | 1.8      |                           |   |  | and a second |   |  | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1  |
|--------------------------|----------|---------------------------|---|--|--|---|--|---|
| Movement                 | EBL      | EBR                       | NBL   | NBT  |  | SBT S   | BR   |   |
|                          | LOL<br>W | LDN                       |   | the state of the s |  | and the second se | non  |   |
| ane Configurations       |          | 50                        | 4   | 1  |  | 1   | 400  |   |
| Traffic Vol, veh/h       | 31       | 56                        | 39  | 284  |  |   | 198  |   |
| Future Vol, veh/h        | 31       | 56                        | 39  | 284  |  |   | 198  | and the second |
| Conflicting Peds, #/hr   | 0        | 0                         | 0   | _ 0  |  | 0   | 0  |   |
| Sign Control             | Stop     | Stop                      | Free  | Free   |  |   | ree  |   |
| RT Channelized           |          | Stop                      | a de la |  |  | - N   | one  | CALCULAR PROPERTY PROFESSION  |
| Storage Length           | 0        | -                         | 230   | -  |  | 1   | -  |   |
| Veh in Median Storage, # | 0        |                           | (1967) - 1967) <mark>1</mark> 9             | 0  |  | 0   | -  |   |
| Grade, %                 | 0        | -                         | -   | 0  |  | 0   | -  | 6 D 2 4   |
| Peak Hour Factor         | 92       | 92                        | 92  | 92   |  | 92  | 92   |   |
| leavy Vehicles, %        | 2        | 2                         | 2   | 2  |  | 2   | 2.   |   |
| Nvmt Flow                | 34       | 61                        | 42  | 309  |  | 1416  | 215  |   |
|                          |          |                           |   |  |  | Transfer Sectors  | Albertmeter  |   |
| Major/Minor              | Minor2   |                           | Major1                                      | Same and the second  | M  | ajor2   |  |   |
| Conflicting Flow All     | 1917     | 1524                      | 1632  | 0  |  | -3 *  | 0  |   |
| Stage 1                  | 1524     | and a state of the second | - 10 - 10 - 10 -                            |  |  | 1929-04-1   | -  |   |
| Stage 2                  | 393      | -                         | ·-  | -  |  | 4   | -  |   |
| Critical Hdwy            | 6.42     | 6.22                      | 4.12  | 12 State   |  | an sala   | -  |   |
| Critical Hdwy Stg 1      | 5.42     | -                         | -   | -  |  |   | -  |   |
| Critical Hdwy Stg 2      | 5.42     |                           | State State                                 | Den Stratter Co  |  | S. S. WA  | 84   |   |
| Follow-up Hdwy           | 3.518    | 3.318                     | 2.218                                       |  |  | 44  | -  |   |
| Pot Cap-1 Maneuver       | 74       | 145                       | 398   |  |  | ALC: NO   | 120  |   |
| Stage 1                  | 198      | -                         |   | -  |  | 11.7  | -  |   |
| Stage 2                  | 682      | and the second            | 1   | a to be an a start   |  | 1   |  |   |
| Platoon blocked, %       | 002      |                           |   | _  |  | -   |  |   |
| Mov Cap-1 Maneuver       | 66       | 145                       | 398   | the second states  |  | and Million   | S. S. Like   |   |
| Nov Cap-2 Maneuver       | 157      | 145                       | 000   |  |  | Charact.  | 1997 - 19 |   |
|                          | 198      | -                         | -<br>                                       | Alexandra and a second   |  |   | -  |   |
| Stage 1                  |          |                           | and the state of                            | Analog The sur   |  | Strand source   | 1012   |   |
| Stage 2                  | 610      |                           | -<br>Antonin (1996)                         | etter i starre   |  |   | -  |   |
| Approach                 | EB       |                           | NB  |  |  | SB  |  |   |
| HCM Control Delay, s     | 32.1     |                           | 1.8   | an the second  |  | 0   | 1944 - 1944 B  | Transform (1997)  |
| HCM LOS                  | D        |                           | 1.0   |  |  | 5   |  |   |
|                          |          |                           |   |  |  |   |  |   |
| Minor Lane/Major Mvmt    | NBL      | NBT EBLn1                 | SBT SBR                                     |  |  |   |  |   |
| Capacity (veh/h)         | 398      | - 225                     | 1. S. A. S. A.                              |  |  | N. ACH  |  | (digitizity) yithinge.  |
| HCM Lane V/C Ratio       | 0.107    | - 0.42                    |   |  |  |   |  |   |
| HCM Control Delay (s)    | 15.1     | - 32.1                    |   |  | N. H. MARSHINE   |   |  |   |
| HCM Lane LOS             | C        | - D                       |   |  |  |   |  |   |
| HCM 95th %tile Q(veh)    | 0.4      | - 1.9                     |   |  |  |   |  | (dovic) office the later  |

| Intersection             |              |  | and the second se |                           |              |                |                    |    |   |
|--------------------------|--------------|--|---|---------------------------|--------------|----------------|--------------------|----|---|
| Int Delay, s/veh         | 0            |  |   |                           |              |                |                    |    |   |
| Movement                 | WBL          | WBR  |   | NBT                       | NBR          | SBL            | SBT                |    |   |
| Lane Configurations      | W.           |  |   | ĵ.                        |              | ٦              | Ŷ                  |    |   |
| Traffic Vol, veh/h       | 1            | 0  |   | 311                       | 1            | 0              | 1492               |    |   |
| Future Vol, veh/h        | . 1          | 0  |   | 311                       | 1            | 0              | 1492               |    |   |
| Conflicting Peds, #/hr   | 0            | 0  |   | 0                         | 0            | 0              | 0                  |    |   |
| Sign Control             | Stop         | Stop   |   | Free                      | Free         | Free           | Free               |    |   |
| RT Channelized           |              | None   |   | station and a             | None         | San gridd 11-  | None               |    |   |
| Storage Length           | 0            | -  |   | · •                       | -            | 150            | -                  |    |   |
| Veh in Median Storage, # | 0            | M  |   | 0                         |              | 1              | 0                  |    |   |
| Grade, %                 | 0            | -  |   | 0                         | -            | -              | 0                  |    |   |
| Peak Hour Factor         | 92           | 92   |   | 92                        | 92           | 92             | 92                 |    |   |
| Heavy Vehicles, %        | 2            | 2  |   | 2                         | 2            | 2              | 2                  |    |   |
| Mvmt Flow                | 1.88         | 0  |   | 338                       | 1            | 0              | 1622               |    |   |
|                          |              |  |   |                           |              |                |                    |    |   |
| Major/Minor              | Minor1       | a de la calenta  |   | Major1                    |              | Major2         |                    |    |   |
| Conflicting Flow All     | 1961         | 339  |   | 0                         | 0            | 339            | 0                  | Q. | 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |
| Stage 1                  | 339          | an the state of th |   | Contraction of the        | 1600-0       | ALCONTRACT.    | 10000120           |    |   |
| Stage 2                  | 1622         | -  |   | -                         | -            | -              | -                  |    |   |
| Critical Hdwy            | 6.42         | 6.22   |   |                           | 16 a 21      | 4.12           | Nilling St         |    |   |
| Critical Hdwy Stg 1      | 5.42         | -  |   | -                         | -            | -              | -                  |    |   |
| Critical Hdwy Stg 2      | 5.42         |  |   |                           |              |                |                    |    |   |
| Follow-up Hdwy           | 3.518        | 3.318  |   | -                         | 1 S          | 2.218          | 12                 |    |   |
| Pot Cap-1 Maneuver       | 70           | 703  |   |                           | POINT_       | 1220           | 22                 |    |   |
| Stage 1                  | 722          | -  |   | -                         | -            | -              | -                  |    |   |
| Stage 2                  | 177          | Sector Sector  |   | Statistics and Statistics | 1000-        | PARAMINICIA-   | entranke se        |    |   |
| Platoon blocked, %       |              |  |   | -                         | -            |                | -                  |    |   |
| Mov Cap-1 Maneuver       | 70           | 703  |   | The State of the State    | the Casing   | 1220           | 1000               |    |   |
| Mov Cap-2 Maneuver       | 148          | -  |   |                           | -            | -              | 2                  |    |   |
| Stage 1                  | 722          |  |   |                           | 1.11.1.1.1.  |                | 150 M              |    |   |
| Stage 2                  | 177          | -  |   | -                         | Concernances | -              | 2007-02 10 - 000 y |    |   |
| Oldye 2                  |              |  |   |                           |              |                |                    |    |   |
| Approach                 | WB           |  |   | NB                        |              | SB             |                    |    |   |
| -ICM Control Delay, s    | 29.5         |  |   | 0                         |              | 0              | 111                |    |   |
| HCM LOS                  | 20.0<br>D    |  |   |                           |              | NOTING AND AND |                    |    |   |
|                          |              |  |   |                           |              |                |                    |    |   |
| Minor Lane/Major Mvmt    | NBT          | NBRWBLn1   | SBL   | SBT                       |              |                |                    |    |   |
| Capacity (veh/h)         | S. 1999.200  | - 148  | 1220  | 100 <b>-</b> 100 - 100    |              |                |                    |    | (Alexandra)                             |
| HCM Lane V/C Ratio       |              | - 0.007  | -   | -                         |              |                |                    |    |   |
| HCM Control Delay (s)    | Cherry 20    | - 29.5   | 0   | <u>.</u>                  |              |                |                    |    |   |
| HCM Lane LOS             | -            | - D  | A   | -                         |              |                |                    |    |   |
| HCM 95th %tile Q(veh)    |              | - 0  | 0   | and and a state           |              |                |                    |    |   |
|                          | FINER FROM S | - 0  | U   | THE CORD STREET, SP       |              |                |                    |    |   |

| Intersection             | 0.4           |               |   | 1.00   |       |   |  |
|--------------------------|---------------|---------------|---|--|-------|---|--|
| nt Delay, s/veh          | 2.4           |               |   |  |       |   |  |
| Movement                 | EBL           | EBR           | NBL   | NBT  | SB    | r SBR                                   |  |
| ane Configurations       | N/            | 1             | ካ   | Ŷ  | 1     | •                                       | e Alta Maria de La Calencia de   |
| Fraffic Vol, veh/h       | 44            | 47            | 45  | 263  | 96    | 2 537                                   |  |
| Future Vol, veh/h        | 44            | 47            | 45  | 263  | 96    | 2 537                                   |  |
| Conflicting Peds, #/hr   | 0             | 0             | 0 0   | 0  |       | 0 0                                     |  |
| Sign Control             | Stop          | Stop          | Free  | Free   | Fre   | e Free                                  |  |
| RT Channelized           | En Chi        | None          | i denduit -   | None   |       | - None                                  |  |
| Storage Length           | 0             | † 57 <b>-</b> | 125   | -  |       |   | L DREAL PROFILE  |
| Veh in Median Storage, # | 0             |               | PERSONAL PROPERTY   | 0  |       | 0 -                                     |  |
| Grade, %                 | 0             | ·             | <u></u>   | 0  | 1     | 0 -                                     |  |
| Peak Hour Factor         | 92            | 92            | 92  | 92   | 9     | 2 92                                    | Sale Hour Factor   |
| Heavy Vehicles, %        | 2             | 2             | 2   | 2  |       | 2 2                                     | 4 percentist v N   |
| Mymt Flow                | 48            | 51            | 49  | 286  | 104   |   | Martin States  |
|                          |               |               |   |  |       |   |  |
| Major/Minor              | Minor2        |               | Major1  |  | Major | 2                                       |  |
| Conflicting Flow All     | 1722          | 1338          | 1629  | 0  |       | - 0                                     |  |
| Stage 1                  | 1338          | 1000          | 1023  | U  |       |   |  |
| Stage 2                  | 384           |               |   |  |       | Endo Alexandro<br>Ma                    | The second second second second  |
| Critical Hdwy            | 6.42          | 6.22          | 4.12  | 16.42  |       |   | i aç e i   |
| Critical Hdwy Stg 1      | 5.42          | 0.22          | 4.12  | SPACE REA                                    |       | Co. | a  |
|                          | 5.42          | -             |   | -  |       | e.<br>Konstratistist                    |  |
| Critical Hdwy Stg 2      | 3.518         | 3.318         | 2.218   | San San San                                  |       |   |  |
| Follow-up Hdwy           |               |               |   | -  |       |   |  |
| Pot Cap-1 Maneuver       | 98            | 088 187       | 399   | 1. N. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. |       |   |  |
| Stage 1                  | 245           | -             | -<br>Transitional States  | -  |       |   |  |
| Stage 2                  | 688           |               | 100 BEER 2017   | Self Self-                                   |       |   | September September  |
| Platoon blocked, %       | 00            | 107           | 000   | -  |       |   |  |
| Mov Cap-1 Maneuver       | 86            | 187           | 399   | State Law                                    |       | 33 C ( ) C ( )                          | seene and the second second  |
| Mov Cap-2 Maneuver       | 190           |               | -   | -  |       |   | the second s |
| Stage 1                  | 245           |               |   | 100 C 1                                      |       | 19                                      | Same Shade Foreign and   |
| Stage 2                  | 604           | -             | en Denne State of Anna Anna Anna Anna Anna Anna Anna Ann  | -  |       |   |  |
|                          |               |               | en den de personales de la seconda de la<br>Seconda de la seconda de la |  |       | Paratan ka sanan s                      |  |
| Approach                 | EB            | 4.0           | NB  |  | S     |   |  |
| HCM Control Delay, s     | 43.6          |               | 2.2   |  |       | 0                                       |  |
| HCM LOS                  | E             |               |   |  |       |   |  |
|                          | MARINE MARINE |               |   |  |       |   |  |
| Minor Lane/Major Mvmt    | NBL           | NBT EBLn1     | SBT SBR   |  |       |   |  |
| Capacity (veh/h)         | 399           | - 188         |   |  |       |   |  |
| HCM Lane V/C Ratio       | 0.123         | - 0.526       |   |  |       |   |  |
| HCM Control Delay (s)    | 15.3          | - 43.6        | all the state   |  |       |   |  |
| HCM Lane LOS             | С             | - E           |   |  |       |   |  |
| HCM 95th %tile Q(veh)    | 0.4           | - 2.7         | State March   |  |       |   | A MANAGER AND A  |

#### HCM 2010 TWSC 1: Silverado Trail & Yountville CrossRd

| Intersection             |  |  |  |  |   |                    |                          |
|--------------------------|--|--|--|--|---|--------------------|--------------------------|
| Int Delay, s/veh 2       | .4                                       |  |  |  |   |                    |                          |
| Movement                 | EBL                                      | EBR  | NBI  | NBT  | SBT   | SBR                |                          |
| Lane Configurations      | Y  | 1997 - 1977 - 19 | 1  | i 🛧  | P   | 1                  | an fina an an            |
| Traffic Vol, veh/h       | 85                                       | 70   | 5  | 5 416  | 352   | 72                 |                          |
| Future Vol, veh/h        | 85                                       | 70   | 5  | 5 416  | 352   | 72                 |                          |
| Conflicting Peds, #/hr   | 0  | 0  |  | ) 0  | 0   | 0                  |                          |
| Sign Control             | Stop                                     | Stop   | Free   | Free   | Free  | Free               |                          |
| RT Channelized           | Mar Child                                | Stop   |  | - None   | and the second second second second   | None               |                          |
| Storage Length           | 0  | -  | 230  | ) -  | -   | -                  |                          |
| Veh in Median Storage, # | 0  |  |  | - 0  | 0   | 100                |                          |
| Grade, %                 | 0  | -  |  | - 0  | 0   |                    |                          |
| Peak Hour Factor         | 92                                       | 92   | 92   | 92   | 92  | 92                 | Contraction and a second |
| Heavy Vehicles, %        | 2  | 2  | 2  |  | 2   | 2                  |                          |
| Mvmt Flow                | 92                                       | 76   | 60   |  | 383   | 78                 |                          |
|                          |  |  |  |  |   |                    |                          |
| Major/Minor              | Minor2                                   |  | Major  |  | Major2  | HIMLE !!           |                          |
| Conflicting Flow All     | 994                                      | 422  | 461  | the second s | -   | 0                  | A STATE STATE            |
| Stage 1                  | 422                                      |  |  |  |   | 22012              |                          |
| Stage 2                  | 572                                      | -  | The second s   | The state of the state of  | -   | -/ <u>-</u>        |                          |
| Critical Hdwy            | 7.12                                     | 6.22   | 4.12   | 199999 <u>1</u> 99   | 1   | 181 - L            |                          |
| Critical Hdwy Stg 1      | 6.12                                     | -  | -  |  | -   |                    |                          |
| Critical Hdwy Stg 2      | 6.12                                     | States and States  |  | 2010/000   |   | Note the second    |                          |
| Follow-up Hdwy           | 3.518                                    | 3.318  | 2.218  | -  |   | -                  |                          |
| Pot Cap-1 Maneuver       | 224                                      | 632  | 1100   |  | 1000 0000 000 000 <u>1</u> 00   | S                  |                          |
| Stage 1                  | 609                                      | -  | -  |  |   | -                  |                          |
| Stage 2                  | 505                                      | 1. T   | With Part States   | 1000124  | 1999 - 1999 - 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - | 86599 <u>2</u> 999 |                          |
| Platoon blocked, %       | 1. |  |  | -  | -   | -                  |                          |
| Nov Cap-1 Maneuver       | 215                                      | 632  | 1100   | 12.4   |   | 978 A <u>9</u> 19  | New years and the second |
| Nov Cap-2 Maneuver       | 335                                      | -  | -  | -  |   | -                  |                          |
| Stage 1                  | 576                                      | in the second  | State Barriet  | CANNEN!  | Constant in Constant of   | Silles Lan         |                          |
| Stage 2                  | 477                                      | -  |  |  |   | -                  |                          |
| oldgo 2                  |  |  |  |  |   |                    |                          |
| Approach                 | EB                                       |  | NB   |  | SB  |                    | And States destroyed     |
| ICM Control Delay, s     | 13.1                                     |  | 1  |  | 0   |                    |                          |
| ICM LOS                  | В  |  |  |  | ,<br>I  |                    |                          |
| /inor Lane/Major Mvmt    | NBL                                      | NBT EBLn1  | SBT SBR  |  |   |                    |                          |
| Capacity (veh/h)         | 1100                                     | - 611  |  |  |   |                    |                          |
| ICM Lane V/C Ratio       | 0.054                                    | - 0.276  | and the second |  |   |                    |                          |
| ICM Control Delay (s)    | 8.5                                      | - 13.1   | NUMBER OF  |  |   |                    |                          |
| ICM Lane LOS             | A  | - B  |  |  |   |                    |                          |
| ICM 95th %tile Q(veh)    | 0.2                                      | - 1.1  | And in the second second   |  |   |                    |                          |

| Int Delay, s/veh         | 0               |                |      |            |            |           |  |            |   |
|--------------------------|-----------------|----------------|------|------------|------------|-----------|--|------------|---|
| Movement                 | WBL             | WBR            |      |            | NBT        | NBR       | SBL  | SBT        | and the second  |
| ane Configurations       | W/              |                |      | 200 A      | Þ          |           | ካ  | Ŷ          | and the second second   |
| Traffic Vol, veh/h       | 1               | 0              |      |            | 471        | 0         | 0  | 396        | and the second  |
| Future Vol, veh/h        | 1               | 0              |      |            | 471        | 0         | 0  | 396        |   |
| Conflicting Peds, #/hr   | 0               | 0              |      |            | 0          | Ō         | 0  | 0          |   |
| Sign Control             | Stop            | Stop           |      | 5.0.1      | Free       | Free      | Free   | Free       |   |
| RT Channelized           | -               | None           |      | a start    | 1000       | None      |  | None       |   |
| Storage Length           | . 0             | -              |      |            |            | -         | 150  | -          | a set a set and a set of the set |
| Veh in Median Storage, # | 0               | a talah ara    |      |            | 0          | 0121214   |  | 0          | and provide the last of the   |
| Grade, %                 | 0               |                |      |            | 0          | -         | -  | 0          |   |
| Peak Hour Factor         | 92              | 92             |      |            | 92         | 92        | 92   | 92         |   |
| Heavy Vehicles, %        | 2               | 2              |      |            | 2          | 2         | 2  | 2          |   |
| Mymt Flow                | 10              | 0              |      |            | 512        | Ō         | 0  | 430        |   |
|                          |                 | U              |      | 1          | 012        | U         | C Lange V                                      | 400        |   |
| Major/Minor              | Minor1          |                |      | Ma         | ajor1      |           | Major2   |            |   |
| Conflicting Flow All     | 942             | 512            |      |            | 0          | 0         | 512  | 0          | ( ) - Jan ( the st  |
| Stage 1                  | 512             | Constantine -  |      |            | -          |           | 14. 19. 18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | -C1        |   |
| Stage 2                  | 430             | -              |      |            | -          | -         | -  | ÷.,        |   |
| Critical Hdwy            | 6.42            | 6.22           |      |            | 15 4       | 10.4      | 4.12   | THE GY     |   |
| Critical Hdwy Stg 1      | 5.42            | -              |      |            | -          | -         | -  | <u>1</u> 1 | d a d d d d d d d d d d d d d d d d d d   |
| Critical Hdwy Stg 2      | 5.42            | NACIONAL AND   |      |            | 100        | Mar 147   | 10 1 2 1 4 1 5 <u>1</u>                        | -          |   |
| Follow-up Hdwy           | 3.518           | 3.318          |      |            | -          | e : .     | 2.218  | ÷ 1        |   |
| Pot Cap-1 Maneuver       | 292             | 562            |      |            | -          |           | 1053   | 1          |   |
| Stage 1                  | 602             | -              |      |            | -          | -         | -  | - "        | X   |
| Stage 2                  | 656             |                |      |            | -          | Store Cak |  | Casherana  |   |
| Platoon blocked, %       |                 |                |      |            | -          | -         |  | -          |   |
| Mov Cap-1 Maneuver       | 292             | 562            |      |            | 100        | an bhan   | 1053   | 1111144    |   |
| Mov Cap-2 Maneuver       | 419             | -              |      |            | -          | -         | -  |            |   |
| Stage 1                  | 602             |                |      |            |            | 11111     |  | al Charles |   |
| Stage 2                  | 656             | _              |      |            | -          | -         | -  | -1         |   |
| olugo z                  | 000             |                |      |            |            |           |  |            |   |
| Approach                 | WB              |                |      |            | NB         |           | SB   |            |   |
| HCM Control Delay, s     | 13.6            | and some south |      |            | 0          |           | 0  | 1          | CM Control Dates  |
| HCMLOS                   | В               |                |      |            |            |           |  | ý.         |   |
|                          |                 | NEE            | 001  | 0.07       | ana ayon a |           |  |            |   |
| Minor Lane/Major Mvmt    | NBT             | NBRWBLn1       | SBL  | SBT        |            |           |  |            |   |
| Capacity (veh/h)         |                 | - 419          | 1053 | 1. 1       |            |           |  |            |   |
| HCM Lane V/C Ratio       | -               | - 0.003        | -    | -          |            |           |  |            |   |
| HCM Control Delay (s)    |                 | - 13.6         | 0    |            |            |           |  |            |   |
| HCM Lane LOS             | -               | - B            | Α    | -          |            |           |  |            |   |
| HCM 95th %tile Q(veh)    | Contraction and | - 0            | 0    | bre Silves |            |           |  |            |   |

q.

| RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br><u>Major/Minor</u> <u>M</u><br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | EBL<br>84<br>84<br>0<br>Stop<br>-<br>0<br>0<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389 | EBR<br>48<br>48<br>0<br>Stop<br>None<br>-<br>-<br>-<br>92<br>2<br>2<br>52<br>52<br>389 | NBL<br>25<br>25<br>0<br>Free<br>125<br>-<br>92<br>2<br>27   | NBT<br>399<br>399<br>0<br>Free<br>None<br>-<br>0<br>0<br>92<br>2<br>434 | SBT<br>♣<br>316<br>316<br>0<br>Free<br>-<br>0<br>0<br>92<br>2<br>343  | SBR<br>84<br>84<br>0<br>Free<br>None<br>-<br>-<br>-<br>92<br>2<br>91 |                |
|---|---|--|---|---|---|--|----------------|
| Lane Configurations<br>Traffic Vol, veh/h<br>Future Vol, veh/h<br>Conflicting Peds, #/hr<br>Sign Control<br>RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br><u>Major/Minor</u> <u>M</u><br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 84<br>84<br>0<br>Stop<br>0<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389                  | 48<br>48<br>0<br>Stop<br>None<br>-<br>-<br>-<br>92<br>2<br>52                          | 25<br>25<br>0<br>Free<br>-<br>125<br>-<br>92<br>2<br>2      | ↑<br>399<br>399<br>0<br>Free<br>None<br>-<br>0<br>0<br>0<br>92<br>2     | ♣<br>316<br>316<br>0<br>Free<br>-<br>0<br>0<br>0<br>92<br>2   | 84<br>84<br>0<br>Free<br>None<br>-<br>-<br>-<br>92<br>2              |                |
| Traffic Vol, veh/h<br>Future Vol, veh/h<br>Conflicting Peds, #/hr<br>Sign Control<br>RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br><u>Major/Minor</u> <u>M</u><br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 84<br>84<br>0<br>Stop<br>0<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389                  | 48<br>0<br>Stop<br>None<br>-<br>-<br>-<br>92<br>2<br>52                                | 25<br>25<br>0<br>Free<br>-<br>125<br>-<br>92<br>2<br>2<br>2 | 399<br>399<br>0<br>Free<br>None<br>-<br>0<br>0<br>92<br>2               | 316<br>316<br>0<br>Free<br>-<br>0<br>0<br>92<br>2   | 84<br>0<br>Free<br>None<br>-<br>-<br>92<br>2                         |                |
| Future Vol, veh/h<br>Conflicting Peds, #/hr<br>Sign Control<br>RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 84<br>0<br>Stop<br>0<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389                        | 48<br>0<br>Stop<br>None<br>-<br>-<br>-<br>92<br>2<br>52                                | 25<br>25<br>0<br>Free<br>-<br>125<br>-<br>92<br>2<br>2<br>2 | 399<br>0<br>Free<br>None<br>-<br>0<br>0<br>92<br>2                      | 316<br>0<br>Free<br>-<br>0<br>0<br>92<br>2  | 84<br>0<br>Free<br>None<br>-<br>-<br>92<br>2                         |                |
| Conflicting Peds, #/hr<br>Sign Control<br>RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 0<br>Stop<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389                                   | 0<br>Stop<br>None<br>-<br>-<br>-<br>92<br>2<br>52                                      | 0<br>Free<br>125<br>-<br>92<br>2<br>27                      | 0<br>Free<br>None<br>-<br>0<br>0<br>92<br>2                             | 0<br>Free<br>-<br>-<br>0<br>0<br>92<br>2  | 0<br>Free<br>None<br>-<br>-<br>92<br>2                               |                |
| Sign Control<br>RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | Stop<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389  | Stop<br>None<br>-<br>-<br>-<br>92<br>2<br>52   | Free<br>-<br>125<br>-<br>-<br>92<br>2<br>2                  | Free<br>None<br>0<br>0<br>92<br>2                                       | Free<br>-<br>-<br>0<br>0<br>92<br>2   | Free<br>None<br>-<br>-<br>92<br>2                                    |                |
| RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | -<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389   | None<br>-<br>-<br>92<br>2<br>52  | -<br>125<br>-<br>-<br>92<br>2<br>27                         | None<br>-<br>0<br>0<br>92<br>2  | -<br>0<br>0<br>92<br>2  | None<br>-<br>-<br>92<br>2  |                |
| RT Channelized<br>Storage Length<br>Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br><u>Major/Minor</u> <u>M</u><br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy<br>Stage 2<br>Collow-up Hdwy<br>Stage 2<br>Collow-up Hdwy<br>Stage 3<br>Stage 3<br>Stage 4<br>Stage 4<br>Stage 4<br>Stage 5<br>Stage 5<br>Stage 5<br>Stage 5<br>Stage 5<br>Stage 5<br>Stage 7<br>Stage 7<br>Sta | -<br>0<br>0<br>92<br>2<br>91<br>inor2<br>877<br>389   | -<br>92<br>2<br>52   | 125<br>-<br>-<br>92<br>2<br>27                              | 0<br>0<br>92<br>2   | -<br>0<br>92<br>2   | -<br>-<br>92<br>2  |                |
| Veh in Median Storage, #<br>Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 0<br>92<br>2<br>91<br>inor2<br>877<br>389   | -<br>92<br>2<br>52   | -<br>92<br>2<br>27  | 0<br>0<br>92<br>2   | 0<br>0<br>92<br>2   | -<br>92<br>2   |                |
| Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 0<br>92<br>91<br>inor2<br>877<br>389  | 2<br>52  | 92<br>2<br>27   | 0<br>92<br>2  | 0<br>92<br>2  | -<br>92<br>2   |                |
| Grade, %<br>Peak Hour Factor<br>Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 92<br>2<br>91<br>inor2<br>877<br>389  | 2<br>52  | 92<br>2<br>27   | 92<br>2   | 92<br>2   | 92<br>2  |                |
| Heavy Vehicles, %<br>Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 2<br>91<br>inor2<br>877<br>389  | 2<br>52  | 2<br>27   | 2   | 2   | 2  |                |
| Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 91<br>inor2<br>877<br>389   | 52   | 27  |   |   |  |                |
| Mvmt Flow<br>Major/Minor M<br>Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 91<br>inor2<br>877<br>389   | 52   | 27  |   |   |  |                |
| Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 877<br>389  | 200  |   |   |   | 91   |                |
| Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 877<br>389  | 200  |   |   |   |  |                |
| Conflicting Flow All<br>Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 389   | 200  | Major1  |   | Major2  |  |                |
| Stage 1<br>Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 389   | 389  | 435   | 0   | -   | 0  | 14 C 10 C 10 C |
| Stage 2<br>Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  |   |  |   | Contraction in the  |   | 16.2.200   |                |
| Critical Hdwy<br>Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 488   | -  |   | -   |   |  |                |
| Critical Hdwy Stg 1<br>Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 7.12  | 6.22   | 4.12  |   | This colation of the  | 101111-101   |                |
| Critical Hdwy Stg 2<br>Follow-up Hdwy 3<br>Pot Cap-1 Maneuver   | 6.12  | -  | -   | -   | -   | -  |                |
| Follow-up Hdwy 3<br>Pot Cap-1 Maneuver  | 6.12  | lan hi na dhir <u>n</u> a  | 1999 - Serie State  |   |   |  |                |
| Pot Cap-1 Maneuver  | 8.518   | 3.318  | 2.218   |   |   | -  |                |
|   | 269   | 659  | 1125  | No. STERNING  | a de la companya de l | Million Parties  |                |
| Stage 1   | 635   | -  | -   | -   | eno ogni competenci ne oggi det l   | -  |                |
| Stage 2   | 561   | RIGHT COMPLET  | A CARLES  |   | The Contention of the   |  |                |
| Platoon blocked, %  | 001   |  |   | -   |   | -  |                |
| Mov Cap-1 Maneuver  | 264   | 659  | 1125  | Manife State  | s manager and the second  | in the state   |                |
| Mov Cap-2 Maneuver  | 385   | -  | -   | -   | a the second  | -  |                |
| Stage 1   | 620   | in the second second   | NASS CONTINUES  | a she was a   |   |  |                |
| Stage 2   | 548   | -  | -   |   | on of the second se  |  |                |
| Oldgo Z   | 040   |  |   |   |   |  |                |
| Approach  | EB  |  | NB  | an a                                | SB  |  |                |
|   | 16.6  |  | 0.5   |   | 0   |  |                |
| HCM LOS   | C   |  | 0.0   |   |   |  |                |
|   |   |  |   |   |   |  |                |
| Minor Lane/Major Mvmt   | NBL   | NBT EBLn1  | SBT SBR   |   |   |  |                |
|   | 1125  | - 454  |   |   | and the second second   | and the second second  |                |
|   | .024  | - 0.316  |   |   |   |  |                |
| HCM Control Delay (s)   | 8.3   | - 16.6   |   |   |   |  |                |
| HCM Lane LOS  | A   | - C  | -   |   |   |  |                |
| HCM 95th %tile Q(veh)   | 0.1   | - 1.3  |   |   |   |  |                |

| ntersection                           | 4.0      |  |                        |               |  |                   |            |  |
|---------------------------------------|----------|--|------------------------|---------------|--|-------------------|------------|--|
|                                       | 1.8      |  |                        |               |  |                   | â          | U * 1  |
| Movement                              | EBL      | EBR  | NBL                    | NBT           | SI   | the second second | SBR        |  |
| ane Configurations                    | M        |  | ሻ                      | Ŷ             |  | ß                 |            | a ta 🦈 👘 a ta angle a ta ang |
| raffic Vol, veh/h                     | 31       | 57   | 42                     | 256           | 12   |                   | 198        |  |
| Future Vol, veh/h                     | 31       | 57   | 42                     | 256           | 12   | 75                | 198        |  |
| Conflicting Peds, #/hr                | 0        | 0  | 0                      | 0             |  | 0                 | 0          |  |
| Sign Control                          | Stop     | Stop   | Free                   | Free          | Fr S   |                   | Free       | e a Constante de Con<br>Constante de Constante de Constant  |
| RT Channelized                        | Such -   | Stop   |                        | None          |  | - N               | lone       |  |
| Storage Length                        | 0        | -  | 230                    | -             |  | -                 | -          |  |
| /eh in Median Storage, #              | 0        | le Calificia - S   | 1. Sec. 1. (-          | 0             |  | 0                 | -          | and the matter and   |
| Grade, %                              | 0        | -  | -                      | 0             |  | 0                 | •          |  |
| Peak Hour Factor                      | 92       | 92   | 92                     | 92            |  | 92                | 92         |  |
| Heavy Vehicles, %                     | 2        | 2  | 2                      | 2             |  | 2                 | 2          |  |
| Nymt Flow                             | 34       | 62   | 46                     | 278           | 13   | 86                | 215        | 1992年1月1日前1  |
|                                       |          |  |                        |               |  |                   |            |  |
| Major/Minor                           | Minor2   |  | Major1                 |               | Majo   | or2               |            |  |
| Conflicting Flow All                  | 1863     | 1493   | 1601                   | 0             | Sel C  |                   | 0          | $n = C_{11}^{-10}$   |
| Stage 1                               | 1493     | a de la construction de la construction de la construcción de la construcción de la construcción de la constru | a contra contra        | GRANG.        |  | 01                |            |  |
| Stage 2                               | 370      | -  |                        | -             |  | <i>.</i>          | -          |  |
| Critical Hdwy                         | 6.42     | 6.22   | 4.12                   | 1000          |  | 1                 |            |  |
| Critical Hdwy Stg 1                   | 5.42     | -  | -                      | -             |  |                   | -          |  |
| Critical Hdwy Stg 2                   | 5.42     | an an an an an a   | 10.000 (0.000 <u>-</u> | -             |  | 125               | 2          | Cold work leaded   |
| Follow-up Hdwy                        | 3.518    | 3.318  | 2.218                  |               |  | 1.                | -          |  |
| Pot Cap-1 Maneuver                    | 80       | 151  | 409                    | 124           |  | 240               |            |  |
| Stage 1                               | 205      | -  |                        | -             |  | -                 | -          | $i \in \{0, 0\}$   |
| Stage 2                               | 699      | NAME OF TAXABLE  | 21.000 (March 12)      |               |  | 1-18              | Cardina -  |  |
| Platoon blocked, %                    |          |  |                        | -             |  | -                 | -          |  |
| Nov Cap-1 Maneuver                    | - 71     | 151  | 409                    | 1             |  | 1-32              | -          |  |
| Nov Cap-2 Maneuver                    | 163      | -  | -                      | -             |  | 12                | -          |  |
| Stage 1                               | 205      |  |                        |               |  | (455)             |            |  |
| Stage 2                               | 620      | -  | -                      | -             |  | 14.1              | -          |  |
|                                       |          |  |                        |               |  |                   |            |  |
| Approach                              | EB       |  | NB                     |               |  | SB                |            |  |
| HCM Control Delay, s                  | 30.8     |  | 2.1                    | - Contraction |  | 0                 |            |  |
| HCM LOS                               | 0.0<br>D |  | 2.1                    |               |  | U                 |            |  |
| TOM LOO                               |          |  |                        |               |  |                   |            |  |
| Minor Lane/Major Mvmt                 | NBL      | NBT EBLn1  | SBT SBR                |               |  |                   | Terrise in |  |
| Capacity (veh/h)                      | 409      | - 233  |                        |               |  |                   |            |  |
| HCM Lane V/C Ratio                    | 0.112    | - 233  |                        |               | , 12,0 - s   |                   |            |  |
|                                       | 14.9     | - 30.8   |                        |               | n and the second s |                   |            |  |
| HCM Control Delay (s)<br>HCM Lane LOS |          |  |                        |               |  |                   |            |  |
| ILGIAI FSUG FOR                       | В        | - D  |                        |               |  |                   |            |  |

#### HCM 2010 TWSC 2: Silverado Trail & Regusci Winery Dr

| Internation                      |               |  |      |  |                |  |                 |                       |
|----------------------------------|---------------|--|------|--|----------------|--|-----------------|-----------------------|
| Intersection<br>Int Delay, s/veh | 0.7           |  |      |  |                |  |                 | 1.1                   |
| Movement                         | WBL           | WBR  |      | NBT  | NBR            | SBL  | SBT             |                       |
| Lane Configurations              | 14            |  |      | ĵ»   |                | 5  | 1               |                       |
| Traffic Vol, veh/h               | 30            | 16   |      | 270  | 10             | 6  | 1448            |                       |
| Future Vol, veh/h                | 30            | 16   |      | 270  | 10             | 6  | 1448            |                       |
| Conflicting Peds, #/hr           | 0             | Ő  |      | 0  | 0              | 0  | 0               |                       |
| Sign Control                     | Stop          | Stop   |      | Free   | Free           | Free   | Free            |                       |
| RT Channelized                   | -             | None   |      |  | None           |  | None            |                       |
| Storage Length                   | 0             | -  |      | -  | -              | 150  | -               |                       |
| Veh in Median Storage, #         |               | in the second second   |      | 0  | 0000520        | 100  | 0               |                       |
| Grade, %                         | 0             | and a state of the |      | 0  | -              | and the second   | 0               |                       |
| Peak Hour Factor                 | 92            | 92   |      | 92   | 92             | 92   | 92              |                       |
| Heavy Vehicles, %                | 2             | 2  |      | 2  | 2              | 2  | 2               |                       |
| Mvmt Flow                        | 33            | 17   |      | 293  | 11             | 7  |                 |                       |
|                                  |               | 11   |      | 200  | 11             |  | 1014            |                       |
| Major/Minor                      | Minor1        |  |      | Major1   |                | Major2   |                 |                       |
| Conflicting Flow All             | 1886          | 299  |      | 0  | 0              | 304  | 0               | 7                     |
| Stage 1                          | 299           |  |      | an anna an th  |                |  |                 |                       |
| Stage 2                          | 1587          |  |      | enenenenenenen ezekko  | -              |  | -               |                       |
| Critical Hdwy                    | 6.42          | 6.22   |      |  | -              | 4.12   |                 |                       |
| Critical Hdwy Stg 1              | 5.42          | -  |      | -  | -              | a the province of the province | -               |                       |
| Critical Hdwy Stg 2              | 5.42          |  |      |  | 200 <u>-</u> 4 |  |                 |                       |
| Follow-up Hdwy                   | 3.518         | 3.318  |      | '  | -              | 2.218  |                 |                       |
| Pot Cap-1 Maneuver               | 78            | 741  |      |  |                | 1257   | 20              |                       |
| Stage 1                          | 752           |  |      | and the second | -              | -  | -               |                       |
| Stage 2                          | 185           |  |      | and a state of the   |                |  |                 |                       |
| Platoon blocked, %               | 100           |  |      |  | -              |  | -               |                       |
| Nov Cap-1 Maneuver               | 78            | 741  |      | 1  |                | 1257   | 0000 <u>2</u> 9 |                       |
| Nov Cap-2 Maneuver               | 155           | -  |      |  | -              | -  |                 |                       |
| Stage 1                          | 752           |  |      | dan dan sa 🖣   | 1000           |  |                 |                       |
| Stage 2                          | 184           | -<br>-   |      | -  | -              | -  | 1               |                       |
| Oldyo Z                          | 107           |  |      |  | and at         |  |                 |                       |
| Approach                         | WB            |  |      | NB   |                | SB   |                 |                       |
| HCM Control Delay, s             | 26.9          |  |      | 0  |                | 0  |                 | and the second second |
| HCM LOS                          | D             |  |      |  |                |  |                 |                       |
|                                  |               |  |      |  |                |  |                 |                       |
| Minor Lane/Major Mvmt            | NBT           | NBRWBLn1   | SBL  | SBT  |                |  |                 |                       |
| Capacity (veh/h)                 | -             | - 214  | 1257 |  |                |  |                 |                       |
| HCM Lane V/C Ratio               | -             | - 0.234  |      | -  |                |  |                 |                       |
| HCM Control Delay (s)            | Start St a    | - 26.9   | 7.9  | 1918 - R. S. D. C.   |                |  |                 |                       |
| HCM Lane LOS                     | -             | - D  | Α    | -  |                |  |                 |                       |
| HCM 95th %tile Q(veh)            | S. S. Salar - | - 0.9  | 0    | in a - Martha  |                |  |                 |                       |

| Intersection             |           |  |                                       |                            |  |         |   |
|--------------------------|-----------|--|---------------------------------------|----------------------------|--|---------|---|
| nt Delay, s/veh          | 2.5       |  |                                       |                            |  |         | in the second second  |
| Novement                 | EBL       | EBR  | NBL                                   | NBT                        | SBT  | SBR     |   |
| ane Configurations       | M         |  | ሻ                                     | ↑                          | î,   |         |   |
| raffic Vol, veh/h        | 46        | 47   | 45                                    | 230                        | 940  | 545     |   |
| uture Vol, veh/h         | 46        | 47   | 45                                    | 230                        | 940  | 545     | alassi ya ingelaa   |
| Conflicting Peds, #/hr   | 0         | 0  | 0                                     | 0                          | 0  | 0       |   |
| Sign Control             | Stop      | Stop   | Free                                  | Free                       | Free   | Free    |   |
| RT Channelized           |           | None   | Second Second                         | None                       | and an Arthorn St.   | None    |   |
| Storage Length           | 0         | 6. j   | 125                                   | -                          | -  | -       |   |
| /eh in Median Storage, # | 0         |  |                                       | 0                          | 0  |         | Contract State Manual   |
| Grade, %                 | 0         | -  | 25 <b>—</b> 2                         | 0                          | 0  | -       |   |
| Peak Hour Factor         | 92        | 92   | 92                                    | 92                         | 92   | 92      |   |
| Heavy Vehicles, %        | 2         | 2  | 2                                     | 2                          | 2  | 2       |   |
| Mvmt Flow                | 50        | 51   | 49                                    | 250                        | 1022   | 592     |   |
|                          |           |  |                                       |                            |  |         |   |
| Major/Minor              | Minor2    |  | Major1                                |                            | Major2   | R. P.F. |   |
| Conflicting Flow All     | 1666      | 1318   | 1614                                  | 0                          |  | 0       | in a start of the st |
| Stage 1                  | 1318      |  | a sector and                          |                            |  |         |   |
| Stage 2                  | 348       |  | -                                     | -                          | -  | . · · · |   |
| Critical Hdwy            | 6.42      | 6.22   | 4.12                                  |                            | A STATE OF A STATE OF A  | -       |   |
| Critical Hdwy Stg 1      | 5.42      | -  |                                       | -                          |  | -       |   |
| Critical Hdwy Stg 2      | 5.42      |  | 1                                     | 10000                      |  |         |   |
| Follow-up Hdwy           | 3.518     | 3.318  | 2.218                                 | -                          | n han en de la segur de la | -       |   |
| Pot Cap-1 Maneuver       | 106       | 192  | 404                                   | 101/101-1                  |  | in star |   |
| Stage 1                  | 250       | -  | -                                     | -                          | •  | -       |   |
| Stage 2                  | 715       |  | Charles Start                         | and the second             |  |         |   |
| Platoon blocked, %       |           |  |                                       | -                          |  | -       |   |
| Mov Cap-1 Maneuver       | 93        | 192  | 404                                   |                            |  |         |   |
| Mov Cap-2 Maneuver       | 196       | -  | -                                     | -                          |  | -       |   |
| Stage 1                  | 250       | 1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 (1.000 |                                       | 197 (1 <u>. 1</u> .)       |  | 40.512  |   |
| Stage 2                  | 628       | -  | -                                     | -                          |  |         |   |
| olugo 2                  |           |  |                                       |                            |  |         |   |
| Approach                 | EB        |  | NB                                    |                            | SB   |         |   |
| HCM Control Delay, s     | 42.1      |  | 2.5                                   |                            | 0  |         |   |
| HCM LOS                  | 42.1<br>E |  | 2.0                                   |                            | U. AND   |         |   |
|                          |           |  |                                       |                            |  |         |   |
| Minor Lane/Major Mvmt    | NBL       | NBT EBLn1  | SBT SBR                               |                            |  |         |   |
|                          | 404       | - 194  |                                       | Contraction and the second |  |         |   |
| Capacity (veh/h)         |           |  |                                       |                            |  |         |   |
| HCM Lane V/C Ratio       | 0.121     | - 0.521  | <br>Nalista (Mariana)                 |                            |  |         | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1  |
| HCM Control Delay (s)    | 15.1      | - 42.1   | · · · · · · · · · · · · · · · · · · · |                            |  |         | <ul> <li>(a) velba (e/fiéro MG)</li> </ul>  |
| HCM Lane LOS             | C         | - E  |                                       |                            |  |         | 10 June - 10 -  |
| HCM 95th %tile Q(veh)    | 0.4       | - 2.7  | 10.0 - Course -                       |                            |  |         |   |

| Intersection             |        |                 |                   |       |        |                    |                       |
|--------------------------|--------|-----------------|-------------------|-------|--------|--------------------|-----------------------|
| Int Delay, s/veh         | 2.4    |                 |                   |       |        |                    | n ng tin ha           |
| Movement                 | EBL    | EBR             | NBL               | NBT   | SBT    | SBR                |                       |
| Lane Configurations      | M      |                 | 5                 | 1     | ĥ      |                    | 7.646.04.00.000       |
| Traffic Vol, veh/h       | 85     | 72              | 57                | 400   | 336    | 72                 |                       |
| Future Vol, veh/h        | 85     | 72              | 57                | 400   | 336    | 72                 |                       |
| Conflicting Peds, #/hr   | 0      | 0               | 0                 | 0     | 0      | 0                  |                       |
| Sign Control             | Stop   | Stop            | Free              | Free  | Free   | Free               |                       |
| RT Channelized           |        | Stop            | The Angle of La   | None  |        | None               |                       |
| Storage Length           | 0      | -               | 230               | -     |        | -                  |                       |
| Veh in Median Storage, # | 0      |                 |                   | 0     | 0      | -                  |                       |
| Grade, %                 | 0      | -               | -                 | 0     | 0      | -                  |                       |
| Peak Hour Factor         | 92     | 92              | 92                | 92    | 92     | 92                 |                       |
| Heavy Vehicles, %        | 2      | 2               | 2                 | 2     | 2      | 2                  |                       |
| Mvmt Flow                | 92     | 78              | 62                | 435   | 365    | 78                 |                       |
|                          |        |                 |                   |       |        |                    |                       |
| Major/Minor              | Minor2 |                 | Major1            |       | Major2 |                    | and the second second |
| Conflicting Flow All     | 963    | 404             | 443               | 0     | -      | 0                  |                       |
| Stage 1                  | 404    | ante a la marca |                   |       |        | 1807 20            |                       |
| Stage 2                  | 559    | -               | -                 | -     | -      | -                  |                       |
| Critical Hdwy            | 7.12   | 6.22            | 4.12              |       | Q 314  | 4                  |                       |
| Critical Hdwy Stg 1      | 6.12   | -               | -                 | -     | -      | -                  |                       |
| Critical Hdwy Stg 2      | 6.12   |                 |                   | 1012- |        | 19                 |                       |
| Follow-up Hdwy           | 3.518  | 3.318           | 2.218             | -     | / X    |                    |                       |
| Pot Cap-1 Maneuver       | 235    | 647             | 1117              |       |        | -                  |                       |
| Stage 1                  | 623    | -               | -                 | -     |        | -                  |                       |
| Stage 2                  | 513    | STREET-         | - 1000            |       |        | 98961 <u>-</u> 239 |                       |
| Platoon blocked, %       |        |                 |                   | -     | -      | -                  |                       |
| Mov Cap-1 Maneuver       | 225    | 647             | 1117              | -     |        | 10112              |                       |
| Mov Cap-2 Maneuver       | 344    |                 | -                 | -     |        | -                  |                       |
| Stage 1                  | 588    | 1               | 6                 |       |        | - 1                |                       |
| Stage 2                  | 485    | -               | -                 | ¥.,   | -      | -                  |                       |
|                          |        |                 |                   |       |        |                    |                       |
| Approach                 | EB     |                 | NB                |       | SB     |                    |                       |
| HCM Control Delay, s     | 12.7   |                 | 1                 |       | 0      |                    | a second and second   |
| HCMLOS                   | В      |                 |                   |       |        |                    |                       |
|                          |        |                 |                   |       |        |                    |                       |
| Vinor Lane/Major Mvmt    | NBL    | NBT EBLn1       | SBT SBR           |       |        |                    |                       |
| Capacity (veh/h)         | 1117   | - 635           |                   |       |        |                    |                       |
| HCM Lane V/C Ratio       | 0.055  | - 0.269         |                   |       |        |                    |                       |
| -ICM Control Delay (s)   | 8.4    | - 12.7          | 0.8197            |       |        |                    |                       |
| HCM Lane LOS             | А      | - B             |                   |       |        |                    |                       |
| -ICM 95th %tile Q(veh)   | 0.2    | - 1.1           | Harris Contractor |       |        |                    |                       |

| Intersection             |                   |  |       |   |   |  |  |  |
|--------------------------|-------------------|--|-------|---|---|--|--|--|
| nt Delay, s/veh          | 0.5               | _  |       |   |   |  |  | <br>Buck where we                                    |
| Movement                 | WBL               | WBR  |       | NBT   | NBR   | SBL                                      | SBT  |  |
| ane Configurations       | NA.               |  |       | ĵ.  |   | η  | 1  |  |
| raffic Vol, veh/h        | 13                | 13   |       | 471   | 14  | 13                                       | 396  |  |
| Future Vol, veh/h        | 13                | 13   |       | 471   | 14  | 13                                       | 396  |  |
| Conflicting Peds, #/hr   | 0                 | 0  |       | 0   | 0   | 0  | 0  |  |
| Sign Control             | Stop              | Stop   |       | Free  | Free  | Free                                     | Free   | $E_{\rm eff} = 2 \sqrt{2} - 8 A_{\rm eff}^{(2)} + 0$ |
| RT Channelized           | Contraction -     | None   |       | a Mercul 1.   | None  | - 6000 C                                 | None   |  |
| Storage Length           | 0                 | -  |       | -   | -   | 150                                      | -  |  |
| /eh in Median Storage, # | <b>#</b> 0        |  |       | 0   |   |  | 0  |  |
| Grade, %                 | 0                 | -  |       | 0   | -   | -  | 0  |  |
| Peak Hour Factor         | 92                | 92   |       | 92  | 92  | 92                                       | 92   |  |
| Heavy Vehicles, %        | 2                 | 2  |       | 2   | 2   | 2  | 2  |  |
| Nvmt Flow                | 14                | 14   |       | 512   | 15  | 14                                       | 430  |  |
|                          |                   |  |       |   |   |  |  |  |
| Major/Minor              | Minor1            |  |       | Major1  |   | Major2                                   |  |  |
| Conflicting Flow All     | 979               | 520  |       | 0   | 0   | 527                                      | 0  |  |
| Stage 1                  | 520               |  |       |   | 140.544   | WHEN THE PARTY                           | STO STATE  |  |
| Stage 2                  | 459               | -  |       | -   | -   | -  | 1  |  |
| Critical Hdwy            | 6.42              | 6.22   |       | and the second second   | N AND NO.   | 4.12                                     | CHARLES THE  |  |
| Critical Hdwy Stg 1      | 5.42              | 0.22   |       |   |   | -  | - 10   |  |
| Critical Hdwy Stg 2      | 5.42              | This is a set  |       |   | 8-54-5 <u>-</u> 21  | 10-10-10-10-10-10-10-10-10-10-10-10-10-1 | 671210   |  |
| Follow-up Hdwy           | 3.518             | 3.318  |       | 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 2012 1 | -   | 2.218                                    | 2.15   | and a second of                                      |
| Pot Cap-1 Maneuver       | 277               | 556  |       | Service Managers N  | The state   | 1040                                     | ALC: BES   |  |
| Stage 1                  | 597               | -  |       |   | -   | -  | 2  | - 4()  |
| Stage 2                  | 636               | and the state of the state   |       | est. Site in par  | not served  |  | 612  |  |
| Platoon blocked, %       | 000               |  |       | A CONTRACTOR OF STREET  |   |  | -  |  |
| Mov Cap-1 Maneuver       | 273               | 556  |       |   | APRIL 2   | 1040                                     | NOR OF BER   |  |
| Nov Cap-2 Maneuver       | 404               | 000  |       | Stelling and an of the second   |   | 1040                                     | L.   |  |
| Stage 1                  | 597               | and the second state of the  |       | a   | ni-sugar  | -  | and SRA  |  |
| Stage 2                  | 627               | and the second sec |       |   |   | •  | 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -<br>1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - |  |
| Slage 2                  | 021               | an an tagainm  |       |   | asella de   |  |  |  |
| Approach                 | WB                |  |       | NB  |   | SB                                       |  |  |
| HCM Control Delay, s     | 13.2              |  |       | 0   | and the second se | 0.3                                      |  |  |
| HCM LOS                  | 13.2<br>B         |  |       | U   |   | 0.3                                      |  |  |
|                          | D                 |  |       |   |   |  |  |  |
| Minor Lono Major Munt    | NIDT              | NIDDIA/DI of   | CDI   | CDT   |   |  |  |  |
| Minor Lane/Major Mvmt    | NBT               | NBRWBLn1   | SBL   | SBT   |   |  |  |  |
| Capacity (veh/h)         | · 700-            | - 468  | 1040  | in the second   |   |  |  |  |
| HCM Lane V/C Ratio       |                   |  | 0.014 | -   |   |  |  |  |
| HCM Control Delay (s)    |                   | - 13.2   | 8.5   |   |   |  |  |  |
| HCM Lane LOS             | -                 | - B  | A     | -   |   |  |  |  |
| HCM 95th %tile Q(veh)    | The second second | - 0.2  | 0     | all the solution  |   |  |  |  |

| Intersection             |        |   |                 |        |        |        |                      |
|--------------------------|--------|---|-----------------|--------|--------|--------|----------------------|
| nt Delay, s/veh          | 2.4    |   |                 |        |        | ľ      | na 14 - 14 - 14      |
| Viovement                | EBL.   | EBR                                       | NBL             | NBT    | SBT    | SBR    |                      |
| ane Configurations       | ¥.4    |   | η               | 个      | Þ      |        |                      |
| Traffic Vol, veh/h       | 86     | 48  | 25              | 380    | 298    | 85     |                      |
| uture Vol, veh/h         | 86     | 48  | 25              | 380    | 298    | 85     |                      |
| Conflicting Peds, #/hr   | 0      | 0   | 0               | 0      | 0      | 0      |                      |
| Sign Control             | Stop   | Stop                                      | Free            | Free   | Free   | Free   |                      |
| T Channelized            |        | None                                      |                 | None   |        | None   |                      |
| Storage Length           | 0      | -   | 125             | -      | -      | -      |                      |
| /eh in Median Storage, # | 0      | 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1    | alas sandi kala | 0      | 0      | - 100  |                      |
| Grade, %                 | 0      | -   |                 | 0      | 0      | -      |                      |
| Peak Hour Factor         | 92     | 92  | 92              | 92     | 92     | 92     |                      |
| leavy Vehicles, %        | 2      | 2   | 2               | 2      | 2      | 2      |                      |
| Avmt Flow                | 93     | 52  | 27              | 413    | 324    | 92     |                      |
|                          |        |   |                 |        |        |        |                      |
| /lajor/Minor             | Minor2 |   | Major1          |        | Major2 |        | A SAME SAME          |
| Conflicting Flow All     | 837    | 370                                       | 416             | 0      |        | 0      |                      |
| Stage 1                  | 370    |   |                 | 102    | -      | -      |                      |
| Stage 2                  | 467    | -   | -               | -      |        | -      |                      |
| Critical Hdwy            | 6.42   | 6.22                                      | 4.12            | -      |        | 6.1    |                      |
| Critical Hdwy Stg 1      | 5.42   | -   | -               | -      | -      | -      |                      |
| Critical Hdwy Stg 2      | 5.42   | al se |                 | 0.001  |        |        |                      |
| follow-up Hdwy           | 3.518  | 3.318                                     | 2.218           | -      | -      | -      | $+ a^{\alpha} E = d$ |
| ot Cap-1 Maneuver        | 337    | 676                                       | 1143            | 14 C   |        | -      |                      |
| Stage 1                  | 699    | -   |                 | -      | -      |        |                      |
| Stage 2                  | 631    |   |                 | ards-t |        | - 10   |                      |
| Platoon blocked, %       |        |   |                 | -      | -      | -      |                      |
| Nov Cap-1 Maneuver       | 329    | 676                                       | 1143            | -      |        | -      |                      |
| Nov Cap-2 Maneuver       | 448    | -   | -               |        |        | -      |                      |
| Stage 1                  | 699    | - 18 C                                    | 1.11.11.1.1     | - 10   |        | Read-M |                      |
| Stage 2                  | 616    | -   | -               |        | -      | -      |                      |
|                          |        |   |                 |        |        |        |                      |
| pproach                  | EB     |   | NB              |        | SB     |        |                      |
| ICM Control Delay, s     | 14.9   |   | 0.5             |        | 0      |        | TALAO TANAS SILA     |
| ICM LOS                  | В      |   |                 |        |        |        |                      |
|                          |        |   |                 |        |        |        |                      |
| /inor Lane/Major Mvmt    | NBL    | NBT EBLn1                                 | SBT SBR         |        |        |        |                      |
| Capacity (veh/h)         | 1143   | - 510                                     |                 |        |        |        |                      |
| ICM Lane V/C Ratio       | 0.024  | - 0.286                                   |                 |        |        |        |                      |
| ICM Control Delay (s)    | 8.2    | - 14.9                                    |                 |        |        |        |                      |
| ICM Lane LOS             | A      | - B                                       |                 |        |        |        |                      |
| ICM 95th %tile Q(veh)    | 0.1    | - 1.2                                     |                 |        |        |        |                      |

#### HCM 2010 TWSC 1: Silverado Trail & Yountville CrossRd

| ntersection              |           |  |            |                |  |            |                              |
|--------------------------|-----------|--|------------|----------------|--|------------|------------------------------|
| nt Delay, s/veh          | 1.9       |  |            |                |  | Š.         | ×2 × '₩2' '8                 |
| lovement                 | EBL       | EBR                                    | NBL        | NBT            | SBT  | SBR        |                              |
| ane Configurations       | M         |  | ካ          | Ŷ              | ĥ  |            |                              |
| raffic Vol, veh/h        | 31        | 58                                     | 43         | 296            | 1307   | 198        | and the second second second |
| uture Vol, veh/h         | 31        | 58                                     | 43         | 296            | 1307   | 198        |                              |
| Conflicting Peds, #/hr   | 0         | 0                                      | 0          | 0              | 0  | 0          |                              |
| lign Control             | Stop      | Stop                                   | Free       | Free           | Free   | Free       |                              |
| T Channelized            | Sand Sec. | Stop                                   |            | None           | Shirt Sector   | None       |                              |
| Storage Length           | 0         | -                                      | 230        | -              | •  | -          |                              |
| /eh in Median Storage, # | 0         | 1000                                   | 1-1-1      | 0              | 0  | -          |                              |
| Grade, %                 | 0         | -                                      |            | 0              | 0  | -          |                              |
| Peak Hour Factor         | 92        | 92                                     | 92         | 92             | 92   | 92         |                              |
| leavy Vehicles, %        | 2         | 2                                      | 2          | 2              | 2  | 2          |                              |
| Nymt Flow                | 34        | 63                                     | 47         | 322            | 1421   | 215        |                              |
|                          |           |  |            |                |  |            |                              |
| Major/Minor              | Minor2    |  | Major1     |                | Major2   |            |                              |
| Conflicting Flow All     | 1943      | 1528                                   | 1636       | 0              | -  | 0          | internet sites and           |
| Stage 1                  | 1528      |  |            |                |  | un alla an |                              |
| Stage 2                  | 415       |  |            | -              |  | -<br>-     |                              |
| Critical Hdwy            | 6.42      | 6.22                                   | 4.12       |                | 1771 (1980) (198 |            |                              |
| Critical Hdwy Stg 1      | 5.42      | -                                      | -          | -              |  | -          | 1 1. VANA 6 DAV              |
| Critical Hdwy Stg 2      | 5.42      | 100 - 10 - 10 - 10 - 10 - 10 - 10 - 10 |            | - 19           | and the second   |            |                              |
| Follow-up Hdwy           | 3.518     | 3.318                                  | 2.218      | 1.H            | a 10   | -          |                              |
| Pot Cap-1 Maneuver       | 71        | 144                                    | 396        | 4              | 1  | -          |                              |
| Stage 1                  | 197       | -                                      | -          | s <del>-</del> |  | -          | . S 2                        |
| Stage 2                  | 666       |  | The second |                | and the second   | R. S.      |                              |
| Platoon blocked, %       |           |  |            | -              |  | -          |                              |
| Nov Cap-1 Maneuver       | 63        | 144                                    | 396        | -              | I TREAS  | -          |                              |
| Nov Cap-2 Maneuver       | 155       | -                                      | -          | - <u>-</u>     | -  | -          |                              |
| Stage 1                  | 197       |  |            |                |  | 9.5        | i brailt                     |
| Stage 2                  | 587       | -                                      | -          | -              | 4  | -          |                              |
|                          |           |  |            |                |  |            |                              |
| Approach                 | EB        |  | NB         |                | SB   |            |                              |
| HCM Control Delay, s     | 33.4      |  | 1.9        |                | . 0  |            |                              |
| HCM LOS                  | D         |  |            |                |  |            | a. 191 - 24                  |
|                          |           |  |            |                |  |            |                              |
| Minor Lane/Major Mvmt    | NBL       | NBT EBLn1                              | SBT SBR    |                |  |            |                              |
| Capacity (veh/h)         | 396       | - 221                                  | ·          |                | A CONTRACTOR OF A  | T.         |                              |
| HCM Lane V/C Ratio       | 0.118     | - 0.438                                |            |                |  |            |                              |
| HCM Control Delay (s)    | 15.3      | - 33.4                                 |            |                |  |            |                              |
| HCM Lane LOS             | С         | - D                                    |            |                |  |            |                              |
| HCM 95th %tile Q(veh)    | 0.4       | - 2.1                                  | 0.000      |                |  |            |                              |

| Intersection             |           |                  |       |   |                  |  |                        |  |
|--------------------------|-----------|------------------|-------|---|------------------|--|------------------------|--|
| Int Delay, s/veh         | 0.7       |                  |       |   |                  |  |                        |  |
| Movement                 | WBL       | WBR              |       | NBT   | NBR              | SBL                                      | SBT                    |  |
| ane Configurations       | Y         |                  |       | Þ   |                  | 5  | 4                      | $dt \stackrel{(0)}{=} \chi \stackrel{(0)}{=} \eta \stackrel{(0)}{=} \eta \stackrel{(0)}{=} \eta$ |
| Traffic Vol, veh/h       | 30        | 16               |       | 311   | 10               | 6  | 1492                   |  |
| Future Vol, veh/h        | 30        | 16               |       | 311   | 10               | 6  | 1492                   |  |
| Conflicting Peds, #/hr   | 0         | 0                |       | 0   | 0                | 0  | 0                      |  |
| Sign Control             | Stop      | Stop             |       | Free  | Free             | Free                                     | Free                   |  |
| RT Channelized           | REGION SE | None             |       |   | None             | a sendary.                               | None                   |  |
| Storage Length           | 0         | -                |       | -   | -                | 150                                      | 1_                     |  |
| /eh in Median Storage, # | 0         |                  |       | 0   | -                | 1000 and 1000 a                          | 0                      |  |
| Grade, %                 | 0         | -                |       | 0   | -                | -  | 0                      |  |
| Peak Hour Factor         | 92        | 92               |       | 92  | 92               | 92                                       | 92                     |  |
| Heavy Vehicles, %        | 2         | 2                |       | 2   | 2                | 2  | 2                      |  |
| Nymt Flow                | 33        | 17               |       | 338   | 11               | 7  | 1622                   |  |
|                          | 00        |                  |       |   |                  |  | CARALLER CO.           |  |
| Major/Minor              | Minor1    |                  |       | Major1  |                  | Major2                                   |                        |  |
| Conflicting Flow All     | 1978      | 343              |       | 0   | 0                | 349                                      | 0                      |  |
| Stage 1                  | 343       |                  |       | (All the second s | 1000-20          |  | 1                      |  |
| Stage 2                  | 1635      | -                |       | -   | -                | -  | 20                     |  |
| Critical Hdwy            | 6.42      | 6.22             |       |   |                  | 4.12                                     | 1000                   |  |
| Critical Hdwy Stg 1      | 5.42      | -                |       | -   | -                | -  | . <u></u> .            |  |
| Critical Hdwy Stg 2      | 5.42      | Contraction of L |       | 200000000000  | 1999 <u>-</u> 19 |  | 1000000                |  |
| Follow-up Hdwy           | 3.518     | 3.318            |       |   | -                | 2.218                                    | -                      |  |
| Pot Cap-1 Maneuver       | 68        | 700              |       |   | 989 <b>-</b> 1   | 1210                                     | (200 <u>1</u> 9        |  |
| Stage 1                  | 719       | -                |       | -   | -                | -  | -                      |  |
| Stage 2                  | 175       | 1000 C           |       |   | 200              | an a |                        |  |
| Platoon blocked, %       | 110       |                  |       |   | -                |  | -                      |  |
| Nov Cap-1 Maneuver       | 68        | 700              |       |   | 100020           | 1210                                     | 11129                  |  |
| Nov Cap-2 Maneuver       | 145       | 700              |       | -   |                  | -  | -10                    |  |
| Stage 1                  | 719       |                  |       |   |                  | an a | 1997 - 199 <u>1</u> 99 |  |
| Stage 2                  | 174       | -                |       |   | -                |  | -1                     |  |
| Slage 2                  | 1/4       | n geografi       |       |   |                  |  |                        |  |
| Approach                 | WB        |                  |       | NB  |                  | SB                                       |                        |  |
| ICM Control Delay, s     | 28.9      |                  |       | 0   |                  | 0  |                        |  |
| HCM LOS                  | D         |                  |       |   |                  |  |                        |  |
|                          |           |                  |       |   |                  |  |                        |  |
| Ainor Lane/Major Mvmt    | NBT       | NBRWBLn1         | SBL   | SBT   |                  |  |                        |  |
| Capacity (veh/h)         |           | - 200            | 1210  |   |                  |  |                        |  |
| HCM Lane V/C Ratio       | -         |                  | 0.005 | -   |                  |  |                        |  |
| HCM Control Delay (s)    |           | - 28.9           | 8     | Sugar - March Stat  |                  |  |                        |  |
| ICM Lane LOS             | -         | - D              | Α     | -   |                  |  |                        |  |
| HCM 95th %tile Q(veh)    |           | - 1              | 0     |   |                  |  |                        |  |

| Int Delay, s/veh 2       | .7          |             |                  |  | angeneral Salita (Salita) - Salita (Salita)   | Allocation Mathematica | and an an an and a start of the | a series and the series of the |
|--------------------------|-------------|-------------|------------------|--|---|------------------------|---------------------------------|--|
|                          |             |             |                  |  |   |                        | 3.8                             | Sat Contraction of the   |
| Movement                 | EBL         | EBR         | NBL              | NBT                                      |   | SBT                    | SBR                             |  |
| Lane Configurations      | N/          | 11          | Ŋ                | 1  |   | ĵ.                     |                                 |  |
| Traffic Vol, veh/h       | 47          | 47          | 45               | 270                                      |   | 981                    | 548                             |  |
| Future Vol, veh/h        | 47          | 47          | 45               | 270                                      |   | 981                    | 548                             |  |
| Conflicting Peds, #/hr   | 0           | 0           | 0                | 0  |   | 0                      | 0                               |  |
| Sign Control             | Stop        | Stop        | Free             | Free                                     |   | Free                   | Free                            |  |
| RT Channelized           |             | None        | 1000             | None                                     |   |                        | None                            |  |
| Storage Length           | 0           | f.;?; =     | 125              | -  |   |                        | -                               |  |
| Veh in Median Storage, # | 0           | -           |                  | 0  |   | Ó                      |                                 |  |
| Grade, %                 | 0           | -           |                  | 0  |   | 0                      | -                               |  |
| Peak Hour Factor         | 92          | 92          | 92               | 92                                       |   | 92                     | 92                              |  |
| Heavy Vehicles, %        | 2           | 2           | 2                | 2  |   | 2                      | 2                               |  |
| Vvmt Flow                | 51          | 51          | 49               | 293                                      |   | 1066                   | 596                             |  |
|                          |             | 01          | 10               | 200                                      |   | 1000                   | 000                             |  |
| Major/Minor              | Minor2      |             | Major1           |  |   | Major2                 |                                 |  |
| Conflicting Flow All     | 1755        | 1364        | 1662             | 0  |   | 11101012               | 0                               |  |
| Stage 1                  | 1364        | -           | -                |  |   | in lotter places in    |                                 |  |
| Stage 2                  | 391         |             | -                | -  |   | •                      |                                 |  |
| Critical Hdwy            | 6.42        | 6.22        | 4.12             | en de la com                             |   | in a state of the      | all a state                     |  |
| Critical Hdwy Stg 1      | 5.42        | -           | 1.12             | -  |   |                        |                                 |  |
| Critical Hdwy Stg 2      | 5.42        | en i en en  | -<br>            | in the second                            |   | Contractor de la       |                                 |  |
| Follow-up Hdwy           | 3.518       | 3.318       | 2.218            | -  |   | -<br>-                 |                                 |  |
| Pot Cap-1 Maneuver       | 3.518<br>94 | 181         | 387              |  |   |                        | Strikener Per                   |  |
|                          | 238         | 101         | 307              | algar. x                                 |   |                        | 1000215105                      |  |
| Stage 1                  |             | ander mente |                  | -<br>                                    |   | ÷<br>Norski Maria      | -                               |  |
| Stage 2                  | 683         |             |                  | Nilos - Al                               |   |                        |                                 |  |
| Platoon blocked, %       | 00          | 404         | 207              | -  |   | -                      | -                               |  |
| Nov Cap-1 Maneuver       | 82          | 181         | 387              | -  |   | -                      | 1998 <b>-</b> 199               |  |
| Mov Cap-2 Maneuver       | 184         | -           | -                | -<br>221. (                              |   | -                      | -                               |  |
| Stage 1                  | 238         | •           | a station said.  | 1949 - A. B. A.                          |   | and the second         | S. Catho                        |  |
| Stage 2                  | 597         | -           | -                | -  |   |                        | Rinnweitern auf eit             |  |
|                          |             |             |                  |  |   |                        |                                 |  |
| Approach                 | EB          |             | NB               |  |   | SB                     |                                 |  |
| HCM Control Delay, s     | 47.5        |             | 2.2              | Sale Part                                |   | 0                      |                                 | and a second state of the  |
| HCM LOS                  | E           |             |                  |  |   |                        |                                 |  |
|                          |             |             |                  |  |   |                        |                                 |  |
| Minor Lane/Major Mvml    | NBL         | NBT EBLn1   | SBT SBR          |  |   |                        |                                 |  |
| Capacity (veh/h)         | 387         | - 182       |                  | Self-Self-Self-Self-Self-Self-Self-Self- | DIV CON   |                        |                                 |  |
| HCM Lane V/C Ratio       | 0.126       | - 0.561     |                  |  |   |                        |                                 |  |
| HCM Control Delay (s)    | 15.6        | - 47.5      |                  |  |   |                        |                                 |  |
| HCM Lane LOS             | C           | - E         | •                |  |   |                        |                                 |  |
| HCM 95th %tile Q(veh)    | 0.4         | - 3         | Provinces of the |  | A STREET, STREE |                        |                                 |  |

Baseline

| Intersection             |        |            |           |  |  |                |  |
|--------------------------|--------|------------|-----------|--|--|----------------|--|
| Int Delay, s/veh         | 2.2    |            |           |  |  | 0.5            |  |
| Movement                 | EBL    | EBR        | NB        | L NBT  | SBT  | SBR            |  |
| Lane Configurations      | W      |            |           | <u>5</u>   | Ą  | amplaid the co | <ul> <li>A statistical second sec</li></ul> |
| Traffic Vol, veh/h       | 85     | 73         | 5         |  | 362  | 72             |  |
| Future Vol, veh/h        | 85     | 73         | 5         | 8 425  | 362  | 72             |  |
| Conflicting Peds, #/hr   | 0      | 0          |           | 0 0  | 0  | 0              | en and state the short.  |
| Sign Control             | Stop   | Stop       | Fre       | e Free   | Free   | Free           | 1.1 A.   |
| RT Channelized           | -      | Stop       |           | - None   | 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1   | None           |  |
| Storage Length           | 0      | -          | 23        | D -  | -  | -              |  |
| Veh in Median Storage, # | 0      |            |           | - 0  | 0  | 1000           |  |
| Grade, %                 | 0      | -          |           | - 0  | 0  | -              |  |
| Peak Hour Factor         | 92     | 92         | 9         | 2 92   | 92   | 92             | Contraction of the state of  |
| Heavy Vehicles, %        | 2      | 2          |           | 2 2  | 2  | 2              |  |
| Mvmt Flow                | 92     | 79         | 6         | 3 462  | 393  | 78             |  |
|                          |        |            |           |  |  |                |  |
| Major/Minor              | Minor2 | a line the | Major     |  | Major2   |                |  |
| Conflicting Flow All     | 1021   | 433        | 47:       | 2 0  | -  | 0              |  |
| Stage 1                  | 433    |            |           | -  |  |                |  |
| Stage 2                  | 588    | -          |           |  | 4  | ·              |  |
| Critical Hdwy            | 6.42   | 6.22       | 4.12      | 2 -  |  |                |  |
| Critical Hdwy Stg 1      | 5.42   | -          | 3         |  | ÷  | -              | 1. A.  |
| Critical Hdwy Stg 2      | 5.42   |            |           | · 1977   |  |                |  |
| Follow-up Hdwy           | 3.518  | 3.318      | 2.218     |  | -  | -              | Y Lo Herry   |
| Pot Cap-1 Maneuver       | 262    | 623        | 1090      | ) -  |  |                |  |
| Stage 1                  | 654    | -          |           |  | -  | a 1            |  |
| Stage 2                  | 555    |            |           |  | AND REAL PROPERTY  | Received a     |  |
| Platoon blocked, %       |        |            |           | -  | -  | -              |  |
| Mov Cap-1 Maneuver       | 247    | 623        | 1090      | 1.1618 - 1   |  | 100 - 10 B     |  |
| Mov Cap-2 Maneuver       | 376    | -          |           | -  | -  | -              |  |
| Stage 1                  | 654    |            | Section 1 | - 11 - 1   | ETTO STREET.   |                |  |
| Stage 2                  | 523    |            | ·         |  |  | 1 ).           |  |
|                          |        |            |           |  |  |                |  |
| Approach                 | EB     |            | NB        | and the second | SB   |                |  |
| HCM Control Delay, s     | 11.8   |            | 1         |  | 0  |                |  |
| HCM LOS                  | В      |            |           |  |  |                |  |
| Vinor Lane/Major Mvmt    | NBL    | NBT EBLn1  | SBT SBR   |  |  |                |  |
| Capacity (veh/h)         | 1090   |            |           |  | and the second |                |  |
| CAPACITY (Ven/n)         |        | - 699      |           |  |  |                |  |
|                          | 0.058  | - 0.246    | -         |  |  |                |  |
| HCM Control Delay (s)    | 8.5    | - 11.8     | · ·       |  |  |                |  |
|                          | A      | - B        |           |  |  |                |  |
| HCM 95th %tile Q(veh)    | 0.2    | - 1        |           |  |  |                |  |

Baseline

Synchro 9 Report Page 1

| Intersection  |         |  |       |                     |                 |         |                              |  |
|---|---------|--|-------|---------------------|-----------------|---------|------------------------------|--|
| A designed and the second s | 0.5     |  |       |                     |                 |         |                              | and a second   |
| Movement  | WBL     | WBR  |       | NBT                 | NBR             | SBL     | SBT                          |  |
| Lane Configurations   | W       | and the second | - N.S | Þ                   | 1               | 5       | <b>A</b> ⊂                   | and states and states at   |
| Traffic Vol, veh/h  | 13      | 13   |       | 471                 | 14              | 13      | 369                          |  |
| Future Vol, veh/h   | 13      | 13   |       | 471                 | 14              | 13      | 369                          |  |
| Conflicting Peds, #/hr  | 0       | 0  |       | 0                   | 0               | 0       | 0                            |  |
| Sign Control  | Stop    | Stop   |       | Free                | Free            | Free    | Free                         |  |
| RT Channelized  | 0001    | None   |       | Salor -             | None            | -       | None                         |  |
| Storage Length  | 0       | -  |       |                     | ÷               | 150     | -                            | - 1461 A. 1 <sup>2</sup>   |
| Veh in Median Storage, #  | 0       | 1993 - 1995 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -  |       | 0                   | ine -           | 1       | 0                            | Vertic Medical Store (   |
| Grade, %  | 0       | -  |       | i) <b>O</b>         | · -             | -       | 0                            |  |
| Peak Hour Factor  | 92      | 92   |       | 92                  | 92              | 92      | 92                           |  |
| Heavy Vehicles, %   | 2       | 2  |       | 2                   | 2               | 2       | 2                            |  |
| Mvmt Flow   | 14      | 14   |       | 512                 | 15              | 14      | 401                          |  |
|   |         |  |       |                     |                 |         |                              |  |
| Major/Minor   | Minor1  | and the second   |       | Major1              | Sec. Production | Major2  |                              |  |
| Conflicting Flow All  | 949     | 520  |       | 0                   | 0               | 527     | 0                            | i le fa kar kar j  |
| Stage 1   | 520     |  |       |                     | -               | - 100 - | -1.4                         |  |
| Stage 2   | 429     | -  |       |                     | -               | -       | A ]                          |  |
| Critical Hdwy   | 6.42    | 6.22   |       | an annin's          |                 | 4.12    | 10122.83                     | A STATE AND A STATE  |
| Critical Hdwy Stg 1   | 5.42    | -  |       |                     |                 | -       | ÷.                           | the state  |
| Critical Hdwy Stg 2   | 5.42    |  |       |                     | -               |         |                              |  |
| Follow-up Hdwy  | 3.518   | 3.318  |       | ÷                   | ÷., -           | 2.218   | 4                            | 18 J. W. 285-  |
| Pot Cap-1 Maneuver  | 289     | 556  |       | -                   | -               | 1040    | S Loll                       |  |
| Stage 1   | 597     | -  |       |                     | -               |         | 4.63                         |  |
| Stage 2   | 657     | HARD TO CHE  |       |                     | - 1             |         |                              |  |
| Platoon blocked, %  |         |  |       |                     | -               |         | -                            |  |
| Mov Cap-1 Maneuver  | 285     | 556  |       | (                   | etit 4-         | 1040    | - 15 C                       |  |
| Mov Cap-2 Maneuver  | 413     | -  |       | -                   | -               |         | ÷2.1                         | $(1-1)^{-1} \left[ \left( \frac{1}{2} - \frac{1}{2} \right)^{-1} \left( \frac{1}{2} + \frac{1}{2} \right)^{-1} \right] = \left( \frac{1}{2} + \frac{1}{2} \right)^{-1} \left( \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right)^{-1} \left( \frac{1}{2} + \frac{1}{2} \right)^{-1} \left( \frac{1}{2} + \frac$ |
| Stage 1   | 597     | anna haran -   |       | Section of the      | - 101           |         |                              |  |
| Stage 2   | 648     | -  |       | -                   | -               | -       | -1                           | $\int dx = \int dx dx$  |
|   |         |  |       |                     |                 |         |                              |  |
| Approach  | WB      |  |       | NB                  |                 | SB      |                              |  |
| HCM Control Delay, s  | 13.1    |  |       | 0                   |                 | 0.3     | a second                     |  |
| HCM LOS   | В       |  |       |                     |                 |         |                              |  |
|   |         |  |       |                     |                 |         |                              |  |
| Minor Lane/Major Mvmt   | NBT     | NBRWBLn1   | SBL   | SBT                 |                 |         |                              |  |
| Capacity (veh/h)  | 1993 (M | - 474  | 1040  | Energia de Comunita |                 |         | 1. 199. (99.) ( <sup>1</sup> |  |
| HCM Lane V/C Ratio  | •       |  | 0.014 | -                   |                 |         |                              |  |
| HCM Control Delay (s)   |         | - 13.1   | 8.5   | W.S.                |                 |         |                              | TEL GRANNING MS  |
| HCM Lane LOS  | -       | - B  | A     | -                   |                 |         |                              |  |
| HCM 95th %tile Q(veh)   |         | - 0.2  | 0     | - 11 C              |                 |         |                              |  |

Baseline

#### MD N-T+Prj. Weekend Conditions 06/09/2017

| Intersection             |           |               |                 |                |  |             |                              |
|--------------------------|-----------|---------------|-----------------|----------------|--|-------------|------------------------------|
| Int Delay, s/veh         | 2.4       |               |                 |                |  |             |                              |
| Movement                 | EBL       | EBR           | NBL             | NBT            | SBT  | SBR         |                              |
| Lane Configurations      | W         |               | 5               | 4              | ĵ≽   |             |                              |
| Traffic Vol, veh/h       | 87        | 48            | 25              | 409            | 326  | 87          |                              |
| Future Vol, veh/h        | 87        | 48            | 25              | 409            | 326  | 87          |                              |
| Conflicting Peds, #/hr   | 0         | 0             | 0               | 0              | 0  | 0           |                              |
| Sign Control             | Stop      | Stop          | Free            | Free           | Free   | Free        |                              |
| RT Channelized           | 1000 100- | None          |                 | None           |  | None        |                              |
| Storage Length           | 0         | -             | 125             | -              | -  | -           |                              |
| Veh in Median Storage, # | 0         |               | Red Red Red Red | 0              | 0  | LASS OF THE |                              |
| Grade, %                 | 0         | -             |                 | 0              | 0  | -           |                              |
| Peak Hour Factor         | 92        | 92            | 92              | 92             | 92   | 92          |                              |
| Heavy Vehicles, %        | 2         | 2             | 2               | 2              | 2  | 2           |                              |
| Mvmt Flow                | 95        | 52            | 27              | 445            | 354  | 95          |                              |
|                          |           |               |                 |                |  |             |                              |
| Major/Minor              | Minor2    |               | Major1          |                | Major2   |             |                              |
| Conflicting Flow All     | 901       | 402           | 449             | 0              |  | 0           | 4                            |
| Stage 1                  | 402       | 10 10 10 10 - |                 | - N            |  | CZ          |                              |
| Stage 2                  | 499       | -             | -               | -              | -  | -           |                              |
| Critical Hdwy            | 6.42      | 6.22          | 4.12            | 101213         | Contract of the second second                        | 0.00        |                              |
| Critical Hdwy Stg 1      | 5.42      | -             | -               | -              |  |             |                              |
| Critical Hdwy Stg 2      | 5.42      |               |                 | -              |  | 4           |                              |
| Follow-up Hdwy           | 3.518     | 3.318         | 2.218           | -              | -  | 11          |                              |
| Pot Cap-1 Maneuver       | 309       | 648           | 1111            | 1. 1. 1. 1. 1. |  | -           |                              |
| Stage 1                  | 676       | -             | •               | -              | -  | -           |                              |
| Stage 2                  | 610       | -             | and the second  |                | CONTRACTOR STATES                                    | 6790727M    | The Barris and States        |
| Platoon blocked, %       |           |               |                 | -              | -  | -           |                              |
| Mov Cap-1 Maneuver       | 301       | 648           | 1111            | 11.22          | State of the second                                  | -           |                              |
| Mov Cap-2 Maneuver       | 425       | -             | -               | -              | •  | -           |                              |
| Stage 1                  | 676       | -             | 1000 A 104-1    | -              |  | -           |                              |
| Stage 2                  | 595       | -             | -               | -              | n lan in a san an a | -           |                              |
|                          |           |               |                 |                |  |             |                              |
| Approach                 | EB        |               | NB              |                | SB   |             |                              |
| HCM Control Delay, s     | 15.6      |               | 0.5             | 1946 - A.A.    | 0  | THE PERSON  | and the second second second |
| HCM LOS                  | C         |               | 0.0             |                | V  |             |                              |
|                          |           |               |                 |                |  |             |                              |
| Minor Lane/Major Mvmt    | NBL       | NBT EBLn1     | SBT SBR         |                |  | 0.542.265   |                              |
| Capacity (veh/h)         | 1111      | - 484         |                 |                |  | (           |                              |
| ICM Lane V/C Ratio       | 0.024     | - 0.303       |                 |                |  |             |                              |
| ICM Control Delay (s)    | 8.3       | - 15.6        |                 |                |  |             |                              |
| ICM Lane LOS             | A         | - C           | -               |                |  |             |                              |
| ICM 95th %tile Q(veh)    | 0.1       | - 1.3         | CHARACTER .     |                |  |             |                              |
|                          | 0.1       | 1.0           |                 |                |  |             |                              |

| nt Delay, s/veh 10.  | 7   |                       |  |                       |       |  | 5.3  | 1. N. S. M. B.  |
|--|---|-----------------------|--|-----------------------|-------|--|--|---|
| Novement   | EBL   | EBR                   | NBL  | NBT                   |       | SBT                                    | SBR  |   |
| the second s | NT NT   | LON                   | NDL  |                       |       |  | ODN  |   |
| ane Configurations   | 34  | 61                    | <b>1</b><br>55                             | 1                     |       | 1700                                   | 279  |   |
|  |   |                       | 55   | 352                   |       | 1790                                   |  |   |
| Future Vol, veh/h  | 34  | 61                    | 0  | 352                   |       | 1790                                   | 279<br>0   |   |
| Conflicting Peds, #/hr   | 0   | 0                     |  | 0                     |       | 0                                      | and the second second second   |   |
| Sign Control<br>RT Channelized   | Stop  | Stop                  | Free                                       | Free                  |       | Free                                   | Free   |   |
|  | -   | Stop                  | -  | None                  |       | 1993 (P)                               | None   |   |
| Storage Length   | 0   | -                     | 230  |                       |       | -                                      | -  |   |
| /eh in Median Storage, #   | 0   | A                     |  | 0                     |       | 0                                      | 206.2 <b>.</b> 3.43  |   |
| Grade, %   | 0   | -                     | -  | 0<br>92               |       | 0<br>92                                | -  |   |
| Peak Hour Factor   | 92  | 92                    | 92   |                       |       |  | 92   |   |
| Heavy Vehicles, %  | 2   | 2                     | 2  | 2                     |       | 2                                      | 2  |   |
| Mvmt Flow  | 37  | 66                    | 60   | 383                   |       | 1946                                   | 303  |   |
| Major/Minor  | Minor2  |                       | Major1                                     |                       |       | Major2                                 |  |   |
| Conflicting Flow All   | 2599  | 2097                  | 2249                                       | 0                     |       | -                                      | 0  |   |
| Stage 1  | 2097  | 2001                  | 22-10                                      |                       |       | 60                                     |  |   |
| Stage 2  | 502   | -                     | -  | _                     |       | 12                                     | -  |   |
| Critical Hdwy  | 6.42  | 6.22                  | 4.12                                       | THE REAL              |       | STRATES                                |  |   |
| Critical Hdwy Stg 1  | 5.42  | 0.22                  | 7.12                                       | 2 millione et al      |       |  |  |   |
| Critical Hdwy Stg 2  | 5.42  | The second second     | No. of the second                          | elen el               |       | anuel area                             | HARMAN   |   |
| Follow-up Hdwy   | 3.518   | 3.318                 | 2.218                                      | _                     |       | 1                                      |  |   |
| Pot Cap-1 Maneuver   | ~ 27  | ~ 65                  | 229  | Eveneters             |       | diama di                               | Contracts  |   |
| Stage 1  | 102   | -                     | LLU  |                       |       |  |  |   |
| Stage 2  | 608   | and a stand of the st | ana sa | Provident             |       |  | in the second  |   |
| Platoon blocked, %   | 000   |                       |  | _                     |       |  | er, ar an  |   |
| Nov Cap-1 Maneuver   | ~ 20  | ~ 65                  | 229  | he Traine Jack        |       | and a star                             | dissing of   |   |
| Nov Cap-2 Maneuver   | 81  | -                     | 225  |                       |       | 10000000000000000000000000000000000000 | and the second | and a second  |
| Stage 1  | 102   | (in the second second | Contraction of the second                  |                       |       |  | ALCOL  |   |
| Stage 2  | 449   |                       | Constant for an internal                   | -                     |       |  | 14 <u>-</u>  |   |
| Oldge 2  |   |                       |  | Teal For              |       |  |  |   |
| Approach   | EB  |                       | NB   |                       |       | SB                                     |  |   |
| ICM Control Delay, s   | 275.4   | and the second        | 3.5  | 6.                    |       | 0                                      |  | 》。<br>在10月前后一回0   |
| HCM LOS  | F   |                       |  |                       |       |  |  |   |
|  |   |                       |  |                       |       |  |  | and a start of the second s |
| Minor Lane/Major Mvmt  | NBL   | NBT EBLn1             | SBT SBR                                    |                       |       | alate a                                |  |   |
| Capacity (veh/h)   | 229   | - 82                  |  |                       |       |  |  |   |
| HCM Lane V/C Ratio   | 0.261   | - 1.259               |  |                       |       |  |  |   |
| HCM Control Delay (s)  | 26.2  | - 275.4               |  |                       | 1.156 |  |  |   |
| ICM Lane LOS   | D   | - F                   |  |                       |       |  |  | Street and a second   |
| HCM 95th %tile Q(veh)  | 1   | - 7.7                 |  |                       |       |  |  |   |
| lotes  | NATES OF STREET, STREET |                       |  | and the second second |       | Course 7 Martine Service               | and the second second  |   |

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined \*: All major volume in platoon

.

Baseline

#### HCM 2010 TWSC 2: Silverado Trail & Regusci Winery Dr

## PM Yr. 2030 (NP) Weekday Conditions 2/13/2017

| Intersection             |                   |                             | and the second |  |                  |   |                                |     |
|--------------------------|-------------------|-----------------------------|----------------|--|------------------|---|--------------------------------|-----|
| Int Delay, s/veh         | 0.3               |                             |                |  |                  |   |                                |     |
| Movement                 | WBL               | WBR                         |                | NBT                                      | NBR              | SBL   | SBT                            |     |
| Lane Configurations      | 1                 |                             |                | Þ  |                  | 5   | 4                              | e 2 |
| Traffic Vol, veh/h       | 11                | 7                           |                | 380                                      | 2                | 0   | 2039                           |     |
| Future Vol, veh/h        | 11                | 7                           |                | 380                                      | 2                | 0   | 2039                           |     |
| Conflicting Peds, #/hr   | 0                 | 0                           |                | 0  | 0                | 0   | 0                              |     |
| Sign Control             | Stop              | Stop                        |                | Free                                     | Free             | Free  | Free                           |     |
| RT Channelized           | Constant Property | None                        |                | n an | None             | a showing a   | None                           |     |
| Storage Length           | 0                 | -                           |                | -  | -                | 150   | -                              |     |
| Veh in Median Storage, # | 0                 | in the second second        |                | 0  |                  |   | 0                              |     |
| Grade, %                 | 0                 | -                           |                | 0  | _                | -   | 0                              |     |
| Peak Hour Factor         | 92                | 92                          |                | 92                                       | 92               | 92  | 92                             |     |
| Heavy Vehicles, %        | 2                 | 2                           |                | 2  | 2                | 2   | 2                              |     |
| Mymt Flow                | 12                | 8                           |                | 413                                      | 2                | 0   | 2216                           |     |
| WIVITIL FIOW             | 12                | 0                           |                | 413                                      | 2                | U   | 2210                           |     |
| Major/Minor              | Minor1            |                             |                | Major1                                   |                  | Major2  |                                |     |
| Conflicting Flow All     | 2630              | 414                         |                | 0  | 0                | 415   | 0                              |     |
| Stage 1                  | 414               |                             |                |  |                  |   | 1246218                        |     |
| Stage 2                  | 2216              |                             |                | -  | -                | -   |                                |     |
| Critical Hdwy            | 6.42              | 6.22                        |                | and the second stable                    | 1000 E.M.        | 4.12  |                                |     |
| Critical Hdwy Stg 1      | 5.42              | 0.26                        |                | -  | North Maria      | 7,12  | 2-<br>                         |     |
| Critical Hdwy Stg 2      | 5.42              | And that the Constrant from |                | -<br>Ruanus anna anna                    | sing sa kana     | -<br>Maria Maria Mari |                                |     |
|                          |                   | 3.318                       |                | ARE DESCRIPTION -                        | Ser. 1907-388    | 2.218   | 1.100.18 <b>-</b> (1)          |     |
| Follow-up Hdwy           | 3.518             |                             |                | -  | -<br>Menosolisis | 1144  | <br>19/22/6/5/4                |     |
| Pot Cap-1 Maneuver       | 26                | 638                         |                | 10-11-20-11-20- <del>1</del> 0           | - 20 C           | 1144  | -                              |     |
| Stage 1                  | 667               | -                           |                | -  | -                | -   | -                              |     |
| Stage 2                  | 89                |                             |                |  |                  |   | 1.1                            |     |
| Platoon blocked, %       | 1                 |                             |                | -  | -                | 1   | -                              |     |
| Mov Cap-1 Maneuver       | 26                | 638                         |                |  | 10.00            | 1144  | - 1997 - 18                    |     |
| Mov Cap-2 Maneuver       | 76                | -                           |                | -  | -                | -   |                                |     |
| Stage 1                  | 667               | 1999 (A. 1997) - A          |                |  | 162-2-2          |   |                                |     |
| Stage 2                  | 89                | -                           |                | -  | -<br>Mardanism   | =<br>   | r i <u>-</u><br>Startin Starte |     |
| A                        | LAID              |                             |                | 105                                      |                  |   | and a second                   |     |
| Approach                 | WB                |                             |                | NB                                       |                  | SB  |                                |     |
| HCM Control Delay, s     | 42.2              |                             |                | 0  |                  | 0   |                                |     |
| HCM LOS                  | E                 |                             |                |  |                  |   |                                |     |
| Minor Lono/Major Mumt    | NIDT              | NBRWBLn1                    | SBL            | SBT                                      |                  |   |                                |     |
| Minor Lane/Major Mvmt    | NBT               |                             |                |  |                  |   |                                |     |
| Capacity (veh/h)         | -                 | - 116                       | 1144           | •  |                  |   |                                |     |
| HCM Lane V/C Ratio       |                   | - 0.169                     | -              | -  |                  |   |                                |     |
| HCM Control Delay (s)    | 1902 State - 1    | - 42.2                      | 0              |  |                  |   |                                |     |
| HCM Lane LOS             | -                 | - E                         | А              | -  |                  |   |                                |     |
| HCM 95th %tile Q(veh)    | 10 28 2           | - 0.6                       | 0              |  |                  |   |                                |     |

# PM Yr. 2030 (NP) Weekday Conditions 2/13/2017

| ntersection                      |            |   |  |                        |  |   |                   |  |
|----------------------------------|------------|---|--|------------------------|--|---|-------------------|--|
| nt Delay, s/veh                  | 8.5        |   |  |                        |  |   |                   |  |
| Movement                         | EBL        | EBR   | NBL  | NBT                    |  | SBT   | SBR               |  |
| Lane Configurations              | M          |   | ħ  | Ŷ                      |  | Þ   |                   |  |
| Traffic Vol, veh/h               | 49         | 52  | 63   | 314                    |  | 1306  | 758               |  |
| Future Vol, veh/h                | 49         | 52  | 63   | 314                    |  | 1306  | 758               |  |
| Conflicting Peds, #/hr           | 0          | 0   | 0  | 0                      |  | 0   | 0                 |  |
| Sign Control                     | Stop       | Stop  | Free   | Free                   |  | Free  | Free              |  |
| RT Channelized                   | CONSUME.   | None  | Contractor 1-  | None                   |  |   | None              |  |
| Storage Length                   | 0          | •   | 125  | -                      |  | -   | -                 |  |
| Veh in Median Storage, #         | 0          |   | anna ann an a   | 0                      |  | 0   | NORM DO Y         |  |
| Grade, %                         | 0          | -   |  | 0                      |  | 0   | -                 |  |
| Peak Hour Factor                 | 92         | 92  | 92   | 92                     |  | 92  | 92                |  |
| Heavy Vehicles, %                | 2          | 2   | 2  | 2                      |  | 2   | 2                 |  |
| Mvmt Flow                        | 53         | 57  | 68   | 341                    |  | 1420  | 824               |  |
|                                  | 00         | 01  | 00   | 041                    |  | 1720  | 024               |  |
| Major/Minor                      | Minor2     |   | Major1   |                        |  | Major2  |                   |  |
| Conflicting Flow All             | 2310       | 1832  | 2243   | 0                      | n n na an an   | -   | 0                 | n and a second |
| Stage 1                          | 1832       |   | inter and a  | tel d'indered          |  |   | alester an        |  |
| Stage 2                          | 478        | -   | and the second   | -                      |  | 1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1                                 | -                 |  |
| Critical Hdwy                    | 6.42       | 6.22  | 4.12   |                        |  | -   | Sector LAN        |  |
| Critical Hdwy Stg 1              | 5.42       | -   | -  | -                      |  |   |                   |  |
| Critical Hdwy Stg 2              | 5.42       |   |  | Section and a          |  | in the second | the sector of the |  |
| Follow-up Hdwy                   | 3.518      | 3.318   | 2.218  | -                      |  |   | ACTIN AT          |  |
| Pot Cap-1 Maneuver               | ~ 42       | 95  | 230  |                        |  | 1990 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -  | 1010000           |  |
| Stage 1                          | 139        | 00  | 200  | 2001-04 <u>7</u> 1-045 |  |   |                   |  |
|                                  | 624        | -   | in and the second sec  | -                      |  |   | Landre sitten     |  |
| Stage 2                          | 024        | n a statistica e e e  | and the second s |                        |  |   | a that a sta      |  |
| Platoon blocked, %               | 20         | 05  | 000  | -                      |  | •   | ·                 |  |
| Mov Cap-1 Maneuver               | ~ 30       | 95  | 230  | -                      |  | 342.34 29 <b>7</b> 3  | St (2) 7 2 5 3    |  |
| Mov Cap-2 Maneuver               | 106        | -   | -  | -                      |  | -   |                   |  |
| Stage 1                          | 139        | Charlen (Charles -  |  |                        |  |   | 10 S .            | State 1 and 1  |
| Stage 2                          | 440        | -<br>1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 1997: 19 | -  | -                      |  | -<br>   | -<br>             |  |
| Approach                         | EB         |   | NB   |                        |  | SB  |                   |  |
| Approach<br>HCM Control Delay, s | 198.2      |   | 4.5  |                        |  | 0   |                   |  |
| HCM LOS                          | 190.2<br>F |   | 4.5  |                        |  | U   |                   | e visio Inino MO   |
| IIGINI LOS                       | F          |   |  |                        |  |   |                   |  |
| Minor Lane/Major Mvmt            | NBL        | NBT EBLn1   | SBT SBR  |                        |  |   | - A               |  |
| Capacity (veh/h)                 | 230        | - 100   | Service and the service of the servi |                        | and a start of the                                   |   | New York          |  |
| HCM Lane V/C Ratio               | 0.298      | - 1.098   |  |                        | NEW PROPERTY AND |   |                   |  |
| HCM Control Delay (s)            | 27.2       | - 198.2   | C. North March 19  |                        |  |   |                   |  |
| HCM Lane LOS                     | 21.2<br>D  | - 130.2<br>- F  | and the second   |                        |  |   |                   |  |
| HCM 95th %tile Q(veh)            | 1.2        | - 7.1   |  |                        |  |   |                   |  |
|                                  | 1.2        | - 1.1   |  | and the first light of |  |   |                   |  |
| Notes                            |            |   |  |                        |  |   |                   |  |

#### HCM 2010 TWSC 1: Silverado Trail & Yountville CrossRd

## MD Yr. 2030 (NP) Weekend Conditions 2/13/2017

| Intersection             |   |                      |                         |                       |   |   |   |
|--------------------------|---|----------------------|-------------------------|-----------------------|---|---|---|
| nt Delay, s/veh          | 2.5   |                      |                         |                       |   |   |   |
| Novement                 | EBL   | EBR                  | NBL                     | NBT                   | SBT   | SBR                                     |   |
| ane Configurations       | W   |                      | 1                       | 1                     | ĥ   |   |   |
| raffic Vol, veh/h        | 94  | 77                   | 77                      | 556                   | 460   | 101                                     |   |
| uture Vol, veh/h         | 94  | 77                   | 77                      | 556                   | 460   | 101                                     |   |
| Conflicting Peds, #/hr   | 0   | 0                    | 0                       | 0                     | 0   | 0                                       |   |
| ign Control              | Stop  | Stop                 | Free                    | Free                  | Free  | Free                                    |   |
| T Channelized            |   | Stop                 | an and the state of the | None                  |   | None                                    |   |
| Storage Length           | 0   | -                    | 230                     | -                     |   |   |   |
| /eh in Median Storage, # | 0   | Propagate -          |                         | 0                     | 0   |   |   |
| Grade, %                 | 0   | -                    | -                       | 0                     | 0   | -                                       |   |
| Peak Hour Factor         | 92  | 92                   | 92                      | 92                    | 92  | 92                                      |   |
| leavy Vehicles, %        | 2   | 2                    | 2                       | 2                     | 2   | 2                                       |   |
| Ivmt Flow                | 102   | 84                   | 84                      | 604                   | 500   | 110                                     |   |
|                          | M: 0  |                      | Matant                  | and a stress          | MajorQ  | Contraction of the                      |   |
| /lajor/Minor             | Minor2  |                      | Major1                  |                       | Major2  |   | 1 |
| Conflicting Flow All     | 1327  | 555                  | 610                     | 0                     | -   | 0                                       |   |
| Stage 1                  | 555   |                      |                         | 1                     |   | an an than an                           |   |
| Stage 2                  | 772   | -                    | -                       | -                     |   | -                                       |   |
| Critical Hdwy            | 6.42  | 6.22                 | 4.12                    | and south and         |   | - 19 <b>-</b> 19                        |   |
| Critical Hdwy Stg 1      | 5.42  | -                    | -                       | -                     | •   | -                                       |   |
| Critical Hdwy Stg 2      | 5.42  | 010.0                |                         |                       |   | 1999 - 1999<br>1999 - 1999              |   |
| ollow-up Hdwy            | 3.518   | 3.318                | 2.218                   | -                     | -   | -                                       |   |
| Pot Cap-1 Maneuver       | 171   | 531                  | 969                     | 4.), H <del>-</del> 1 |   |   |   |
| Stage 1                  | 575   | -                    | -                       | -                     | -   | -                                       |   |
| Stage 2                  | 456   | an an an an an an    | - 18 A - 18             | -                     |   | - 19                                    |   |
| latoon blocked, %        |   |                      |                         | -                     | -   | -                                       |   |
| Nov Cap-1 Maneuver       | 156   | 531                  | 969                     | 2005 - A              |   | - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 |   |
| Nov Cap-2 Maneuver       | 289   | -                    | -                       | -                     | -   | -                                       |   |
| Stage 1                  | 575   |                      | 的特别和在自由的中               |                       |   |   |   |
| Stage 2                  | 416   |                      | -<br>Nicestal Microsoft | -<br>                 | -   | -<br>Marine in the second               |   |
| pproceb                  | EB  |                      | NB                      |                       | SB  |   |   |
| pproach                  | and the second se |                      | 1.1                     |                       | 0   |   |   |
| ICM Control Delay, s     | 15.5  |                      | 1.1                     |                       | U   |   |   |
| ICM LOS                  | С   |                      |                         |                       |   |   |   |
| inor Lane/Major Mvmt     | NBL   | NBT EBLn1            | SBT SBR                 |                       |   |   |   |
| Capacity (veh/h)         | 969   | - 526                |                         |                       | and the second se |   |   |
| ICM Lane V/C Ratio       | 0.086   | - 0.353              |                         |                       |   |   |   |
| ICM Control Delay (s)    | 9.1   | - 15.5               |                         |                       |   |   |   |
| ICM Lane LOS             | A   | - C                  |                         |                       |   |   |   |
| ICM 95th %tile Q(veh)    | 0.3   | - 1.6                |                         |                       |   |   |   |
|                          | 0.0   | Second Second Second |                         |                       |   |   |   |

| ntersection              |                       |                     |              |  |           |  |                                       |   |
|--------------------------|-----------------------|---------------------|--------------|--|-----------|--|---------------------------------------|---|
| nt Delay, s/veh          | 0.2                   |                     |              |  | N - Krist | a 798 a 1  | je -                                  |   |
| Novement                 | WBL                   | WBR                 |              | NBT                                      | NBR       | SBL  | SBT                                   |   |
| ane Configurations       | W                     |                     |              | þ  |           | in the second se | 1                                     |   |
| Traffic Vol, veh/h       | 6                     | 6                   |              | 614                                      | 2         | 2  | 522                                   |   |
| Future Vol, veh/h        | 6                     | 6                   |              | 614                                      | 2         | 2  | 522                                   |   |
| Conflicting Peds, #/hr   | 0                     | 0                   |              | 0  | 0         | 0  | 0                                     |   |
| Sign Control             | Stop                  | Stop                |              | Free                                     | Free      | Free   | Free                                  |   |
| RT Channelized           |                       | None                |              | - 11                                     | None      | ALL AND ALL AND  | None                                  |   |
| Storage Length           | 0                     | -                   |              | -  | -         | 150  | -                                     |   |
| Veh in Median Storage, # | ŧ 0                   | Sales and a         |              | 0  |           | No. of Contract  | 0                                     |   |
| Grade, %                 | 0                     | -                   |              | 0  | -         | -  | 0                                     |   |
| Peak Hour Factor         | 92                    | 92                  |              | 92                                       | 92        | 92   | 92                                    |   |
| Heavy Vehicles, %        | 2                     | 2                   |              | 2  | 2         | 2  | 2                                     |   |
| Mymt Flow                | 7                     | 7                   |              | 667                                      | 2         | 2  | 567                                   |   |
|                          | and the second of the |                     |              | 501                                      |           | a she ha ha she s  |                                       |   |
| Major/Minor              | Minor1                |                     |              | Major1                                   |           | Major2   |                                       |   |
| Conflicting Flow All     | 1240                  | 668                 | and an error | 0  | 0         | 670  | 0                                     | <ul> <li>A second sec<br/>second second sec</li></ul> |
| Stage 1                  | 668                   |                     |              | and the second second                    | -         | Constant to such costs   | Section 1                             | in an an an an an Arra Yelan a tar harrest<br>An an Arra an A   |
| Stage 2                  | 572                   | -                   |              | -  | -         | -  | -                                     |   |
| Critical Hdwy            | 6.42                  | 6.22                |              |  | -         | 4.12   | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |   |
| Critical Hdwy Stg 1      | 5.42                  | -                   |              |  | -         | -  |                                       |   |
| Critical Hdwy Stg 2      | 5.42                  |                     |              | contraction in the                       |           |  | Phone Party                           |   |
| Follow-up Hdwy           | 3.518                 | 3.318               |              | -  | -         | 2.218  |                                       |   |
| Pot Cap-1 Maneuver       | 193                   | 458                 |              |  |           | 920  | in the second                         |   |
| Stage 1                  | 510                   | -                   |              | -  | -         | -  | -                                     |   |
| Stage 2                  | 565                   | (Delever States and |              | a a tha an a tha a s                     | Minute La | States and a   | NALEN AND                             |   |
| Platoon blocked, %       | 000                   |                     |              | an a | -         |  | -                                     |   |
| Mov Cap-1 Maneuver       | 193                   | 458                 |              | the formation of the                     | and leave | 920  | in sala <u>-</u> ani                  |   |
| Mov Cap-2 Maneuver       | 332                   | 400                 |              | an a |           | 520  | SULTER STATES                         |   |
| Stage 1                  | 510                   | -<br>               |              | -<br>Salas colo                          | DR.Will   |  | un i stanta                           |   |
|                          | 564                   |                     |              |  |           |  |                                       |   |
| Stage 2                  | 004                   | -                   |              |  | -<br>     | -  | in the store                          | ំ ខម្មលទំ   |
| Approach                 | WB                    |                     |              | NB                                       |           | SB   |                                       |   |
| HCM Control Delay, s     | 14.7                  |                     |              | 0  |           | 0  | tase and the second                   |   |
| HCM LOS                  | B                     |                     |              |  |           |  |                                       |   |
|                          |                       |                     |              |  |           |  |                                       |   |
| Minor Lane/Major Mvmt    | NBT                   | NBRWBLn1            | SBL          | SBT                                      |           |  |                                       |   |
| Capacity (veh/h)         |                       | - 385               | 920          |  |           |  |                                       | The second s  |
| HCM Lane V/C Ratio       | -                     | - 0.034             |              | -  |           |  |                                       | and a second  |
| HCM Control Delay (s)    | -                     | - 14.7              | 8.9          |  |           |  |                                       |   |
| HCM Lane LOS             | -                     | - B                 | A            | -  |           |  |                                       |   |
| HCM 95th %tile Q(veh)    | and the state of the  | - 0.1               | 0            | antra Denger                             |           |  |                                       |   |

## MD Yr. 2030 (NP) Weekend Conditions

2/13/2017

| Int Delay, s/veh         | 2.6    |                   |   |  |   |                         |                   |
|--------------------------|--------|-------------------|---|--|---|-------------------------|-------------------|
| Vovement                 | EBL    | EBR               | NBL   | NBT  | SBT                                       | SBR                     |                   |
| Lane Configurations      | W      |                   | 1   |  | ĥ   |                         |                   |
| Traffic Vol, veh/h       | 93     | 53                | 35  |  | 411                                       | 117                     |                   |
| Future Vol, veh/h        | 93     | 53                | 35  |  | 411                                       | 117                     |                   |
| Conflicting Peds, #/hr   | 0      | 0                 | (   |  | 0   | 0                       |                   |
| Sign Control             | Stop   | Stop              | Free  |  | Free                                      | Free                    |                   |
| RT Channelized           | otop   | None              | 1100  | No. 494-10-10-10-10-10-  | 1100                                      | None                    |                   |
| Storage Length           | 0      | None              | 125   |  |   | None                    |                   |
|                          | 0      | -                 | 120   |  | 0   | n Al Harrison           |                   |
| Veh in Median Storage, # | 0      |                   |   |  | 0   | 02903-909               |                   |
| Grade, %                 |        | 92                |   |  | 92  | 92                      |                   |
| Peak Hour Factor         | 92     |                   | 92  |  | 2   | 2                       |                   |
| Heavy Vehicles, %        | 2      | 2                 |   |  |   |                         |                   |
| Mvmt Flow                | 101    | 58                | 38  | 566  | 447                                       | 127                     |                   |
| Anior/Minor              | Minor  |                   | Molori  |  | Major2                                    |                         |                   |
| Major/Minor              | Minor2 | 540               | Major1  | A REAL PROPERTY AND A REAL | wajoi z                                   | 0                       |                   |
| Conflicting Flow All     | 1152   | 510               | 574   |  |   |                         |                   |
| Stage 1                  | 510    | Statistical - 1   |   |  |   | 18 5-00                 |                   |
| Stage 2                  | 642    | -                 | •   |  | -   | -                       |                   |
| Critical Hdwy            | 6.42   | 6.22              | 4.12  |  |   | 90 (m. <del>1</del> 94) |                   |
| Critical Hdwy Stg 1      | 5.42   | -                 | and the state of the | -  | -   | -                       |                   |
| Critical Hdwy Stg 2      | 5.42   |                   |   | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1   |   | alter - pai             |                   |
| Follow-up Hdwy           | 3.518  | 3.318             | 2.218   |  |   | -                       |                   |
| Pot Cap-1 Maneuver       | 219    | 563               | 999   |  |   | Charles and             |                   |
| Stage 1                  | 603    | -                 | -   | -  | •   | -                       |                   |
| Stage 2                  | 524    |                   |   | 4.50 - C. I  | and opposite spin and a                   | 2                       |                   |
| Platoon blocked, %       |        |                   |   | -  | -   | -                       |                   |
| Nov Cap-1 Maneuver       | 211    | 563               | 999   | 1000 ( <b>4</b> 33)  | E. C. | 68(30 <b>-</b> 10)      |                   |
| Nov Cap-2 Maneuver       | 346    | -                 | -   | -  | -   | -                       |                   |
| Stage 1                  | 603    | gelan Ministeran) | e sant minis  | 10171 92-111   |   | -                       |                   |
| Stage 2                  | 504    | -                 | -   |  | -   | -                       |                   |
|                          |        |                   |   |  |   |                         |                   |
| Approach                 | EB     |                   | NB  |  | SB  |                         |                   |
| HCM Control Delay, s     | 19.7   |                   | 0.6   |  | 0   | UN THE P                | A Starting of Cal |
| HCM LOS                  | С      |                   |   |  |   |                         |                   |
|                          |        |                   |   |  |   |                         |                   |
| Vinor Lane/Major Mvmt    | NBL    | NBT EBLn1         | SBT SBR   |  |   |                         |                   |
| Capacity (veh/h)         | 999    | - 402             |   |  |   |                         |                   |
| HCM Lane V/C Ratio       | 0.038  | - 0.395           |   |  |   |                         |                   |
| HCM Control Delay (s)    | 8.7    | - 19.7            |   |  |   |                         |                   |
| ICM Lane LOS             | А      | - C               |   |  |   |                         |                   |
| HCM 95th %tile Q(veh)    | 0.1    | - 1.8             | and sectors a   |  |   |                         |                   |

| Intersection                  |            |                      |   |                                |                       |                        |  |  |
|-------------------------------|------------|----------------------|---|--------------------------------|-----------------------|------------------------|--|--|
| nt Delay, s/veh 11            | 1.3        |                      |   |                                |                       |                        |  | 1. 1. 4. 4. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. |
| Novement                      | EBL        | EBR                  | NBL   | NBT                            |                       | SBT                    | SBR                                      |  |
| ane Configurations            | Y.         |                      | ή   | 1                              |                       | Þ                      |  | 1471, 1481 A.C. (1497)                             |
| Fraffic Vol, veh/h            | 34         | 63                   | 59  | 364                            |                       | 1794                   | 279                                      |  |
| Future Vol, veh/h             | 34         | 63                   | 59  | 364                            |                       | 1794                   | 279                                      |  |
| Conflicting Peds, #/hr        | 0          | 0                    | 0   | 0                              |                       | 0                      | 0  |  |
| Sign Control                  | Stop       | Stop                 | Free  | Free                           |                       | Free                   | Free                                     |  |
| RT Channelized                | 14301      | Stop                 |   | None                           |                       |                        | None                                     |  |
| Storage Length                | 0          | -0                   | 230   | ÷.                             |                       | i                      | -  |  |
| /eh in Median Storage, #      | 0          | 1993-1997-1944       |   | 0                              |                       | 0                      | 15 - 1                                   | Niegendamenaer/ ni nin                             |
| Grade, %                      | 0          | -                    | <u>-</u>  | 0                              |                       | 0                      | -  |  |
| Peak Hour Factor              | 92         | 92                   | 92  | 92                             |                       | 92                     | 92                                       |  |
| leavy Vehicles, %             | 2          | 2                    | 2   | 2                              |                       | 2                      | 2  |  |
| Mvmt Flow                     | 37         | 68                   | 64  | 396                            |                       | 1950                   | 303                                      |  |
| Major/Minor                   | Minor2     |                      | Major1  |                                |                       | Major2                 |  |  |
| Conflicting Flow All          | 2626       | 2102                 | 2253  | 0                              |                       | IVIAJUIZ               | · · · 0                                  | the section tests of                               |
| Stage 1                       | 2020       | 2102                 | 2203  | U                              |                       | ana in California y Ca | U  |  |
| Stage 2                       | 524        |                      | and the set of the set of the   |                                |                       |                        | AND THIS PLAY                            |  |
| Critical Hdwy                 | 6.42       | 6.22                 | 4.12  | -<br>                          |                       | -<br>                  | Sector Sector                            |  |
| Critical Hdwy Stg 1           | 5.42       | 0.22                 | 4.12  | a la participati               |                       |                        | iego citilitada<br>Sa                    |  |
| Critical Hdwy Stg 2           | 5.42       | -                    | -<br>The state of the | -<br>Na slocisti               |                       |                        | an a |  |
| Follow-up Hdwy                | 3.518      | 3.318                | 2.218   |                                |                       | and the second         |  |  |
|                               | ~ 26       | ~ 65                 | 2.210   |                                |                       | ndusina en             |  |  |
| Pot Cap-1 Maneuver            | ~ 20       | ~ 00                 | 220   | 1999 A 1999                    |                       |                        | Dec Strand                               |  |
| Stage 1                       | 594        | -                    |   | - 10.5 (1997)<br>- 10.5 (1997) |                       | -                      | -  |  |
| Stage 2<br>Platoon blocked, % | 094        |                      |   | an the state                   |                       |                        | Warren and State                         |  |
|                               | ~ 19       | ~ 65                 | 228   | -                              |                       | -                      | ine di Sin Ja                            |  |
| Mov Cap-1 Maneuver            | ~ 19<br>80 | ~ 00                 | 220   | Sector Sector                  |                       |                        | He gan a Grade<br>In                     |  |
| Nov Cap-2 Maneuver            | 102        | -                    |   | -indizan                       |                       | -                      | en indaa                                 |  |
| Stage 1                       | 427        | 87. Etter anna 1993. |   | 1 4 6 7                        |                       |                        | Carl South State                         | the stand of the second states of the              |
| Stage 2                       | 421        | ALL STR              | Romencia  | AND AND                        |                       |                        | e.<br>State 1988                         |  |
| Approach                      | EB         |                      | NB  |                                |                       | SB                     |  |  |
| HCM Control Delay, s          | 285.1      |                      | 3.7   | 0.6                            |                       | 0                      | C.L.                                     | CIA C 1000 Delay, ac                               |
| HCM LOS                       | F          |                      |   |                                |                       |                        |  |  |
| Alizant and Malian Mumb       | ND         |                      | COT COD   |                                |                       |                        |  |  |
| Minor Lane/Major Mvmt         | NBL        | NBT EBLn1            | SBT SBR   |                                |                       |                        |  |  |
| Capacity (veh/h)              | 228        | - 82                 | - 0.00 <b>-</b> 0.00 -  |                                |                       |                        |  |  |
| HCM Lane V/C Ratio            | 0.281      | - 1.286              |   |                                |                       |                        |  |  |
| HCM Control Delay (s)         | 26.9       | - 285.1              |   |                                |                       |                        |  |  |
| HCM Lane LOS                  | D          | - F                  | Second second second  |                                |                       |                        |  |  |
| HCM 95th %tile Q(veh)         | 1.1        | - 7.9                | Sill - South-   |                                | and the second second |                        |  |  |
| Notes                         |            |                      |   |                                |                       |                        |  |  |

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined \*: All major volume in platoon

| Int Delay, s/veh 1       | .2              |                      |            |  |                   |   |                 |                                      |
|--------------------------|-----------------|----------------------|------------|--|-------------------|---|-----------------|--------------------------------------|
| Movement                 | WBL             | WBF                  | 2          | NBT                                      | NBR               | SBL   | SBT             |                                      |
| Lane Configurations      | M               |                      |            | î»                                       | TIDIT             | <u>502</u>  | 1               | The approach in the                  |
| Traffic Vol, veh/h       | 30              |                      |            | 380                                      | 10                | 6   | 2039            |                                      |
| Future Vol, veh/h        | 30              | 16                   |            | 380                                      | 10                | 6   | 2039            |                                      |
| Conflicting Peds, #/hr   | 0               |                      |            | 0  | 0                 | 0   | 0               |                                      |
| Sign Control             | Stop            | Stop                 |            | Free                                     | Free              | Free  | Free            |                                      |
| RT Channelized           | -               | None                 |            | -  | None              | 1100  |                 |                                      |
| Storage Length           | 0               |                      | A SOLUTION | -  | -                 | 150   | None            |                                      |
| Veh in Median Storage, # | Ő               | a film and the state |            | 0  |                   | -   | 0               |                                      |
| Grade, %                 | 0               | -                    |            | 0  | -                 | and the second se | 0               |                                      |
| Peak Hour Factor         | 92              | 92                   |            | 92                                       | 92                | 92  | 92              |                                      |
| Heavy Vehicles, %        | 2               | 2                    |            | 2  | 2                 | 2   | 2               |                                      |
| Mvmt Flow                | 33              | 17                   |            | 413                                      | 11                | 7   |                 |                                      |
|                          |                 |                      |            |  |                   | and the second  | 2210            |                                      |
| Major/Minor              | Minor1          |                      |            | Major1                                   |                   | Major2  |                 |                                      |
| Conflicting Flow All     | 2647            | 418                  |            | 0  | 0                 | 424   | 0               | a sector of the                      |
| Stage 1                  | 418             |                      |            | TO BE AND A DECK                         | HIRE              |   | 100020          |                                      |
| Stage 2                  | 2229            | -                    |            | -  |                   | -   | -               |                                      |
| Critical Hdwy            | 6.42            | 6.22                 |            | 12-12-12-12-12-12-12-12-12-12-12-12-12-1 |                   | 4.12  | Section Section |                                      |
| Critical Hdwy Stg 1      | 5.42            | -                    |            | -  | -                 | -   | -               |                                      |
| Critical Hdwy Stg 2      | 5.42            | National States      |            |  |                   | William March   | 110 L           |                                      |
| Follow-up Hdwy           | 3.518           | 3.318                |            | -  |                   | 2.218   |                 |                                      |
| Pot Cap-1 Maneuver       | ~ 26            | 635                  |            | No in the second second second           | 200127            | 1135  | Saure La        |                                      |
| Stage 1                  | 664             | -                    |            | -  | -                 | -   | -               |                                      |
| Stage 2                  | 88              |                      |            | and the state of the                     | 10.120            | NAMES AND ALC   | 100             |                                      |
| Platoon blocked, %       |                 |                      |            | -  | _                 |   | _               |                                      |
| Nov Cap-1 Maneuver       | ~ 26            | 635                  |            | 96627 Pentitika <u>8</u> 5               | 100 m 124         | 1135  | 1000            |                                      |
| Nov Cap-2 Maneuver       | 75              | -                    |            | angrowing a second second                | -                 | 1100  | 2               |                                      |
| Stage 1                  | 664             | And States           |            | MAN SHOTTING                             |                   | an an an Alasta   | en de la        |                                      |
| Stage 2                  | 87              | -                    |            | -  | _                 | -   | -               |                                      |
|                          | MAN HONO        |                      |            |  |                   |   |                 |                                      |
| pproach                  | WB              |                      |            | NB                                       |                   | SB  |                 |                                      |
| ICM Control Delay, s     | 64.3            |                      |            | 0  |                   | 0   |                 | en de la company de la company de la |
| ICM LOS                  | F               |                      |            |  |                   | <b>0</b>  |                 |                                      |
|                          |                 |                      |            |  |                   |   |                 |                                      |
| Ainor Lane/Major Mvmt    | NBT             | NBRWBLn1             | SBL        | SBT                                      |                   |   |                 |                                      |
| Capacity (veh/h)         | -               | - 108                | 1135       | te di name                               |                   |   |                 |                                      |
| ICM Lane V/C Ratio       | -               |                      | 0.006      |  |                   |   |                 |                                      |
| ICM Control Delay (s)    |                 | - 64.3               | 8.2        |  |                   |   |                 |                                      |
| ICM Lane LOS             | - Contraction   | - F                  | A          | - Carlo de Constantina 2.90              |                   |   |                 |                                      |
| ICM 95th %tile Q(veh)    | Sec. 18 2       | - 2                  | 0          | and a state of the                       |                   |   |                 |                                      |
|                          | Contraction and |                      |            |  | Statistics of the |   | montanget state |                                      |
| otes                     | <u> </u>        |                      | 0.0        |  |                   |   |                 |                                      |
| Volume exceeds capacity  | 5: De           | av exceeds 3         | UUS        | +: Computation                           | Not Def           | ined *: All r   | naior vol       | lume in platoon                      |

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined \*: All major volume in platoon

Baseline

## HCM 2010 TWSC 3: Silverado Trail & Oak Knoll Ave.

## PM Yr. 2030+Prj. Weekday Conditions 06/12/2017

| Intersection             |           |                |             |            |                  |  |  |
|--------------------------|-----------|----------------|-------------|------------|------------------|--|--|
| nt Delay, s/veh          | 18.6      |                |             |            |                  |  |  |
| Vovement                 | EBL       | EBR            | NBL         | NBT        |                  | SBT SBR                                  |  |
| Lane Configurations      | W         |                | ሻ           | 1          |                  | ĵ.                                       | 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| Traffic Vol, veh/h       | 52        | 52             | 63          | 321        |                  | 1325 769                                 |  |
| Future Vol, veh/h        | 52        | 52             | 63          | 321        |                  | 1325 769                                 | 1 The second                           |
| Conflicting Peds, #/hr   | 0         | 0              | 0           | 0          |                  | 0 0                                      |  |
| Sign Control             | Stop      | Stop           | Free        | Free       |                  | Free Free                                | an albani                              |
| RT Channelized           | THE REAL  | None           | - Month     | None       |                  | - None                                   |  |
| Storage Length           | 0         | 64 -           | 125         | -          |                  |  |  |
| Veh in Median Storage, # | ŧ 0       | the state of   |             | 0          |                  | 0 -                                      |  |
| Grade, %                 | 0         | -              |             | 0          |                  | 0 -                                      | 1 - 1                                  |
| Peak Hour Factor         | 92        | 92             | 92          | 92         |                  | 92 92                                    |  |
| Heavy Vehicles, %        | 2         | 2              | 2           | 2          |                  | 2 2                                      |  |
| Mvmt Flow                | 57        | 57             | 68          | 349        |                  | 1440 836                                 | Vini Flow                              |
|                          |           |                |             |            |                  |  |  |
| Major/Minor              | Minor2    |                | Major1      |            |                  | Major2                                   |  |
| Conflicting Flow All     | 2344      | 1858           | 2276        | 0          |                  | - 0                                      |  |
| Stage 1                  | 1858      |                | -           |            |                  |  |  |
| Stage 2                  | 486       | -              |             | -          |                  | - ( <u>-</u>                             |  |
| Critical Hdwy            | 7.12      | 6.22           | 4.12        |            |                  | - 84 <u>8</u> 18                         |  |
| Critical Hdwy Stg 1      | 6.12      | -              | -           | -          |                  | -  |  |
| Critical Hdwy Stg 2      | 6.12      |                |             |            |                  | - 5 F 1 m                                |  |
| Follow-up Hdwy           | 3.518     | 3.318          | 2,218       | -          |                  | -0                                       |  |
| Pot Cap-1 Maneuver       | ~ 25      | 91             | 223         | 100-1      |                  |  |  |
| Stage 1                  | 94        | -              | -           | -          |                  | <del>5</del> 89 -                        |  |
| Stage 2                  | 563       |                | State State | Call State |                  |  |  |
| Platoon blocked, %       |           |                |             |            |                  |  | in a nationality                       |
| Mov Cap-1 Maneuver       | ~ 19      | 91             | 223         | 1012-241   |                  |  |  |
| Mov Cap-2 Maneuver       | ~ 55      | -              | -           | -          |                  | 1. ·                                     |  |
| Stage 1                  | 65        | -              |             |            |                  | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 |  |
| Stage 2                  | 391       | -              | -           | -          |                  | - 11                                     |  |
| Oldgo 2                  | 001       |                |             |            |                  |  |  |
| Approach                 | EB        |                | NB          |            |                  | SB                                       |  |
| HCM Control Delay, s     | \$ 443.9  |                | 4.6         |            |                  | 0  | Chill Control (Cellevis, since         |
| HCM LOS                  | F         |                |             |            |                  |  |  |
|                          |           |                |             |            |                  |  |  |
| Minor Lane/Major Mvmt    | NBL       | NBT EBLn1      | SBT SBR     |            |                  |  |  |
| Capacity (veh/h)         | 223       | - 69           | •           |            | Cont and         |  |  |
| HCM Lane V/C Ratio       | 0.307     | - 1.638        |             |            |                  |  |  |
| HCM Control Delay (s)    | 28.1      | -\$ 443.9      | Sec 18.45-  |            |                  |  | (a) yeleC tentero MO                   |
| HCM Lane LOS             | D         | - F            |             |            |                  |  |  |
| HCM 95th %tile Q(veh)    | 1.2       | - 9.8          | 10-00-      |            |                  |  |  |
| Notes                    |           |                |             |            |                  |  |  |
| ~: Volume exceeds capa   | city & Do | lay exceeds 30 |             |            | Not Defined *: A | All major volume in                      | nlatoon                                |

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| Intersection             |        |                      |               |              |                    |         |                      |                  |
|--------------------------|--------|----------------------|---------------|--------------|--------------------|---------|----------------------|------------------|
| Int Delay, s/veh         | 3      |                      |               |              |                    |         |                      |                  |
| vlovement                | EBL    | EBR                  | NBL           | NBT          |                    | SBT     | SBR                  |                  |
| ane Configurations       | Y      |                      | 7             | 4            |                    | P       |                      |                  |
| Fraffic Vol, veh/h       | 94     | 80                   | 80            | 566          |                    | 470     | 101                  |                  |
| Future Vol, veh/h        | 94     | 80                   | 80            | 566          |                    | 470     | 101                  |                  |
| Conflicting Peds, #/hr   | 0      | 0                    | 0             | 0            |                    | 0       | 0                    |                  |
| Sign Control             | Stop   | Stop                 | Free          | Free         |                    | Free    | Free                 |                  |
| RT Channelized           |        | Stop                 | remaining-    | None         |                    | -       | None                 |                  |
| Storage Length           | 0      | -                    | 230           | -            |                    | 4       | -                    |                  |
| /eh in Median Storage, # | 0      | en southers          |               | 0            |                    | 0       | - 00 <del>-</del> 16 |                  |
| Grade, %                 | 0      | -                    | -             | 0            |                    | 0       | -                    |                  |
| Peak Hour Factor         | 92     | 92                   | 92            | 92           |                    | 92      | 92                   |                  |
| Heavy Vehicles, %        | 2      | 2                    | 2             | 2            |                    | 2       | 2                    |                  |
| Nvmt Flow                | 102    | 87                   | 87            | 615          |                    | 511     | 110                  |                  |
|                          |        |                      |               |              |                    |         |                      |                  |
| Major/Minor              | Minor2 |                      | Major1        |              | Ν                  | Major2  |                      |                  |
| Conflicting Flow All     | 1355   | 566                  | 621           | 0            | 27.5               | -       | 0                    | () [] = Fo       |
| Stage 1                  | 566    |                      |               |              |                    |         | a) 1120.             |                  |
| Stage 2                  | 789    | -                    | -             | -            |                    | -       | -                    |                  |
| Critical Hdwy            | 7.12   | 6.22                 | 4.12          | The Alter    |                    | 10.0025 | 3,512.5              |                  |
| Critical Hdwy Stg 1      | 6.12   | -                    | -             | -            |                    | -       | -                    |                  |
| Critical Hdwy Stg 2      | 6.12   |                      | 0200000000000 | 1.5.1.1      |                    |         | State                |                  |
| Follow-up Hdwy           | 3.518  | 3.318                | 2.218         | -            |                    | 5       | · -                  |                  |
| Pot Cap-1 Maneuver       | 127    | 524                  | 960           | 10120        |                    |         | 1                    |                  |
| Stage 1                  | 509    | -                    | ·-            | -            |                    | -<br>-  | -                    |                  |
| Stage 2                  | 384    | an the second second | Read and the  | 10002        |                    |         | d data the           |                  |
| Platoon blocked, %       |        |                      |               | -            |                    | -       | •                    |                  |
| Nov Cap-1 Maneuver       | 118    | 524                  | 960           | 11 A         |                    | 12      | 1485. <b>-</b> 76    |                  |
| Nov Cap-2 Maneuver       | 234    | · -                  | -             | -            |                    |         | -                    |                  |
| Stage 1                  | 463    |                      |               | 14-19        |                    |         | a series             |                  |
| Stage 2                  | 349    | -                    | -             | -            |                    | -       | 2                    |                  |
|                          |        |                      |               |              |                    |         |                      |                  |
| Approach                 | EB     |                      | NB            |              |                    | SB      |                      |                  |
| ICM Control Delay, s     | 19.6   |                      | 1.1           |              |                    | 0       | Terry States         |                  |
| ICM LOS                  | С      |                      |               |              |                    |         |                      |                  |
|                          |        |                      |               |              |                    |         |                      |                  |
| /inor Lane/Major Mvmt    | NBL    | NBT EBLn1            | SBT SBR       |              |                    |         |                      |                  |
| Capacity (veh/h)         | 960    | - 433                |               | Carl Control | CONTRACT OF STREET |         |                      | THE PARKWINE THE |
| ICM Lane V/C Ratio       | 0.091  | - 0.437              |               |              |                    |         |                      |                  |
| ICM Control Delay (s)    | 9.1    | - 19.6               | Sel- Dise     |              |                    |         |                      |                  |
| ICM Lane LOS             | А      | - C                  |               |              |                    |         |                      |                  |
| ICM 95th %tile Q(veh)    | 0.3    | - 2.2                | AND THE REAL  |              |                    |         |                      |                  |

| ntersection  |                           |   |                    |  |                               |                        |                      |   |
|--|---------------------------|---|--------------------|--|-------------------------------|------------------------|----------------------|---|
| nt Delay, s/veh  | 0.4                       |   |                    |  |                               |                        |                      | t devision and the second s   |
| Novement   | WBL                       | WBR   |                    | NBT  | NBR                           | SBL                    | SBT                  |   |
| ane Configurations   | W                         |   | and a start of the | ß  |                               | ሻ                      | Ŷ                    | and the second  |
| raffic Vol, veh/h  | 13                        | 13  |                    | 614  | 14                            | 13                     | 522                  | the second the second   |
| uture Vol, veh/h   | 13                        | 13  |                    | 614  | 14                            | 13                     | 522                  | at the state of the   |
| Conflicting Peds, #/hr   | 0                         | 0   |                    | 0  | 0                             | 0                      | 0                    | and the start Brand House   |
| lign Control   | Stop                      | Stop  |                    | Free   | Free                          | Free                   | Free                 |   |
| T Channelized  | C. C. MANAGER             | None  |                    | -  | None                          | 1.141 A. 2018 -        | None                 | Noter territory Th  |
| Storage Length   | . 0                       | -   |                    | -  | -                             | 150                    | -                    | and the second second second second second  |
| /eh in Median Storage, #   |                           | South States  |                    | 0  | 10002                         | Ser Conservation       | 0                    | the second second second  |
| Grade, %   | 0                         | _   |                    | 0  | -                             | -                      | 0                    |   |
| Peak Hour Factor   | 92                        | 92  |                    | 92   | 92                            | 92                     | 92                   |   |
| leavy Vehicles, %  | 2                         | 2   |                    | 2  | 2                             | 2                      | 2                    |   |
| Avmt Flow  | 14                        | 14  |                    | 667  | 15                            | 14                     | 567                  |   |
| and the second sec | (constraints and a state) | and a state of the state  |                    | 001  |                               | ine could be local and |                      |   |
| Major/Minor  | Minor1                    |   |                    | Major1   | and the second                | Major2                 |                      |   |
| Conflicting Flow All   | 1271                      | 675   |                    | 0  | 0                             | 683                    | 0                    | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |
| Stage 1  | 675                       | New South States and  |                    | C. C. C.   | 11. J                         | Survey 53 67 8 14      | and the start        |   |
| Stage 2  | 596                       | -   |                    |  | -                             | -                      | •.,                  |   |
| Critical Hdwy  | 6.42                      | 6.22  |                    |  | 100                           | 4.12                   |                      |   |
| Critical Hdwy Stg 1  | 5.42                      | -   |                    | -  | -                             | -                      |                      |   |
| Critical Hdwy Stg 2  | 5.42                      | SPLIN STREET  |                    | 1990 - 199 <b>.</b>  | 1-1-1-1-1                     | ten instanting         |                      |   |
| Follow-up Hdwy   | 3.518                     | 3.318   |                    |  |                               | 2.218                  |                      | and the second se |
| Pot Cap-1 Maneuver   | 185                       | 454   |                    | 100  |                               | 910                    |                      |   |
| Stage 1  | 506                       |   |                    | 27 C - 27 |                               | -                      | -1.                  |   |
| Stage 2  | 550                       | a tana a sa kata sa   |                    |  | 15120-15                      | internet internet      | 1-45                 |   |
| Platoon blocked, %   | 000                       |   |                    | and the second   |                               |                        | -                    |   |
| Nov Cap-1 Maneuver   | 182                       | 454   |                    | -  |                               | 910                    | -<br>Sanakari        |   |
|  | 322                       | 404   |                    |  | 14 - 9 - 9 - <del>1</del> - 9 | 310                    |                      |   |
| Mov Cap-2 Maneuver   | 506                       | And the state of the state  |                    | -  | -                             | -                      | Section Section      |   |
| Stage 1  | 506                       |   |                    | and the second   |                               |                        | ( <del>.</del> )¥    |   |
| Stage 2  | 042                       |   |                    | -  | -                             | -                      | egenerge<br>Sterrege |   |
| Approach   | WB                        |   |                    | NB   |                               | SB                     |                      |   |
| HCM Control Delay, s   | 15.3                      | and the second second   |                    | 0  |                               | 0.2                    |                      |   |
| HCM LOS  | 13.3<br>C                 |   |                    | U  | Patient period                | 0.2                    |                      |   |
|  |                           |   |                    |  |                               |                        |                      |   |
| Minor Lane/Major Mvmt  | NBT                       | NBRWBLn1  | SBL S              | BT   |                               |                        |                      |   |
| Capacity (veh/h)   |                           | and the second | 910                |  |                               | 1 Cork                 | and the              | Provide a second  |
| HCM Lane V/C Ratio   | -                         | - 0.075 0   |                    | -  |                               |                        | the second second    | Sector and a sector   |
| HCM Control Delay (s)  | CA Chaire P               | - 15.3  | 9                  | eren Linera  |                               |                        |                      |   |
| HCM Lane LOS   | -                         | - C   | A                  | -  |                               |                        |                      |   |
| HCM 95th %tile Q(veh)  | -                         | - 0.2   | 0                  |  |                               |                        |                      |   |

# HCM 2010 TWSC 3: Silverado Trail & Oak Knoll Ave.

# MD Yr. 2030 + Prj. Weekend Conditions 06/12/2017

| Intersection             |              |                                   |             |  |   |  |        |
|--------------------------|--------------|-----------------------------------|-------------|--|---|--|--------|
| Int Delay, s/veh 2       | 2.6          |                                   |             |  |   |  |        |
| Movement                 | EBL          | EBR                               | NBL         | NBT                                      | SBT   | SBR  |        |
| Lane Configurations      | w W          |                                   | ĥ           | Ŷ  | Â   |  |        |
| Traffic Vol, veh/h       | 96           | 53                                | 35          | 531                                      | 421   | 120  |        |
| Future Vol, veh/h        | 96           | 53                                | 35          | 531                                      | 421   | 120  |        |
| Conflicting Peds, #/hr   | 0            | 0                                 | 0           | 0  | 0   | 0  |        |
| Sign Control             | Stop         | Stop                              | Free        | Free                                     | Free  | Free   |        |
| RT Channelized           | 20120116     | None                              | - 10 A C    | None                                     | Contraction of the  | None   |        |
| Storage Length           | 0            | -                                 | 125         | .=.                                      | -   |  |        |
| Veh in Median Storage, # | 0            | and and a                         | contract 12 | 0  | 0   | v times - success  |        |
| Grade, %                 | 0            |                                   | -           | 0  | 0   | -<br>-   |        |
| Peak Hour Factor         | 92           | 92                                | 92          | 92                                       | 92  | 92   |        |
| Heavy Vehicles, %        | 2            | 2                                 | 2           | 2  | 2   | 2  |        |
| Mvmt Flow                | 104          | 58                                | 38          | 577                                      | 458   | 130  |        |
|                          |              |                                   | 50          |  | 100   |  |        |
| Major/Minor              | Minor2       |                                   | Major1      |  | Major2  |  |        |
| Conflicting Flow All     | 1176         | 523                               | 588         | 0  | WidjOI2   | 0  | N.C.S. |
| Stage 1                  | 523          | 020                               | 000         | Ŭ  | States of States in States &  |  |        |
| Stage 2                  | 653          | and a strength of the strength of |             |  |   |  |        |
| Critical Hdwy            | 6.42         | 6.22                              | 4.12        | Constant of Solars                       | a folgen alater a far hand and the  | -  |        |
| Critical Hdwy Stg 1      | 5.42         | 0.22                              | 4.12        | 7  |   |  |        |
| Critical Hdwy Stg 2      | 5.42         | a di manana di sa                 | -           |  |   | -  |        |
|                          | 3.518        | 3.318                             | 2.218       | 5.00 ( P.A. 58.6                         |   |  |        |
| Follow-up Hdwy           |              |                                   |             | -  |   | -  |        |
| Pot Cap-1 Maneuver       | 211          | 554                               | 987         | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 |   | a the second second second   |        |
| Stage 1                  | 595          | -                                 | -           |  |   |  |        |
| Stage 2                  | 518          |                                   |             |  | Contraction of the second s |  |        |
| Platoon blocked, %       | -            |                                   |             | -  |   | <ul> <li>A second s</li></ul> |        |
| Nov Cap-1 Maneuver       | 203          | 554                               | 987         | 1 <b>-</b> -                             |   | STATES STREET  |        |
| Mov Cap-2 Maneuver       | 339          | -                                 | -           | -  | · · · · ·   | -  |        |
| Stage 1                  | 595          |                                   |             | 1967-61                                  |   | Na sh <del>i</del> tika ka   |        |
| Stage 2                  | 498          | -                                 |             | <del>ن</del><br>محمد المحمد الم          | -   | -  |        |
|                          | in particula |                                   |             |  |   |  |        |
| pproach                  | EB           |                                   | NB          |  | SB  | Sec. 10  |        |
| ICM Control Delay, s     | 20.4         |                                   | 0.5         |  | 0   |  |        |
| ICM LOS                  | С            |                                   |             |  |   |  |        |
| dipor Lono/Major Mumi    | NDI          | NDT CDL -4                        | COT COD     |  |   |  |        |
| Ainor Lane/Major Mvmt    | NBL          | NBT EBLn1                         | SBT SBR     |  |   |  |        |
| Capacity (veh/h)         | 987          | - 393                             |             |  |   |  |        |
| ICM Lane V/C Ratio       | 0.039        | - 0.412                           |             |  |   |  |        |
| ICM Control Delay (s)    | 8.8          | - 20.4                            | - 17 - E    |  |   |  |        |
| ICM Lane LOS             | А            | - C                               |             |  |   |  |        |
| ICM 95th %tile Q(veh)    | 0.1          | - 2                               |             |  |   |  |        |

. .

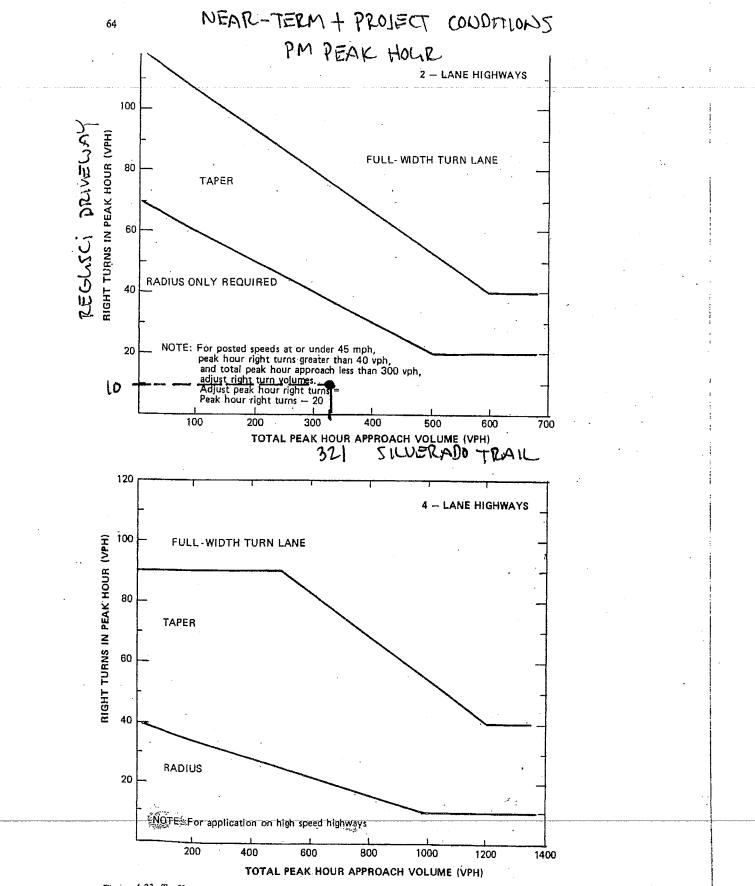


Figure 4-23. Traffic volume guidelines for design of right-turn lanes. (Source: Ref. 4-11)

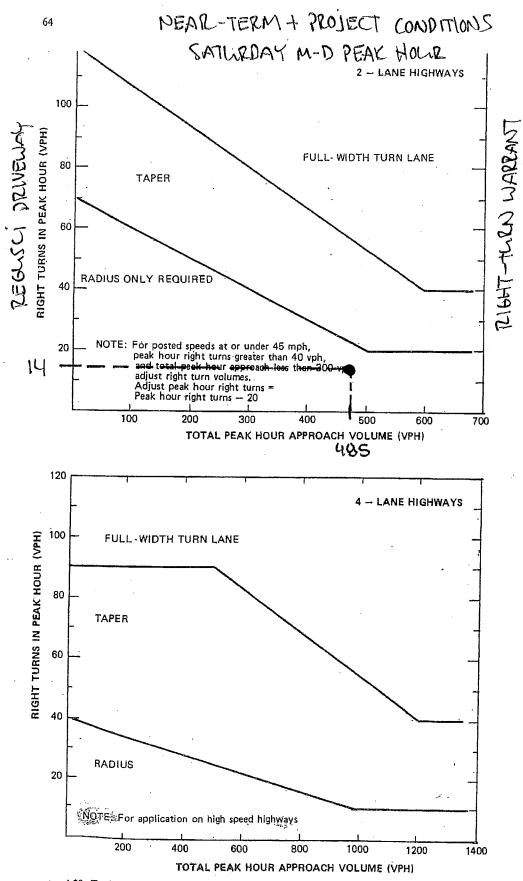


Figure 4-23. Traffic volume guidelines for design of right-turn lanes. (Source: Ref. 4-11)

| TABLE 2   |  |   | Transit  | ioning A  | Daily Volun<br>Areas and<br>Urbanize   | nes for Flori  | da's  | 12/18/12  |
|---|--|---|--|---|--|--|---|---|
| MANUERRU  | RIEDIFIOWIAG   |   |  |   |  | RUPTEDHIO  | WARA  | S   |
| STATE SIG   | NALIZED ART  | ERIALS  |  | <u></u>   |  | FREEWA   |   |   |
| Class I (40 m<br>Lanes Median<br>2 Undivided<br>4 Divided<br>6 Divided  | ph or higher posted s<br>B C<br>* 14,400<br>* 34,000<br>* 52,100   | peed limit)<br>D<br>16,200<br>35,500<br>53,500  | E<br>**<br>**<br>**  | Lanes<br>4<br>6<br>8<br>10  | B<br>44,100<br>65,100<br>85,100<br>106,200   | C<br>57,600<br>85,600<br>113,700<br>141,700  | D<br>68,900<br>102,200<br>135,200<br>168,800  | E<br>71,700<br>111,000<br>150,000<br>189,000  |
| Lanes Median<br>2 Undivided<br>4 Divided<br>6 Divided<br>Non-State Sign<br>(Alter c<br>by                                   | http://www.aphical.org/aphical | speed limit)<br>D<br>13,300<br>28,800<br>44,900<br>Adjustmen<br>mes   | E<br>14,200<br>31,600<br>47,600                            |   | Fr<br>Auxiliary Lane<br>ent in Both Dire<br>+ 20,000   |  | tments<br>Ram<br>Meter<br>+ 59  | ing   |
| Lanes Median I<br>2 Divided<br>2 Undivided<br>Multi Undivided<br>Multi Undivided<br><br>One-W<br>Multiply the               | E Turn Lane Adjus<br>Exclusive Exclu<br>Left Lanes Right I<br>Yes No<br>No No<br>Yes No<br>No No<br>Ye<br>ay Facility Adjust<br>e corresponding two-di<br>umes in this table by 0.   | sive Ad<br>Lanes<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D | djustment<br>Factors<br>+5%<br>-20%<br>-5%<br>-25%<br>+ 5% | Lanes<br>2<br>4<br>6  | Median<br>Undivided<br>Divided<br>Divided  | 35,300 49  | C I<br>7,300 24,4<br>9,600 62,9<br>4,500 94,3<br>way Adjustn  | E           00         33,300           00         69,600           00         104,500  |
| (Multiply motorized v<br>directional roadway la<br>Paved<br>Shoulder/Bicycle<br>Lane Coverage<br>0-49%<br>50-84%<br>85-100% | CYCLE MODE<br>rehicle volumes shown b<br>nes to determine two-we<br>volumes.)<br>B C<br>* 2,600<br>1,900 5,500<br>7,500 19,500<br>DESTRIAN MOI   | D<br>below by num<br>ay maximum<br>D<br>6,100<br>18,400<br>>19,500  |  | <sup>1</sup> Values s<br>service an<br>does not<br>applicatic<br>more spe<br>not be us,<br>Calculati<br>the Trans<br><sup>2</sup> Level of<br>of motori<br><sup>3</sup> Buses pe<br>flow. | hown are presented<br>id are for the autom<br>constitute a stundar<br>sons. The computer r<br>cific planning appli<br>de for corridor or i<br>ons are based on pli<br>it Capacity and Qu<br>f service for the big<br>zed vehicles, not m<br>er hour shown are on | as two-way annual<br>uobild/ruck modes u<br>d and should be used<br>models from which the<br>cations. The table and<br>tetsection design, w<br>anning applications of<br>allity of Service Man<br>yole and pedestrian u<br>umber of bicyclists of<br>ly for the peak hour in<br>table input value de | Intess specifically s<br>) only for general p<br>his table is derived<br>d deriving comput<br>here more refined t<br>of the Highway Can<br>ual<br>modes in this table<br>or pedestrians using<br>the single direction | nes for levels of<br>tated. This table<br>lanning<br>should be used for<br>er models should<br>echniques exist.<br>pacity Manual and<br>is based on number<br>the facility. |
| (Multiply motorized y   | vehicle volumes shown h<br>ines to determine two-we<br>volumes.)<br>B C<br>* *<br>1,600<br>3,800 10,500  | below by num  | E<br>9,400<br>15,600<br>>19,500                            | volumes<br>been read  | greater than level o<br>shed. For the bicycl<br>le because there is  | yel of service letter i<br>f service D become<br>e mode, the level of<br>no maximum vehiole  | F because intersect<br>service letter grade   | ion capacities have<br>(including F) is not   |
|   | E (Scheduled Fix   |   | ) <sup>3</sup>   |   |  |  |   |   |
| (Buses)<br>Sidewalk Coverage<br>0-84%<br>85-100%  | in peak hour in peak dire<br>$ \begin{array}{ccc} B & C \\ > 5 & \geq 4 \\ > 4 & \geq 3 \end{array} $  | $\frac{D}{\geq 3}$ $\geq 2$   | E<br>≥2<br>≥1  | Systems   | Department of Train<br>Planning Office<br>t state fl us/plannin  | sportation<br><u>g/systems/sin/los/de</u>  | fault.shtm  |   |

2012 FDOT QUALITY/LEVEL OF SERVICE HANDBOOK TABLES

TABLE 2 (continued)

Γ

# Generalized Annual Average Daily Volumes for Florida's Transitioning and Areas Over 5,000 Not In Urbanized Areas

12/18/12

|   | Uninterrupted Flow Facilities           |                   |                      | . L            | Interrupted Flow Fac |                 |         |                         | ilities         |  |
|---|---|-------------------|----------------------|----------------|----------------------|-----------------|---------|-------------------------|-----------------|--|
| INPUT VALUE<br>ASSUMPTIONS                      |   | State Arterials   |                      |                | 0                    | Class I         |         |                         |                 |  |
|   | Freeways                                | i Hi              | ighways              | с              | lass I               | c               | lass II | Bicycle                 | Pedestrian      |  |
| ROADWAY CHARACTERISTICS                         |   |                   |                      |                |                      |                 |         |                         |                 |  |
| Area type (t,uo)                                | t                                       | t                 | t                    | t              | t                    | t               | t       | l t                     | t               |  |
| Number of through lanes (both dir.)             | 4-10                                    | 2                 | 4-6                  | 2              | 4-6                  | 2               | 4-6     | 4                       | 4               |  |
| Posted speed (mph)                              | 70                                      | 50                | 50                   | 45             | 50                   | 30              | 30      | 45                      | 45              |  |
| Free flow speed (mph)                           | 75                                      | 55                | 55                   | 50             | 55                   | 35              | 35      | 50                      | 50              |  |
| Auxiliary lanes (n,y)                           | n                                       | n                 | n                    | 1              |                      |                 |         |                         | 1               |  |
| Median (n, nr, r)                               |   | n                 | r                    | n              | у                    | n               | у       | r                       | r               |  |
| Terrain (l,r)                                   | 1                                       | 1                 | 1                    | 1              | 1                    | 1               | 1       | 1                       | 1               |  |
| % no passing zone                               |   | 60                |                      |                |                      |                 |         |                         | 1               |  |
| Exclusive left turn lane impact (n, y)          |   | [n]               | у                    | У              | у                    | у               | у       | у                       | у               |  |
| Exclusive right turn lanes (n, y)               |   |                   |                      | n              | n                    | n               | n       | n                       | n               |  |
| Facility length (mi)                            | 8                                       | 5                 | 5                    | 1.8            | 2                    | 2               | 2       | 2                       | 2               |  |
| Number of basic segments                        | 4                                       |                   |                      |                |                      |                 | 1       |                         | 1               |  |
| TRAFFIC CHARACTERISTICS                         |   |                   |                      |                |                      |                 |         |                         |                 |  |
| Planning analysis hour factor (K)               | 0.090                                   | 0.090             | 0.090                | 0.090          | 0.090                | 0.090           | 0.090   | 0.090                   | 0.090           |  |
| Directional distribution factor (D)             | 0.555                                   | 0.550             | 0.550                | 0.550          | 0.570                | 0.570           | 0.565   | 0.070                   | 0.570           |  |
| Peak hour factor (PHF)                          | 1.000                                   | 1.000             | 1.000                | 1.000          | 1.000                | 1.000           | 1.000   | 1.000                   | 1.000           |  |
| Base saturation flow rate (pcphpl)              |   | 1,700             | 2,100                | 1,950          | 1,950                | 1,950           | 1,950   | 1,950                   | 1,950           |  |
| Heavy vehicle percent                           | 9.0                                     | 4.0               | 4.0                  | 2.0            | 3.0                  | 2.0             | 3.0     | 3.0                     | 3.0             |  |
| Local adjustment factor                         | 0.85                                    | 0.97              | 0.95                 |                |                      |                 |         |                         | 5.0             |  |
| % left turns                                    |   | 1                 |                      | 12             | 12                   | 12              | 12      | 12                      | 12              |  |
| % right turns                                   |   |                   |                      | 12             | 12                   | 12              | 12      | 12                      | 12              |  |
| CONTROL CHARACTERISTICS                         |   |                   | - I                  |                |                      |                 | 1 12    | 1                       | 12              |  |
| Number of signals                               | <u> </u>                                | 1                 |                      | e              |                      | 1               | T 10    | 1                       |                 |  |
| Arrival type (1-6)                              |   |                   |                      | 5              | 4                    | 10              | 10      | 4                       | 6               |  |
| Signal type (a, c, p)                           |   |                   |                      | 4              | 3                    | 4               | 4       | 4                       | 4               |  |
| Cycle length (C)                                |   |                   |                      | C              | C                    | c               | c       | C                       | ¢               |  |
| Effective green ratio (g/C)                     |   |                   |                      | 120            | 150                  | 120             | 150     | 120                     | 120             |  |
|   |   | <u> </u>          | <u> </u>             | 0.44           | 0.45                 | 0.44            | 0.45    | 0.44                    | 0.44            |  |
| MULTIMODAL CHARACTERISTICS                      | 3                                       |                   |                      |                |                      |                 |         |                         |                 |  |
| Paved shoulder/bicycle lane (n, y)              |   |                   |                      |                |                      | T               |         | n, 50%, y               | n               |  |
| Outside lane width (n, t, w)                    | _                                       |                   |                      |                |                      |                 |         | t                       | t               |  |
| Pavement condition (d, t, u)                    |   |                   |                      |                |                      |                 |         | t                       |                 |  |
| On-street parking (n, y)                        |   |                   |                      |                |                      |                 |         | п                       | n               |  |
| Sidewalk (n, y)                                 |   |                   |                      |                |                      | 1               |         | 1                       | n, 50%, y       |  |
| Sidewalk/roadway separation (a, t, w)           |   |                   |                      |                |                      |                 |         | t                       | t               |  |
| Sidewalk protective barrier (n, y)              |   |                   |                      |                |                      | 1               |         |                         | <br>n           |  |
|   | ΓDW                                     | TI OF CE          | ERVICE TE            | IDECILOT       |                      | <u> </u>        | L       | ł                       | <u> </u>        |  |
|   | Freeways                                |                   |                      | ucronor        |                      |                 | D'      |                         |                 |  |
| Level of  | Ficeways                                | Two-Lane          | iways                | <u> </u>       | Arterials            |                 | Bicycle | Ped                     | Bus             |  |
| Service   | Density                                 | 1 Wo-Lane<br>%ffs | Multilane<br>Density | Class I<br>ats |                      | Class II<br>ats | Score   | Score                   | Buses/hr.       |  |
| В   | ≤ 17                                    | > 83.3            | ≤ 17                 | > 31 mp        | h >                  | 22 mph          | ≤ 2.75  | ≤2.75                   | ≤6              |  |
| С   | ≤24                                     | > 75.0            | ≤24                  | > 23 mp        |                      | 17 mph          | ≤ 3.50  | ≤ 3.50                  | <u>30</u><br>≤4 |  |
| D   | ≤31                                     | > 66.7            | ≤31                  | > 18 mp        |                      | 13 mph          | ≤ 4.25  | <u>≤ 3.36</u><br>≤ 4.25 | < 3             |  |
| E   | ≤39                                     | > 58.3            | ≤ 35                 | > 15 mp        |                      | 10 mph          | ≤ 5.00  | ≤ 5.00                  | <2              |  |
| 6 ffs = Percent free flow speed ats = Average 1 | - 1 - · · · · · · · · · · · · · · · · · |                   |                      | mp             |                      | mbii            |         |                         | ~ 4             |  |

% ffs = Percent free flow speed ats = Average travel speed



# Memorandum

| То:   | Napa County<br>Planning, Building,& Environmental | Date:     | September 27, 2017       |
|-------|---|-----------|--------------------------|
| Attn: | Ms. Dana Ayers, Planner                           | Project:  | Proposed Regusci Winery  |
| From: | Peter Galloway                                    |           | Use Modification Project |
| Re:   | Regusci Driveway/Silverado Trail                  | Job No.:  | 35-5644-01 (11145087)    |
|       | Intersection Level-of-Service                     | File No.: | C268MEM001.DOCX          |
| CC:   | Mr. George Monteverdi, Planning Consu             | ultant    |                          |

#### Hi Dana,

This memorandum is a follow-up to our conversation and emails last week related to the calculated Level-of-Service (LOS) for the Regusci Driveway/Silverado Trail intersection for all "no project" scenarios under existing, near-term, and cumulative conditions. Based on the most recent draft traffic analysis prepared for the proposed project (*Omni-Means/GHD, June, 2017*); when proposed project traffic was added to the subject intersection overall LOS improved when compared to all "no project" conditions. This result of improved intersection LOS is not typical when additional trips are added to a "baseline" or existing condition. The following sections provide a brief explanation for this a-typical result as well as revised LOS calculations for the Regusci Driveway/Silverado Trail intersection that provide a more uniform comparison of "no project" and "with project" conditions for all analyzed scenarios.

## HCM 2010 LOS Methodology for Stop-Sign Controlled Intersections

The Regusci Driveway/Silverado Trail intersection is one of many stop-sign controlled, minor street (driveway) intersections on Silverado Trail. The Regusci driveway is a single-lane approach (westbound) at Silverado Trail with a shared right/left-turn lane. Silverado Trail has a shared through/right-turn lane in the northbound direction and a separate left-turn lane and through-lane in the southbound direction. All turning movements from Silverado Trail into the Regusci Driveway are uncontrolled.

The Highway Capacity Manual (HCM) 2010 methodology for a stop-sign controlled minor street intersection primarily focuses on the stop-sign controlled movements but also provides delay for turning movements from the main street. As an example, under existing "no project" conditions the LOS for the Regusci Driveway/Silverado Trail intersection was calculated to be LOS D (28.1 seconds of delay) for the outbound (left-turn) movement from the Regusci driveway onto Silverado Trail. A key factor in this LOS calculation was that the Regusci driveway's westbound approach always had one (1) left-turn movement and zero (0) right-turn movements. These volumes for the westbound stop-sign controlled driveway approach were consistent for all "no project" conditions. This is noted because the calculated LOS and vehicle delay of D (28.1 seconds of delay) only reflects the delay for left-turn movement(s) from the driveway onto Silverado Trail. With the Regusci driveway having shared left and right-turn movements onto

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Silverado Trail, the HCM methodology also provides capacity for right-turn movements. However, since all "no project" scenarios for the Regusci driveway westbound approach always contained one (1) left-turn and zero (0) right-turn movements; vehicle delay for the right-turn movements were never factored into the overall calculation. The HCM LOS calculation assumes a higher combined capacity for a shared left and right-turn lane when there are both left and right-turn movements using the approach.

When proposed project trips were added to the westbound Regusci driveway approach at Silverado Trail, it resulted in both left *and* right-turn movements based on the overall distribution of project trips. Thus, the HCM calculation assumed a higher capacity for shared left and right-turn movements at the driveway that resulted in an improved overall intersection LOS as compared to all "no project" LOS calculations that contained only left-turn movements.

To correct this intersection LOS discrepancy at the Regusci Driveway/Silverado Trail intersection between "no project" and "with project" conditions, an additional right-turn movement was added to all "no project" LOS calculations for the intersection. By adding one (1) right-turn movement to the westbound Regusci driveway approach the HCM LOS calculation included the same proportional capacities for the shared left and right-turn movements (dependent on volumes) as all "with project" LOS calculations (see "No Project" LOS calculations for existing, near-term, and cumulative conditions—attached).

## **Revised Level of Service Tables for Project Analysis Scenarios**

The revised Regusci Driveway/Silverado Trial intersection LOS for all "no project" analysis scenarios are shown in Table 2 (Existing and Near-Term "No Project" Conditions) and Table 5 (Cumulative Year 2030 "No Project" And Plus Project Conditions) taken directly from the draft traffic analysis conducted for the proposed project. As shown in Table 2 for Existing and Near-Term (no project) conditions, LOS for the Regusci Driveway/Silverado Trail would improve under all "no project" conditions (particularly for the weekday PM peak hour conditions). Our conclusions related to proposed project impacts would not change from the draft traffic analysis. Under cumulative "no project" and "with project" conditions, intersection LOS would change from LOS D (31.9 seconds) to LOS E (49.7 seconds) during the weekday PM peak hour for the outbound Regusci driveway left and right-turn movements. This change is intersection LOS would be considered a significant impact. However, all uncontrolled vehicle turning movements from Silverado Trail would continue to operate at LOS A and there would be ample vehicle storage for outbound turning movements on the Regusci driveway. In addition, the Regusci Driveway/Silverado Trail intersection would not meet the peak hour signal warrant with cumulative plus project traffic. Therefore, no mitigation is recommended at this time.

| TABLE 2  |
|--|
| EXISTING AND NEAR-TERM (NO PROJECT) CONDITIONS: INTERSECTION LEVELS-OF-SERVICE |
| WEEKDAY PM PEAK AND WEEKEND MID-DAY PEAK HOUR <sup>1, 2</sup>                  |
|  |

|   |                                      | Wkdy. PM LO     | )S/Delay                 | Wknd. Mid-Day LOS/Delay   |                          |                           |
|---|--------------------------------------|-----------------|--------------------------|---------------------------|--------------------------|---------------------------|
|   | Intersection                         | Control<br>Type | Existing<br>(No Project) | Near-Term<br>(No Project) | Existing<br>(No Project) | Near-Term<br>(No Project) |
| 1 | Yountville Crossroad/Silverado Trail | Stop            | D 29.6                   | D 32.1                    | B 11.4                   | B 13.1                    |
| 2 | Regusci Driveway/Silverado Trail     | Stop            | C 19.0                   | B 13.6                    | B 12.2                   | B 12.5                    |
|   | Oak Knoll Ave./Silverado Trail       | Stop            | E 39.1                   | E 43.6                    | B 14.5                   | C 16.6                    |

(1) Based on Highway Capacity Manual (HCM) 2010, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds. Stated LOS refers to the minor street (stop-sign) controlled movement.

| TABLE 5  |
|--|
| CUMULATIVE YEAR 2030 (NO PROJECT) AND PLUS PROJECT CONDITIONS:                               |
| INTERSECTION LEVEL OF SERVICE; WEEKDAY PM PEAK AND WEEKEND MID-DAY PEAK HOUR <sup>1, 2</sup> |

|   |                                      |                 | Wkdy. PM LO              | S/Delay                  | Wknd. Mid-Da             | ay LOS/Delay              |
|---|--------------------------------------|-----------------|--------------------------|--------------------------|--------------------------|---------------------------|
|   | Intersection                         | Control<br>Type | Yr. 2030<br>(No Project) | Yr. 2030<br>(W/ Project) | Yr. 2030<br>(No Project) | Near-Term<br>(W/ Project) |
| 1 | Yountville Crossroad/Silverado Trail | Stop            | F 275.4                  | F 280.2                  | C 15.5                   | C 19.5                    |
| 2 | Regusci Driveway/Silverado Trail     | Stop            | D 31.9                   | E 49.7                   | B 14.4                   | C 15.0                    |
| 3 | Oak Knoll Ave./Silverado Trail       | Stop            | F 198.2                  | F 214.9                  | C 19.7                   | C 20.2                    |

(1) Based on Highway Capacity Manual (HCM) 2010, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds. Stated LOS refers to the minor street (stop-sign) controlled movement.

| Intersection           |   |   |         |                |        |                    |
|------------------------|---|---|---------|----------------|--------|--------------------|
| Int Delay, s/veh       | 0                                       |   |         |                |        |                    |
| Movement               | WBL                                     | WBR   | NBT     | NBR            | SBL    | SBT                |
| Lane Configurations    | M                                       |   | ţ,      |                | 3      | 1                  |
| Traffic Vol, veh/h     | 1                                       | 1   | 270     | 1              | 0      | 1448               |
| Future Vol, veh/h      | 1                                       | 1   | 270     | 1              | 0      | 1448               |
| Conflicting Peds, #/hr | 0                                       | 0   | 0       | 0              | 0      | 0                  |
| Sign Control           | Stop                                    | Stop  | Free    | Free           | Free   | Free               |
| RT Channelized         | 50.80                                   | None  | -       | None           | 1000   | None               |
| Storage Length         | 0                                       | -   | -       | -              | 150    | -                  |
| Veh in Median Storage  |   | 1000  | 0       |                | 1.5.79 | 0                  |
| Grade, %               | 0                                       | -   | 0       |                | -      | 0                  |
| Peak Hour Factor       | 92                                      | 92  | 92      | 92             | 92     | 92                 |
| Heavy Vehicles, %      | 2                                       | 2   | 2       | 2              | 2      | 2                  |
| Mymt Flow              | 1                                       | 1   | 293     | 1              | 0      | 1574               |
|                        |   |   | 200     |                | U      | 10/4               |
|                        |   | Statistics and  |         | and the second |        |                    |
|                        | /linor1                                 |   | /lajor1 |                | Major2 | 1.1                |
| Conflicting Flow All   | 1868                                    | 294   | 0       | 0              | 295    | 0                  |
| Stage 1                | 294                                     | - N   | 1.5     | 1.4            | 1      | ÷.                 |
| Stage 2                | 1574                                    | -   | -       | 7              | -      | -                  |
| Critical Hdwy          | 6.42                                    | 6.22  | -       |                | 4.12   | 2 / N+2            |
| Critical Hdwy Stg 1    | 5.42                                    | -   | -       | -              | 2      | - 1 - <del>-</del> |
| Critical Hdwy Stg 2    | 5.42                                    | 191-  | 1114    | -              | WI - F | S. 10+             |
| Follow-up Hdwy         | 3.518                                   | 3.318   | -       | -              | 2.218  |                    |
| Pot Cap-1 Maneuver     | 80                                      | 745   | -       | -              | 1266   | and the            |
| Stage 1                | 756                                     | -   | -       | -              | ÷      | -                  |
| Stage 2                | 187                                     | A TOP   | NUL IN  | 100            | 1774   | 1.15 (2)           |
| Platoon blocked, %     |   |   | -       | -              |        | -                  |
| Mov Cap-1 Maneuver     | 80                                      | 745   | 101-2   | 1.1            | 1266   | 01.00-             |
| Mov Cap-2 Maneuver     | 157                                     | -   | -       | -              | -      | -                  |
| Stage 1                | 756                                     |   | -       | 1              |        | C Vieta            |
| Stage 2                | 187                                     | COLOR4  | -       | -              |        | -                  |
| Oldgo 2                | 101                                     |   |         |                |        |                    |
|                        |   |   |         |                |        |                    |
| Approach               | WB                                      | a la companya da companya d | NB      |                | SB     |                    |
| HCM Control Delay, s   | 19                                      |   | 0       |                | 0      |                    |
| HCM LOS                | С                                       |   |         |                |        |                    |
|                        |   |   |         |                |        |                    |
| Minor Lane/Major Mvn   | nt                                      | NBT   | NBR     | WBLn1          | SBL    | SBT                |
| Capacity (veh/h)       | 11.11.11.11.11.11.11.11.11.11.11.11.11. |   | _       | 259            | 1266   | -                  |
| HCM Lane V/C Ratio     |   |   |         | 0.008          | 1200   |                    |
| HCM Control Delay (s   |   | NEW TRA   | 1.8150  | 19             | 0      | 1                  |
| HCM Lane LOS           | /                                       | 100.00  |         | C              | A      | 72 20              |
| HOW LANE LUS           |   | -   |         | U              | A      | -                  |

0

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-

0

HCM 95th %tile Q(veh)

|  |         | Caller Contraction of the |        |         |         | Contraction of the local division of the loc |
|--|---------|---------------------------|--------|---------|---------|--|
| Intersection   |         |                           |        |         |         |  |
| Int Delay, s/veh   | 0       |                           |        |         |         |  |
| Movement   | WBL     | WBR                       | NBT    | NBR     | SBL     | SBT  |
| Lane Configurations  | M       |                           | Þ      |         | 3       | 1  |
| Traffic Vol, veh/h   | 1       | 1                         | 436    | 1       | 0       | 371  |
| Future Vol, veh/h  | 1       | 1                         | 436    | 1       | 0       | 371  |
| Conflicting Peds, #/h  | ir O    | 0                         | 0      | 0       | 0       | 0  |
| Sign Control   | Stop    | Stop                      | Free   | Free    | Free    | Free   |
| RT Channelized   | 100     | None                      |        | None    |         | None   |
| Storage Length   | 0       | -                         | -      | -       | 150     | -  |
| Veh in Median Stora  | ge, # 0 | 10 2 4                    | 0      | 12 3 47 | -       | 0  |
| Grade, %   | 0       | -                         | 0      | -       | -       | 0  |
| Peak Hour Factor   | 92      | 92                        | 92     | 92      | 92      | 92   |
| Heavy Vehicles, %  | 2       | 2                         | 2      | 2       | 2       | 2  |
| Mvmt Flow  | 1       | 1                         | 474    | 1       | 0       | 403  |
|  |         |                           |        |         |         |  |
| Major/Minor  | Minor1  | Ň                         | Aajor1 | N       | /lajor2 |  |
| Conflicting Flow All   | 877     | 474                       | 0      | 0       | 475     | 0  |
| Stage 1  | 474     |                           | -      |         |         |  |
| Stage 2  | 403     | -                         | -      | -       | -       | -  |
| Critical Hdwy  | 6.42    | 6.22                      | -      | -       | 4.12    | 1.1.2  |
| Critical Hdwy Stg 1  | 5.42    |                           | -      | -       | -       |  |
| THE R. P. LEWIS CO., NAME AND ADDRESS OF TAXABLE AD |         |                           |        |         |         |  |

| Approach             | WB   | NB | SB |   |
|----------------------|------|----|----|---|
|                      |      |    | 00 | a series and the state of the series of the series of the series of the state of the series of the series of th |
| HCM Control Delay, s | 12.2 | 0  | 0  |   |
| HCM LOS              | В    |    |    |   |

| Minor Lane/Major Mvmt | NBT     | NBRM  | VBLn1 | SBL  | SBT    |  |
|-----------------------|---------|-------|-------|------|--------|--|
| Capacity (veh/h)      |         | -     | 505   | 1087 |        |  |
| HCM Lane V/C Ratio    |         | -     | 0.004 | -    | -      |  |
| HCM Control Delay (s) | - 11    | 640 2 | 12.2  | 0    | 115-17 |  |
| HCM Lane LOS          | -       | -     | В     | А    | -      |  |
| HCM 95th %tile Q(veh) | Sec. 19 | 2017  | 0     | 0    | 100345 |  |

Critical Hdwy Stg 2

Stage 1

Stage 2

Platoon blocked, % Mov Cap-1 Maneuver

Mov Cap-2 Maneuver

Stage 1

Stage 2

Pot Cap-1 Maneuver 319

Follow-up Hdwy

5.42

626

675

319

442

626

675

3.518 3.318

.

590

-

-

590

-

-

-

-

-

-

- 2.218

- 1087

- 1087

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-

2

| Intersection<br>Int Delay, s/veh   | 0      |                           |         |                          |                       |                                       |
|--|--------|---------------------------|---------|--------------------------|-----------------------|---------------------------------------|
| -  |        | 14/00                     | LIDE    | LINE                     | 001                   | 0.0.7                                 |
| Movement   | WBL    | WBR                       | NBT     | NBR                      | SBL                   | SBT                                   |
| Lane Configurations  | Y      |                           | Þ       |                          | ٦                     | 1                                     |
| Traffic Vol, veh/h   | 1      | 0                         | 471     | 0                        | 0                     | 396                                   |
| Future Vol, veh/h  | 1      | 0                         | 471     | 0                        | 0                     | 396                                   |
| Conflicting Peds, #/hr   | 0      | 0                         | 0       | 0                        | 0                     | 0                                     |
| Sign Control   | Stop   | Stop                      | Free    | Free                     | Free                  | Free                                  |
| RT Channelized   | -303   | None                      | 10012   | None                     |                       | None                                  |
| Storage Length   | 0      | -                         | -       | 4                        | 150                   | -                                     |
| Veh in Median Storage  |        | 1012                      | 0       | 17.2                     | -                     | 0                                     |
| Grade, %   | 0      | -                         | 0       |                          | _                     | 0                                     |
| Peak Hour Factor   | 92     | 92                        | 92      | 92                       | 92                    | 92                                    |
|  | 92     | 92                        | 92      | 92                       | 92                    | 92                                    |
| Heavy Vehicles, %  | 1      | 0                         |         |                          |                       |                                       |
| Mvmt Flow  | 1999 A | 0                         | 512     | 0                        | 0                     | 430                                   |
|  |        |                           |         |                          |                       |                                       |
| Major/Minor M  | /inor1 | N                         | lajor1  | N.                       | Major2                |                                       |
| Conflicting Flow All   | 942    | 512                       | 0       | 0                        | 512                   | 0                                     |
| Stage 1  | 512    | -                         | -       | -                        | -                     | -                                     |
| Stage 2  | 430    | -                         |         |                          |                       |                                       |
| Critical Hdwy  | 6.42   | 6.22                      |         | Sec. As                  | 4.12                  |                                       |
| Critical Hdwy Stg 1  | 5.42   |                           | 18.07   | 1. 1. 1.                 | 4.12                  |                                       |
|  |        | -                         | -       |                          | -                     |                                       |
| Critical Hdwy Stg 2  | 5.42   | -                         | -       |                          | -                     | 11 14                                 |
|  |        | 3.318                     | -       | -                        | 2.218                 | -                                     |
| Pot Cap-1 Maneuver   | 292    | 562                       | -       | -                        | 1053                  | e e e e e e e e e e e e e e e e e e e |
| Stage 1  | 602    | -                         | -       |                          | -                     | -                                     |
| Stage 2  | 656    | -                         | -       | -                        | - 11 ( A <del>-</del> | -                                     |
| Platoon blocked, %   |        |                           | -       | ٠                        |                       |                                       |
| Mov Cap-1 Maneuver   | 292    | 562                       | -       |                          | 1053                  | 1000                                  |
| Mov Cap-2 Maneuver   | 419    | -                         | -       | -                        | -                     | -                                     |
| Stage 1  | 602    | 1. S. 4                   | 118 214 |                          | 111                   | 1                                     |
| Stage 2  | 656    | -                         | -       |                          | 4                     | -                                     |
|  |        |                           |         |                          |                       |                                       |
|  |        | Non-Marine Lands products |         |                          |                       | and the second second                 |
| Approach   | WB     |                           | NB      |                          | SB                    |                                       |
| HCM Control Delay, s   | 13.6   |                           | 0       |                          | 0                     |                                       |
| HCM LOS  | В      |                           |         |                          |                       |                                       |
|  |        |                           |         |                          |                       |                                       |
| Minor Long/Major Mun   | at     | NBT                       | NIDDA   | VBLn1                    | SBL                   | SBT                                   |
| Minor Lane/Major Mvn   | n      | INDI                      | 1-22 A  | the second second second |                       | 1010 Do 10 - 12 1                     |
| Capacity (veh/h)   |        | 2.40                      | 1.1     | 419                      | 1053                  |                                       |
| HCM Lane V/C Ratio   | -      | -                         |         | 0.003                    | -                     |                                       |
| The second s |        |                           |         | 13.6                     | 0                     | 4                                     |
| HCM Control Delay (s)  |        |                           | 0       | 15.0                     |                       |                                       |
| HCM Control Delay (s)<br>HCM Lane LOS  |        | -                         | -       | 13.0<br>B<br>0           | A<br>0                | -                                     |

| Intersection<br>Int Delay, s/veh | 0      |                |                   |                       | and the second second  | Manual and Man         |
|----------------------------------|--------|----------------|-------------------|-----------------------|--|------------------------|
| A                                |        |                | THE OWNER ADDRESS | and the second second |  | dis <u>baring</u>      |
| Movement                         | WBL    | WBR            | NBT               | NBR                   | SBL  | SBT                    |
| Lane Configurations              | Y      |                | Þ                 |                       | 7  | 1                      |
| Traffic Vol, veh/h               | 1      | 1              | 471               | 0                     | 0  | 396                    |
| Future Vol, veh/h                | 1      | 1              | 471               | 0                     | 0  | 396                    |
| Conflicting Peds, #/hr           | 0      | 0              | 0                 | 0                     | 0  | 0                      |
| Sign Control                     | Stop   | Stop           | Free              | Free                  | Free   | Free                   |
| RT Channelized                   | 18.13  | None           | NO ST             |                       | 100  |                        |
| Storage Length                   | 0      | -              | -                 | -                     | 150  | -                      |
| Veh in Median Storage            |        | 1. 1. 1. 1. A. | 0                 | 12.12                 | 13.65  | 0                      |
| Grade, %                         | 0      | -              | 0                 |                       | -  | 0                      |
| Peak Hour Factor                 | 92     | 92             | 92                | 92                    | 92   | 92                     |
| Heavy Vehicles, %                | 2      | 2              | 2                 | 2                     | 2  | 2                      |
| Mvmt Flow                        | 1      | 1              | 512               | 0                     | 0  | 430                    |
| INIVITIL FIOW                    | - Hard |                | 512               | 0                     | 0  | 430                    |
|                                  |        |                |                   |                       |  |                        |
| Major/Minor N                    | Minor1 | ٨              | Aajor1            | The I                 | Major2   |                        |
| Conflicting Flow All             | 942    | 512            | 0                 | 0                     | 512  | 0                      |
| Stage 1                          | 512    | 2012           | 1.54              | Cast.                 | -  | 1 Section              |
| Stage 2                          | 430    | -              | -                 | -                     |  | -                      |
| Critical Hdwy                    | 6.42   | 6.22           | 1.00              | Sec. 2                | 4.12   | 1.1                    |
| Critical Hdwy Stg 1              | 5.42   | -              | -                 | -                     | -  | -                      |
| Critical Hdwy Stg 2              | 5.42   |                | 794               | 1. S. S. L.           |  |                        |
|                                  |        | 3.318          | -                 |                       | 2.218  |                        |
| Pot Cap-1 Maneuver               | 292    | 562            | -<br>1966/2       |                       | 1053   |                        |
|                                  |        |                |                   |                       | 1055   | 1                      |
| Stage 1                          | 602    | -              | -                 |                       | -  | -                      |
| Stage 2                          | 656    |                | -                 |                       | 1.200  | 1 <del>.</del> .       |
| Platoon blocked, %               |        |                | -                 | •                     |  | -                      |
| Mov Cap-1 Maneuver               | 292    | 562            |                   | 1.00                  | 1053   |                        |
| Mov Cap-2 Maneuver               | 419    | -              |                   |                       | -  | -                      |
| Stage 1                          | 602    |                | の日本               | - 10 - E              | S  | 1 ( A ( <del>-</del> ) |
| Stage 2                          | 656    | -              | -                 | -                     |  | -                      |
|                                  |        |                |                   |                       |  |                        |
| Approach                         | WB     | 15.08.5 X      | NB                |                       | SB   | 1.1.1.1.1.1.1          |
| Approach                         |        |                |                   |                       | and the second |                        |
| HCM Control Delay, s             |        |                | 0                 |                       | 0  |                        |
| HCMLOS                           | В      |                |                   |                       |  |                        |
|                                  |        |                |                   |                       |  |                        |
| Minor Lane/Major Mvr             | nt     | NBT            | NBR               | WBLn1                 | SBL  | SBT                    |
| Capacity (veh/h)                 |        |                | -                 | 480                   | 1053   |                        |
| HCM Lane V/C Ratio               |        |                |                   | 0.005                 | 1000   | 0000000                |
|                                  | 1      | -              |                   | 12.5                  | 0  |                        |
| HCM Control Delay (s             | 1      |                |                   |                       |  |                        |
| HCM Lane LOS                     |        | -              | -                 | B                     | A  |                        |
| HCM 95th %tile Q(veh             | 1)     | 10.5           | 1. 12             | 0                     | 0  | 1616-7                 |

| Intersection           |        |         |         | Sec.                                     |         |  |
|------------------------|--------|---------|---------|--|---------|--|
| Int Delay, s/veh       | 0      |         |         |  |         | and the second |
| Movement               | WBL    | WBR     | NBT     | NBR                                      | SBL     | SBT  |
| Lane Configurations    | Y      |         | Þ       |  | 7       | 1  |
| Traffic Vol, veh/h     | 1      | 1       | 380     | 1  | 0       | 2039   |
| Future Vol, veh/h      | 1      | 1       | 380     | 1  | 0       | 2039   |
| 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      | -       | -       |  | 150     | -  |
| Veh in Median Storage  | e,# 0  |         | 0       |  | 199 12  | 0  |
| Grade, %               | 0      | -       | 0       | -  | -       | 0  |
| Peak Hour Factor       | 92     | 92      | 92      | 92                                       | 92      | 92   |
| Heavy Vehicles, %      | 2      | 2       | 2       | 2  | 2       | 2  |
| Mvmt Flow              | 1      | 1       | 413     | 1  | 0       | 2216   |
|                        |        |         |         |  |         |  |
| Major/Minor M          | Minor1 | Ň       | /lajor1 |  | Major2  |  |
| Conflicting Flow All   | 2630   | 414     | 0       | 0  | 414     | 0  |
| Stage 1                | 414    | 414     | -       | U  | 414     | -  |
| Stage 2                | 2216   | -       |         | 19 19 19 19 19 19 19 19 19 19 19 19 19 1 |         |  |
| Critical Hdwy          | 6.42   | 6.22    | -       | Linda                                    | 4.12    |  |
| Critical Hdwy Stg 1    | 5.42   | 0.22    |         |  | 4.12    |  |
| Critical Hdwy Stg 2    | 5.42   | Resta   | a la    | No.                                      | 11.12   | 20000  |
| Follow-up Hdwy         |        | 3.318   | -       |  | 2.218   | S 135  |
| Pot Cap-1 Maneuver     | 26     | 638     |         |  | 1145    | -  |
| Stage 1                | 667    | 030     | _       | 3.0                                      | 1143    | 10.24  |
| Stage 2                | 89     |         |         |  |         | 1000   |
| Platoon blocked, %     | 03     | 101200  | -       |  | 11 1 30 |  |
| Mov Cap-1 Maneuver     | 26     | 638     | 180.02  | Silver 1                                 | 1145    |  |
| Mov Cap-2 Maneuver     | 76     | 030     |         |  | 1140    |  |
| Stage 1                | 667    | 1010    | N Seas  | navity/                                  |         | 11-11-2  |
| Stage 2                | 89     | I.V.SOB |         |  |         |  |
| olaye z                | 03     |         | 1       |  | -2.10%  |  |
|                        |        |         |         |  |         | NAME OF COLUMN   |
| Approach               | WB     |         | NB      |  | SB      |  |
| HCM Control Delay, s   |        |         | 0       |  | 0       |  |
| HCMLOS                 | D      |         |         |  |         |  |
|                        |        |         |         |  |         |  |
| Minor Lane/Major Mvr   | nt     | NBT     | NBR     | WBLn1                                    | SBL     | SBT  |
| Capacity (veh/h)       | N. CON | 1       | -       | 136                                      | 1145    | •  |
| HCM Lane V/C Ratio     |        | -       | -       | 0.016                                    | -       |  |
| HCM Control Delay (s   | )      | mild-   |         | 31.9                                     | 0       | 2 1 <del>4</del>   |
|                        |        |         |         | -  |         |  |

D 0

Α

0

HCM Lane LOS

HCM 95th %tile Q(veh)

| Intersection           |             |               |                   |                       |                                 | (Sec.2)  |
|------------------------|-------------|---------------|-------------------|-----------------------|---------------------------------|----------|
| Int Delay, s/veh       | 0           |               |                   |                       |                                 |          |
| Movement               | WBL         | WBR           | NBT               | NBR                   | SBL                             | SBT      |
| Lane Configurations    | Y           |               | ħ                 |                       | 7                               | 1        |
| Traffic Vol, veh/h     | 1           | 1             | 614               | 1                     | 0                               | 522      |
| Future Vol, veh/h      | 1           | 1             | 614               | 1                     | 0                               | 522      |
| 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           | -             | -                 | -                     | 150                             | -        |
| Veh in Median Storage  |             |               | 0                 | 3.7mg                 | -                               | 0        |
| Grade, %               | 5, # 0<br>0 | 100 Sta 173 S | 0                 |                       |                                 | 0        |
| Peak Hour Factor       | 92          | 92            | 92                | 92                    | 92                              | 92       |
|                        |             |               |                   |                       |                                 |          |
| Heavy Vehicles, %      | 2           | 2             | 2                 | 2                     | 2                               | 2        |
| Mvmt Flow              | 1           | 1             | 667               | 1                     | 0                               | 567      |
|                        |             |               |                   |                       |                                 |          |
| Major/Minor N          | /inor1      | N             | /lajor1           | M                     | Major2                          | Sec. 19  |
| Conflicting Flow All   | 1235        | 668           | 0                 | 0                     | 668                             | 0        |
| Stage 1                | 668         | -             | -                 | -                     | -                               | -        |
| Stage 2                | 567         | -             | -                 | 24110-821             |                                 | 10. N.S. |
| Critical Hdwy          | 6.42        | 6.22          | 10-5              |                       | 4.12                            |          |
|                        |             |               |                   |                       | 4.12                            |          |
| Critical Hdwy Stg 1    | 5.42        |               | -                 |                       | -                               | •        |
| Critical Hdwy Stg 2    | 5.42        | -             |                   | 1                     | -                               | 1.01     |
|                        | 3.518       |               | -                 | -                     | 2.218                           | -        |
| Pot Cap-1 Maneuver     | 195         | 458           | 1.16              | 1.1.54                | 922                             | 1. S.    |
| Stage 1                | 510         | -             | -                 | -                     | -                               | -        |
| Stage 2                | 568         | -             |                   | -                     | a state                         |          |
| Platoon blocked, %     |             |               | -                 | -                     |                                 | -        |
| Mov Cap-1 Maneuver     | 195         | 458           | 1                 | Se ( -                | 922                             | - 1 N    |
| Mov Cap-2 Maneuver     | 334         | -             | -                 | -                     | -                               | -        |
| Stage 1                | 510         | Track-        | 197               | A sec 12              |                                 | States 1 |
| Stage 2                | 568         | -             | -                 | -                     | Card 120                        | -        |
| Oldge Z                | 000         |               |                   |                       |                                 |          |
|                        |             |               | and the second of |                       |                                 |          |
| Approach               | WB          | a de la Ve    | NB                |                       | SB                              |          |
| HCM Control Delay, s   | 14.4        |               | 0                 |                       | 0                               |          |
| HCM LOS                | В           |               |                   |                       |                                 |          |
|                        |             |               |                   |                       |                                 |          |
| Minor Lane/Major Mvn   | <b>n</b> t  | NBT           | NIDDA             | WBLn1                 | SBL                             | SBT      |
|                        | m           |               | NDN               | and the second second | Notes and a state of the second |          |
| Capacity (veh/h)       |             |               | -                 | 386                   | 922                             | 1999.9   |
| HCM Lane V/C Ratio     |             | -             | -                 | 0.006                 | -                               |          |
| HCM Control Delay (s)  | )           |               | 15.74             | 14.4                  | 0                               |          |
| HCM Lane LOS           |             | -             | -                 | В                     | A<br>0                          |          |
|                        |             |               |                   | 0                     |                                 |          |