UPDATED TRAFFIC STUDY FOR THE PROPOSED

DAVIS ESTATES WINERY PROJECT Napa County, CA

May 20, 2013

Prepared by: Omni-Means, Ltd. Engineers & Planners 1901 Olympic Blvd., Suite 120 Walnut Creek, CA 94596

R1684TIA003 / 35-3062-01





May 20, 2013

Davis Estates Vineyards c/o Mr. Mark Phillips Dickenson, Peatman & Fogarty 1455 First Street, Suite 301 Napa, CA 94559

Subject: Updated Traffic Study for a Proposed Davis Estates Vineyards Winery at 4060 Silverado Trail

Dear Mr. Phillips:

This report presents our updated traffic analysis for the proposed Davis Estates Vineyards Winery at 4060 Silverado Trail in Napa County (see Figure 1 for site location map). The scope of this analysis is based on our additional discussions with you regarding the project description and comments received from Napa County staff on the original report (March 11, 2013) previously submitted for the project.

The analysis has determined that the proposed winery would not significantly impact traffic level of service conditions. Existing daily volumes on Silverado Trail are indicative of LOS 'B' conditions and would remain unchanged under existing plus project and near term plus project conditions. Peak hour intersection conditions would also operate at acceptable levels of service. At your direction it was determined all three of the winery's access driveways would be utilized. Based on the allocation of trips at the project driveways, the Silverado Trail/Larkmead Lane (Northern Winery Driveway) intersection and the Silverado Trail/Middle Winery Driveway intersection would operate at LOS 'B' or better, and the south driveway would operate at LOS 'A' under existing and near term conditions with the project.

The daily volumes on the project driveways and Silverado Trail under existing and near term plus project conditions were applied to the Napa County warrants for installation of a left turn lane on Silverado Trail. Based on our review of the warrant, a left turn lane is not required at any of the three driveway locations on Silverado Trail. The available sight distances along Silverado Trail at the driveway locations exceed Caltran's minimum sight distance guidelines. Recommendations to maintain sight distance and direct traffic to the proper driveways have been presented.

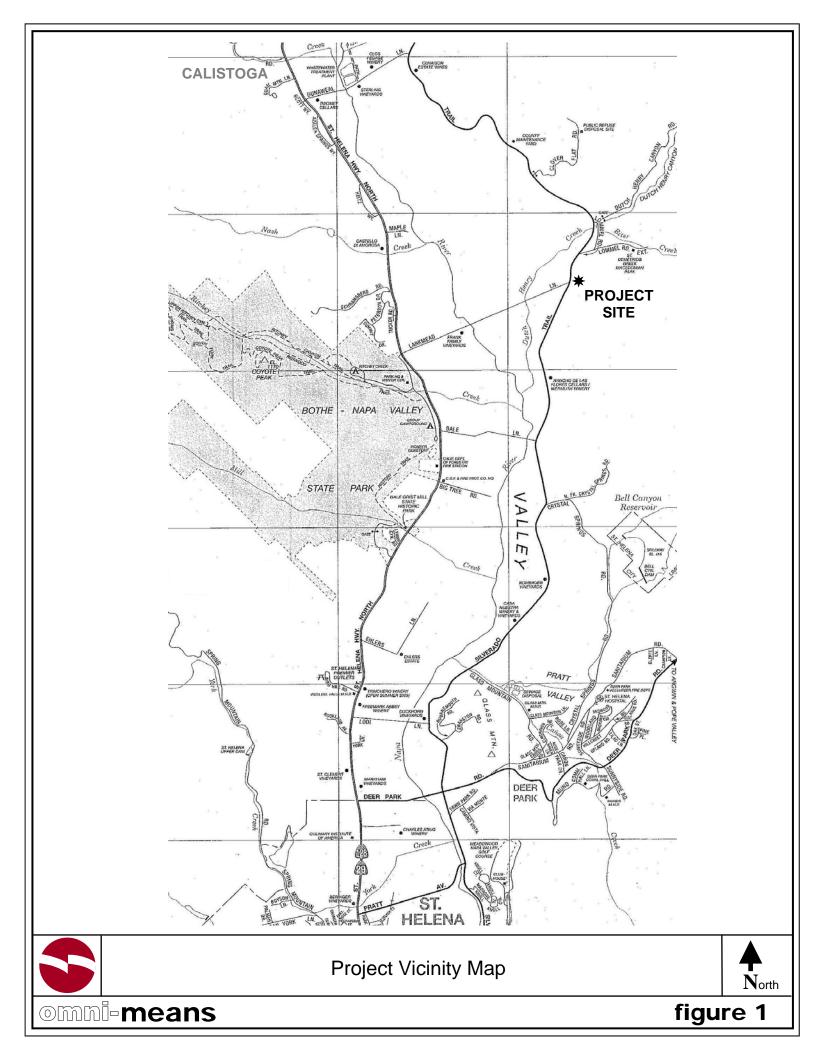
Travel model forecasts from the Napa County General Plan Update were used to calculate cumulative volumes. Although there were no significant impacts associated with project, the forecast cumulative volume increases are quite large. (Historical volume data for the past several years indicates volumes are not increasing at the forecasted rate.) However, the County has adopted measures to proactively address potential volume growth. Such measures include trip reduction strategies and possible implementation of a traffic impact fee. If enacted, the project could presumably contribute a fair share towards the circulation improvements.

I trust that this report responds to your needs. Please feel free to call me with any questions or comments after your review.

Sincerely,

Seorge Dickelson

George W. Nickelson, P.E. OMNI-MEANS, Ltd. Engineers & Planners rt/R1684TIA001.doc/35-2455-01



1. EXISTING TRAFFIC CONDITIONS

Site Location

The proposed Davis Estates winery would be located at the site of an existing vineyard/residential property at 4060 Silverado Trail. The property has three access driveways located on the east side of Silverado Trail (opposite Larkmead Lane, approximately 600 feet south of Larkmead Lane and approximately 1,000 feet south of Larkmead Lane). Silverado Trail is a rural two lane undivided arterial road oriented in a north-south direction throughout much of Napa County. Silverado Trail near the project site consists of two 12-feet wide travel lanes and 3-4 feet paved shoulders plus drainage swales or slopes in some areas.

Existing Traffic Operations

Traffic operating conditions are measured by Level of Service (LOS), which applies a letter ranking to successive levels of roadway and intersection traffic performance. LOS 'A' represents optimum conditions with free-flow travel and no congestion. LOS 'F' represents severe congestion with long delays. When applied to unsignalized intersections with minor street stop controls, the LOS reflects the delays experienced by the minor street approach. (LOS definitions, calculations, and volume worksheets are provided in the Appendix.) To identify LOS conditions, daily volumes were obtained from Napa County records, and peak hour traffic counts were conducted on Silverado Trail at the site driveways.

Based on Napa County records, Silverado Trail has an average daily traffic volume of 3,903 vehicles and a peak day volume of 4,187 vehicles south of Larkmead Lane.⁽¹⁾ The count data is somewhat old (2003); based on new peak hour counts (see below) that are about 6% higher than the 2003 peak hour volume, it has been assumed that current conditions reflect about a 6% increase over the 2003 volume. Applying this increase yields an existing average daily volume of about 4,140 vehicles. Although Saturday volumes on Silverado Trail are typically somewhat lower than weekday volumes, it has been conservatively assumed that the 4,140 daily volume reflects both weekday and Saturday conditions. The County counts were conducted in March, a reasonably average month in terms of winery activity. Thus, these volumes likely reflect the annual average daily traffic (AADT), described by Caltrans as generally used in a traffic analysis in order to account for seasonal influences, weekly variations, and other variables which may by present. This daily volume on Silverado Trail is indicative of Level of Service 'B' conditions (less than 5,300 ADT for a two lane rural arterial).⁽²⁾

In order to assess the peak hour intersection operating conditions, turning volume counts were conducted at the Silverado Trail/Davis Estates Access intersections. The counts were conducted during a weekday p.m. peak commute period (4:00-6:00 p.m.) and a Saturday afternoon peak period (1:00-3:00 p.m.).⁽³⁾ The peak hour volume within each count period was identified and is shown in Figure 2. The two-way volume on Silverado Trail was 450 vehicles, about 6% higher than the peak hour counted in 2003. This suggests that traffic growth on Silverado Trail has been very modest over the last 10 years. The counts identified no peak hour trips in/out of the existing driveways. Essentially, neither the existing vineyard nor the existing residence had any observed activity.

With no vehicle trips in or out of the existing site, all three driveway approaches operate at LOS 'A' with zero seconds of delay. The eastbound Larkmead Lane approach operates at LOS 'B' (10-11 seconds of delay) during the weekday and weekend peak hours. The existing LOS are shown in Table 1.

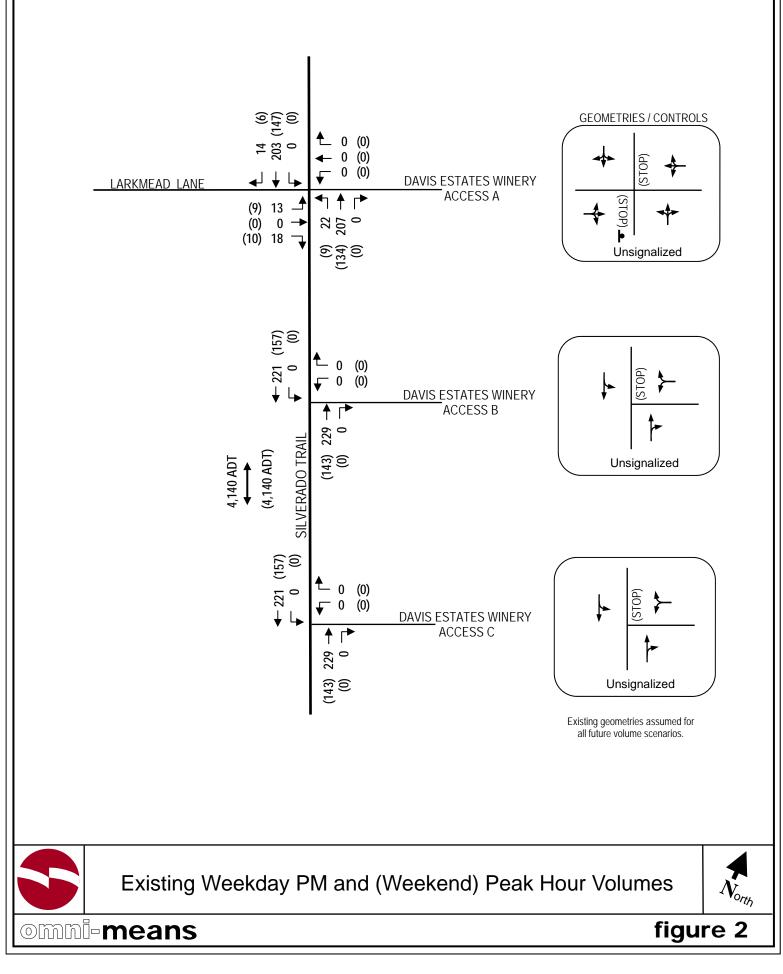


	Weekday PM Peak Hour	Saturday Afternoon Peak Hour
Intersection	Existing LOS Delay	Existing <u>LOS</u> Delay
Silverado Trail / Larkmead Lane (North Winery Driveway) Unsignalized (minor street stops)		
North Driveway westbound approach Larkmead Lane eastbound approach Silverado Trail southbound approach Silverado Trail northbound approach	A <1" B 11.3" A <1" A <1"	$\begin{array}{rrrr} A & <1"\\ B & 10.2"\\ A & <1"\\ A & <1"\\ \end{array}$
Silverado Trail / Middle Driveway Unsignalized (minor street stop)		
Middle Driveway westbound approach Silverado Trail southbound approach	A <1" A <1"	A <1" A <1"
Silverado Trail / South Driveway Unsignalized (minor street stop)		
South Driveway westbound approach Silverado Trail southbound approach	A <1" A <1"	A <1" A <1"

TABLE 1EXISTING PEAK HOUR INTERSECTION OPERATIONSLEVEL OF SERVICE (LOS) AND SECONDS OF DELAY



Existing Peak Hour Volumes:



2. PROPOSED PROJECT

Project Description

Although the project would be developed in two phases, this analysis has focused on the phase two project buildout conditions. The traffic generating components of the proposed project are summarized as follows:

- Production: 30,000 gallons annual wine production;
- Visitation: 20 weekday and 34 Saturday visitors (by appointment);
- Employees: 5 full-time employees on weekdays and Saturdays;
- Residences: Two residences would be on the site (housing 2 of the full-time employees);
- Marketing Events:
 2 per month for up to 50 guests at each event;
 2 per year for up to 100 guests.

Project Trip Generation/Distribution

The proposed winery traffic generation has been calculated in Table 2. New trips would be composed of visitors, employees, and wine production-related truck traffic. The two residences would also generate trips. Although two employees would be comprised of onsite residents, the trip calculation conservatively treated the employee trips and residential trips separately. The project was calculated to generate 51 weekday daily trips and 13 weekday peak hour trips (4 in, 9 out). On a typical Saturday the project would generate 60 daily trips and 12 afternoon peak hour trips (6 in, 6 out). During the six-week harvest season, the project would generate 67 daily trips and 14 peak hour trips (7 in, 7 out).

The project trips were distributed onto Silverado Trail based on the existing turning movements at the Silverado Trail/Larkmead Lane intersection. Based on the observed turning percentages, the project trips were distributed with 50% to/from the north and 40% to/from the south on Silverado Trail and 10% to/from the west on Larkmead Lane.

Each driveway would be designated for specific users of the site. The north driveway would be designated for employees and trucks. The middle driveway would be designated for visitors to the winery. And the south driveway would be designated for the private residential trips. The project trips are shown in Figure 3.

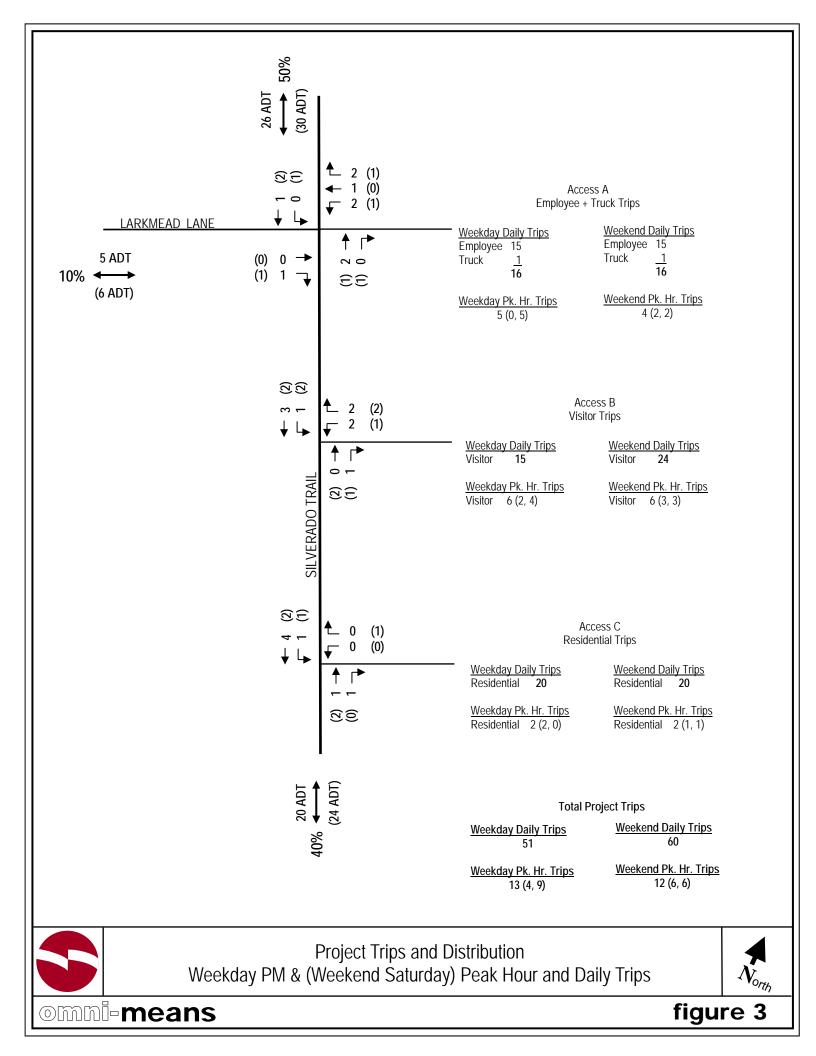


TABLE 2 TRIP GENERATION: PROPOSED DAVIS ESTATES WINERY

Typical Weekday Daily Traffic:Project: 20 visitors/2.6 per vehicle x 2 one-way trips5 full time employees x 3.05 one-way trips1 truck trip: (30,000 gls/1,000 x .009 x 2 o-w trips)Two residences (20 daily trips) ^a Total Weekday Daily Trips	= = = =	15 daily trips 15 daily trips 1 daily trip <u>20 daily trips</u> 51 total daily trips
<u>Typical Weekday PM Peak Hour Traffic:</u> Project: (15 daily visitor trips + 1 daily truck trip) x .38 5 full time employees Two residences (2 peak hour trips) ^a Total Weekday Peak Hour Trips	= = =	6 peak hour trips 5 peak hour trips 2 peak hour trips 13 total trips (4 in, 9 out)
<u>Typical Saturday Daily Traffic</u> : Project: 34 visitors/2.8 per vehicle x 2 one-way trips 5 full time employees x 3.05 one-way trips 1 truck trip: (30,000 gls/1,000 x .009 x 2 o-w trips) Two residences (20 daily trips) Total Weekday Daily Trips		24 daily trips 15 daily trips 1 daily trip <u>20 daily trips</u> 60 total daily trips
<u>Typical Saturday Peak Hour Traffic:</u> Project: (24 daily visitor + 15 employee + 1 truck trip = 40 trips) x 25% Two residences (2 peak hour trips) Total Saturday Peak Hour Trips (54 daily trips x 25%)	= = =	10 peak hour trips <u>2 peak hour trips</u> 12 total trips (6 in, 6 out)
 Weekend (Saturday) Daily Traffic During Crush: Project: 34 visitors/2.8 per vehicle x 2 one-way trips 7 full time employees x 3.05 one-way trips 1 truck trip: (60,000 gls/1,000 x .009 x 2 trips) 95 annual tons grape on-haul/4 tons per truck/36 days x 2 trips Two residences (20 daily trips) Total Weekend (Saturday) Daily Harvest/Crush Trips 	 	24 daily trips 21 daily trips 1 daily trip 1 daily trip 20 daily trips 67 total daily trips
<u>Weekend (Saturday) Peak Hour Traffic During Crush:</u> Project: (24 daily visitor + 21 employee + 2 truck trips = 47 trips) x 25% Two residences (2 peak hour trips) Total Weekend Peak Hour Harvest Trips	= =	12 peak hour trips <u>2 peak hour trips</u> 14 total trips (7 in, 7 out)

Production, visitor, and employee data provided by Mr. Mark Phillips(project representative) and Use Permit Application. Trip equations for daily and weekday peak hour derived from Napa County, Conservation, Planning, & Development Department, "Use Permit Application Package", Napa County Winery Traffic Generation Characteristics, 2012. Trip equation for weekend peak hour based on conservative assumption that 25% of daily trips occur in peak hour. ^aResidential trips based on Institute of Transportation Engineers, <u>Trip Generation</u>, 9th Edition, 2012.





3. EXISTING PLUS PROJECT CONDITIONS

Napa County Significance Criteria

The County of Napa's significance criteria has been based on a review of the Napa County Transportation & Planning Agency and Napa County General Plan documentation on roadway and intersection operations. Specifically, the Circulation Element of the County's General Plan outlines 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.

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.

Existing Plus Project Operating Conditions

The distribution of project trips would add 28 weekday and 33 Saturday daily trips to the highest volume segment of Silverado Trail. The daily project traffic would add 0.8% to the existing daily volume of 4,140 trips on Silverado Trail. Silverado Trail would continue to function at LOS 'B' conditions. The traffic increases would be somewhat higher during the six-week harvest season, but these volumes would also not significantly affect traffic flows.

The peak hour conditions were evaluated for the three study intersections on Silverado Trail and are listed in Table 3. At the north intersection, the winery driveway and Larkmead Lane approaches would operate at LOS 'B' during the weekday and weekend peak hours. The middle driveway westbound approach would operate at LOS 'B' during the weekday peak hour and LOS 'A' during the weekend peak hour. At the south driveway intersection, the westbound winery approach would function at LOS 'A' during both peak hours. The northbound and southbound Silverado Trail approaches would operate at LOS 'A'. The intersections would continue to operate acceptably. The existing plus project volumes are shown in Figure 4.



Turn Lane Warrants (Existing and Existing Plus Project Conditions)

The existing and existing plus project volumes were compared with the Napa County guidelines for installing a left turn lane in Silverado Trail.⁽⁴⁾ The warrant graphs for weekday and Saturday conditions are provided in the Appendix – the Saturday conditions represent the peak. With existing plus project volumes of 16 daily trips at the north driveway, 15-24 weekday/weekend trips at the middle driveway, 20 daily trips at the south driveway, and approximately 4,170 annual average daily trips on Silverado Trail, a left turn lane is not warranted at any of the access driveways.

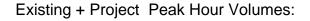
The projected right turn volumes at the site driveways are well below minimum thresholds at which right turn lanes would be required (right turn lane warrant graphs are included in the Appendix).⁽⁵⁾

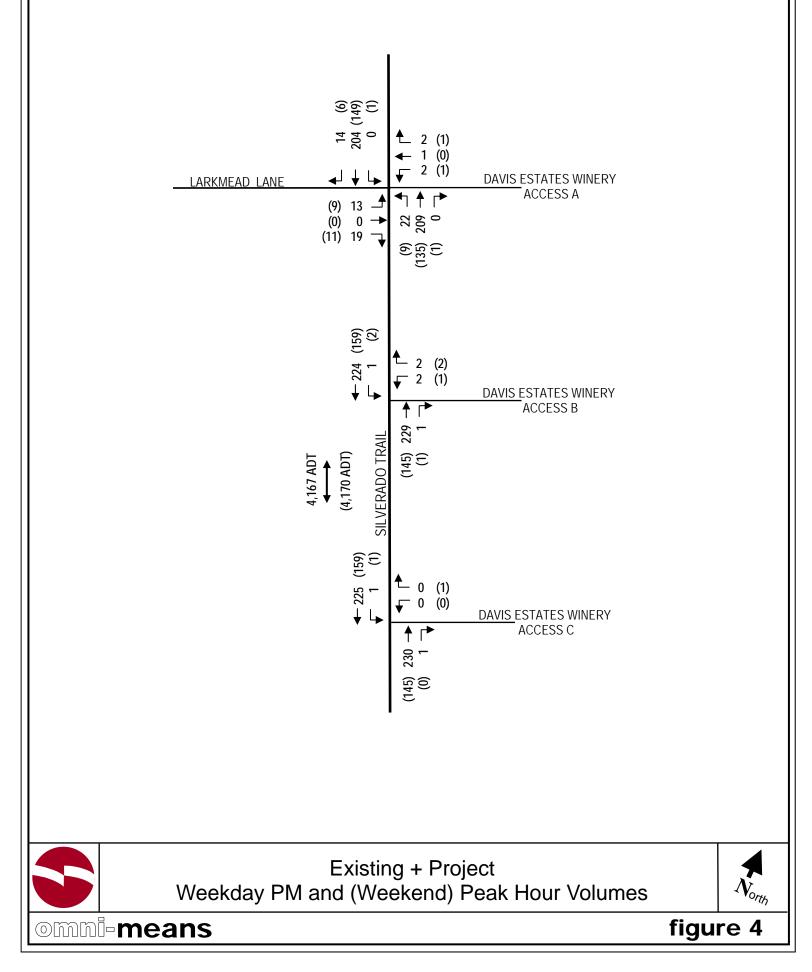
	Weekday PN	I Peak Hour	Saturday Afternoon Peak Hour			
Intersection	Existing LOS Delay	Existing + Project <u>LOS</u> Delay	Existing LOS <u>Delay</u>	Existing + Project <u>LOS Delay</u>		
Silverado Trail / Larkmead Lane (North Winery Driveway) Unsignalized (minor street stops)						
North Driveway westbound approach Larkmead Lane eastbound approach Silverado Trail southbound approach Silverado Trail northbound approach	A <1" B 11.3" A <1" A <1"	B 11.8" B 11.3" A <1" A <1"	A <1" B 10.2" A <1" A <1"	B 10.2" B 10.2" A <1" A <1"		
Silverado Trail / Middle Driveway Unsignalized (minor street stop)						
Middle Driveway westbound approach Silverado Trail southbound approach	A <1" A <1"	B 10.7" A <1"	A <1" A <1"	A 9.5" A <1"		
Silverado Trail / South Driveway Unsignalized (minor street stop)						
South Driveway westbound approach Silverado Trail southbound approach	A <1" A <1"	A <1" A <1"	A <1" A <1"	A 9.1" A <1"		
Based on Highway Canacity Manual (HCM) 2000				1 ••••••••••••••••••••••••••••••••••••		

TABLE 3 EXISTING AND EXISTING + PROJECT PEAK HOUR INTERSECTION OPERATIONS LEVEL OF SERVICE (LOS) AND SECONDS OF DELAY

Based on Highway Capacity Manual (HCM) 2000, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds.







4. NEAR TERM CONDITIONS

Approved Developments

Near term conditions reflect existing volumes plus any additional volumes expected to be generated by approved developments within the project study area. Approved developments include structures that are built but not fully occupied or are not yet built but are expected to be within the near term future. The County of Napa and City of Calistoga planning departments each provided information regarding approved developments.^(6, 7) The vehicle trips for these developments were taken from traffic studies when available or generated based on the type of development and distributed onto the street network. (A list of the developments that have calculated trips on Silverado Trail is provided in the Appendix.)

Near Term Operating Conditions

The approved developments will generate 270 daily trips on Silverado Trail adjacent to the site. Added to the existing volume of 4,140 daily trips results in 4,410 daily trips on Silverado Trail for near term conditions. Silverado Trail would continue to function at LOS 'B' conditions.

The peak hour trips generated by the approved developments were also identified and added to existing volumes. The near term volumes are shown in Figure 5. The Silverado Trail/Larkmead Lane (north driveway) intersection would operate at LOS 'B' or better conditions during the weekday and weekend peak hours. The middle and south driveway intersections would operate at LOS 'A' during the weekday and weekend peak hours. The LOS are shown in Table 4.

Near Term Plus Project Operating Conditions

The project trips were added to the near term volumes (shown in Figure 6). The project would add 28-33 daily trips on the highest volume segment to the near term volume of 4,410 daily trips, resulting in about 4,440 daily trips on Silverado Trail under near term plus project conditions. The project traffic would add 0.7 % to the near term daily volumes on Silverado Trail. Silverado Trail would continue to function at LOS 'B'. Silverado Trail would continue to operate at acceptable conditions.

The peak hour intersection operating conditions were evaluated for near term plus project conditions and are shown in Table 4. The Silverado Trail/Larkmead Lane (north driveway) intersection would operate at LOS 'B' during the weekday and Saturday peak hours. The middle driveway intersection would operate at LOS 'B' during the weekday peak hour and LOS 'A' during the weekend peak hour. The south driveway would operate at LOS 'A' conditions. The Silverado Trail northbound and southbound approaches would operate at LOS 'A'. The intersections would continue to operate at acceptable conditions under near term plus project conditions. Based on the volumes there would not be any expected vehicle queuing issues at the project access intersections.

Turn Lane Warrants (Near Term and Near Term Plus Project Conditions)

The near term and near term plus project volumes were compared with the Napa County guidelines for installing a left turn lane on Silverado Trail. (The warrant graphs for weekday and Saturday conditions are provided in the Appendix.) Under near term plus project conditions with 4,440 trips on Silverado Trail, 16 daily trips at the north driveway, 15-24 trips at the middle driveway, and 20 daily trips at the south driveway a left turn lane would not be warranted at any of the driveways.

The projected right turn volumes at the site driveways would remain well below minimum thresholds at which right turn lanes would be required (right turn lane warrant graphs are included in the Appendix).



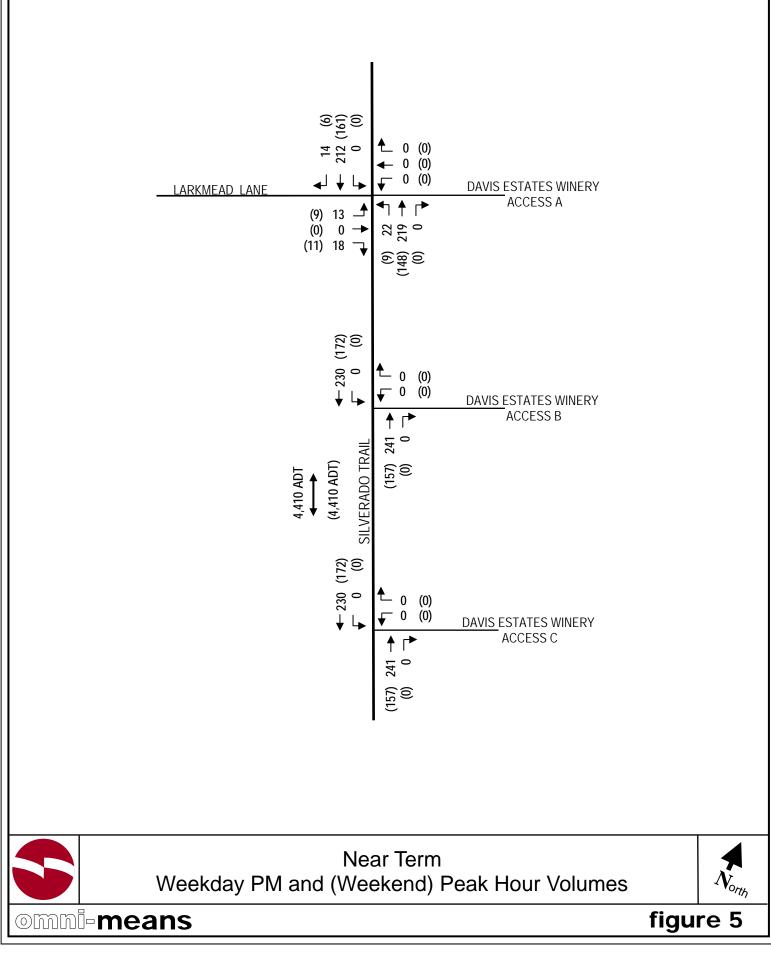
	Weekday PN	I Peak Hour	Saturday Afternoon Peak Hour		
Intersection	Near Term <u>LOS</u> Delay	Near Term + Project <u>LOS</u> Delay	Near Term <u>LOS</u> Delay	Near Term + Project <u>LOS Delay</u>	
Silverado Trail / Larkmead Lane (North Winery Driveway) Unsignalized (minor street stops)					
North Driveway westbound approach Larkmead Lane eastbound approach Silverado Trail southbound approach Silverado Trail northbound approach	A <1" B 11.4" A <1" A <1"	B 12.0" B 11.4" A <1" A <1"	A <1" B 10.3" A <1" A <1"	B 10.4" B 10.3" A <1" A <1"	
Silverado Trail / Middle Driveway Unsignalized (minor street stop) Middle Driveway westbound approach Silverado Trail southbound approach	A <1" A <1"	B 10.8" A <1"	A <1" A <1"	A 9.7" A <1"	
Silverado Trail / South Driveway Unsignalized (minor street stop) South Driveway westbound approach Silverado Trail southbound approach	A <1" A <1"	A <1" A <1"	A <1" A <1"	A 9.1" A <1"	

TABLE 4NEAR TERM AND NEAR TERM + PROJECT PEAK HOUR INTERSECTION OPERATIONSLEVEL OF SERVICE (LOS) AND SECONDS OF DELAY

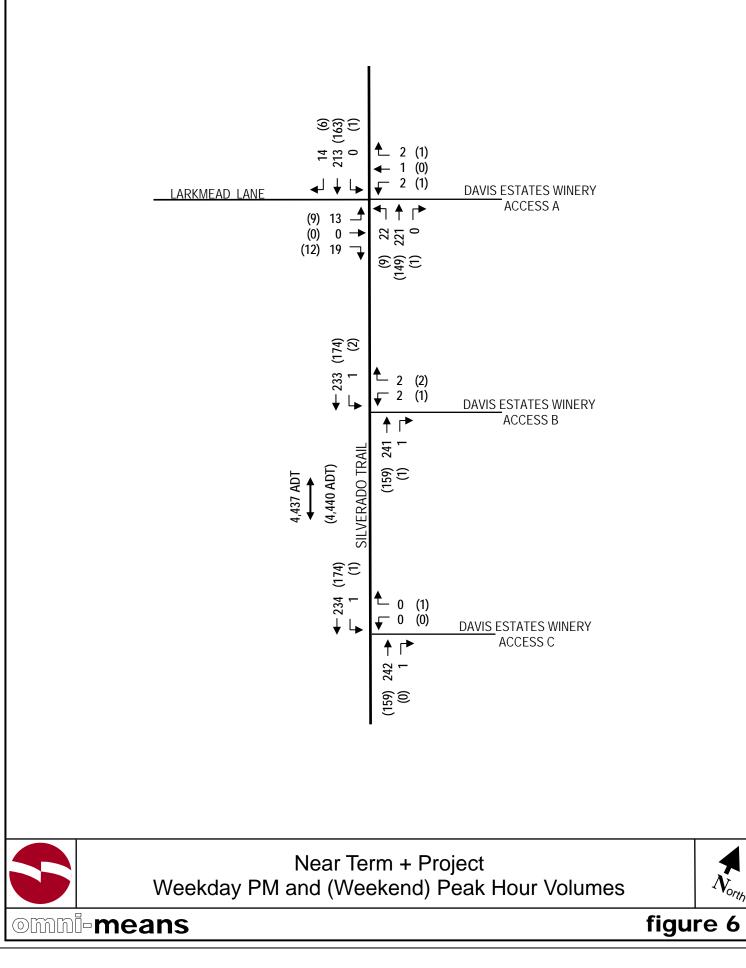
Based on Highway Capacity Manual (HCM) 2000, Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds.



Near Term Peak Hour Volumes:



Near Term + Project Peak Hour Volumes:



5. SITE ACCESS / DESIGN PARAMETERS

Sight Distances on Silverado Trail

Vehicle sight distances along Silverado Trail to/from the project driveways were 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 at private access intersections the minimum corner sight distance "shall be equal to the stopping sight distance".

Silverado Trail has a posted speed limit of 50-55 mph. Radar speed surveys of Silverado Trail were also conducted at the project site.⁽⁸⁾ The "critical" vehicle speed (the speed at which 85% of all surveyed vehicles travel at or below) along Silverado Trail was measured at 55-57 mph. Caltrans' design standards indicate that these vehicle speeds require a stopping sight distance of 500-550 feet, measured along the travel lanes on Silverado Trail.⁽⁹⁾ Based on field measurements, sight distances from the driveway locations are in excess of this distance in both directions on Silverado Trail. Therefore, the sight distance recommendations are met for the speed limit and measured vehicle speeds. There is some vegetation south of the project site along the east side of Silverado Trail which may require occasional trimming in order to retain adequate sight distance from the south driveway.

Project Access and Circulation

A project site plan is provided in Figure 7. It is our understanding the driveways are proposed to be at least 18 feet wide which would meet the Napa County standard of 18 feet for two-way traffic flow. ⁽¹⁰⁾ Any changes or modifications to the proposed driveway designs should meet the roadway standards set forth by Napa County, including providing adequate turning radius at the driveway entrance to Silverado Trail for trucks serving the winery.

Each driveway would be designated for specific users. The north driveway would serve employee and truck trips, the middle driveway would serve visitor trips, and the south driveway would serve the private residential trips.

In order to direct users of the site to the appropriate driveway, signs explaining the allowed vehicle type at each driveway should be installed at each driveway entrance. (For example, "Delivery Trucks Only" sign at the north driveway, "Visitor Entrance" sign at the middle driveway, and a "No Winery Access: Private Residence" sign at the south driveway.)

The Napa County Transportation & Planning Agency (NCTPA) in cooperation with Napa County and local City agencies is developing bicycle routes as outlined in the Napa Countywide Bicycle Plan.⁽¹¹⁾ The plan encourages new developments to incorporate bicycle friendly design. Silverado Trail has striped shoulder area bike lanes (Class II) in both directions. Some visitors may utilize bicycles to access the proposed project. The project would provide bicycle racks for visitors to the proposed winery.

Marketing Events

The winery proposes to host the following marketing events: two monthly events with 20-50 guests; and two annual events with 100 guests.

Based on standard auto occupancy rates, a monthly 50-person event would be expected to generate approximately 46-50 trips (25 in, 25 out) including visitors and staff. The largest events (100 people) would

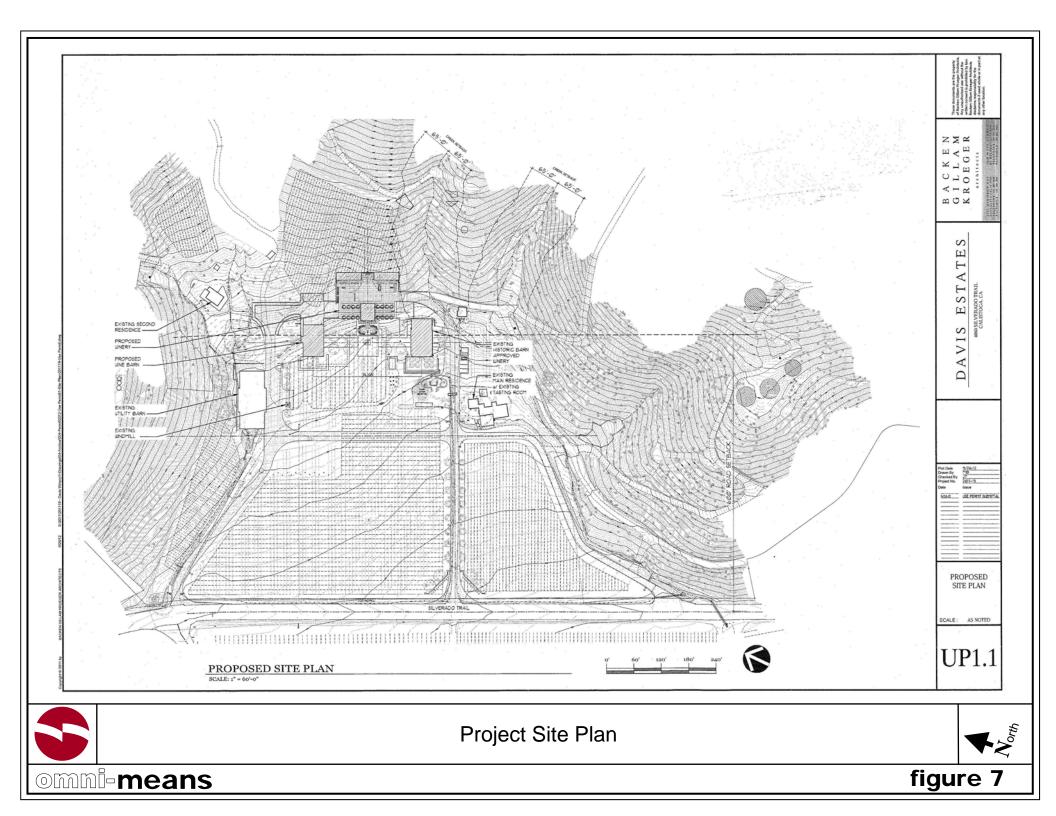


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generate up to 84-86 trips (43 in, 43 out). These events are typically of sufficient duration in length that the inbound and outbound trips occur in separate hours, thus the number of trips on the street network at one time are half of the total volume.

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. In the Use Permit Project Statement, it states the weekday evening events would occur after the peak traffic hour and would end by 9:00 p.m.; the weekend events would end by 10:00 p.m.; and no other visitation or events would occur during the larger monthly and annual events.





6. CUMULATIVE CONDITIONS

Cumulative Year 2030 Projections

Model Forecast

Cumulative (Year 2030) volume projections on Silverado Trail were derived from the Napa County Transportation & Planning Agency's traffic volume forecasts in the Napa County General Plan Update EIR.⁽¹²⁾ The forecast increase in volume-to-capacity (v/c) ratio from Year 2003 to Year 2030 on Silverado Trail in the project vicinity was applied to the provided Year 2003 peak hour two-way volume (559 trips) on Silverado Trail, yielding a volume of 1,344 weekday PM peak hour trips on Silverado Trail in Year 2030.

The projected cumulative volume represents a large (300%) increase compared to the existing (Year 2013) peak hour volume of 450 trips. With the forecasted volumes, the existing daily volume on Silverado Trail would increase from 4,140 trips to 12,400 daily trips.

Historical Data

For comparison, average annual daily traffic volumes on SR 29 south of Larkmead Lane over the previous twenty years were reviewed. The AADT on SR 29 in Year 1992 was 10,000 trips and in Year 2011 was 12,700 trips. The volumes were highest in Year 2003, reaching 14,100 AADT. The daily volumes have declined since then and are lower today than they were in 1999. The increase in volumes between year 1992 and the highest year of 2003 equates to an annual increase of 3½% per year. Applying the same annual increase to the current ADT on Silverado Trail of 4,140 (a conservative approach) results in about 7,700 ADT in year 2030 (3½% per year added for 18 years).

Cumulative volumes based on historical data are approximately 60% of the model forecast volumes. The model volumes are higher than historical growth trends, therefore volumes may not increase to the model's forecasted levels (at least within the given timeframe). However, in order to proactively address potential traffic volumes under cumulative conditions, the County has adopted several measures identified in the General Plan to improve the street network and also reduce vehicle trips.

In order to identify weekend cumulative conditions, the General Plan Update provides a ratio of weekday to weekend peak hour volumes on key streets within the valley. Several segments on SR 29 in the vicinity of the project were shown to have an average ratio of 0.76-0.80, indicating weekend peak hour volumes are expected to be about 80% of weekday volumes. This corresponds with the volumes counted for this study which found the weekend peak hour volumes to be 67% of the weekday peak hour volumes. Therefore the future weekday vs. weekend peak hour volumes would be expected to remain in the same ratio as the existing volumes.

Cumulative Operating Conditions

Although cumulative volumes are tenuous, the forecast volumes would yield acceptable LOS 'C' or better conditions (less than 13,800 ADT) on Silverado Trail.

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 will provide 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 County has identified other mitigation policies, including development of a traffic impact fee (TIF) to be developed in cooperation with the NCTPA (Mitigation Measure 4.4.1C). This would require new projects to pay their "fair share" of countywide traffic improvements they contribute the need for. Examples of such improvements could include construction of a two-way left turn lane on Silverado Trail or signalizing the Silverado Trail/Larkmead Lane intersection. The concept is under development but presumably the fee would be applied on a "per trip" basis if/when implemented.

7. SUMMARY AND CONCLUSIONS

The findings of the study and recommendations are presented as follows:

The proposed Davis Estates Winery project was calculated to generate 51-60 daily trips and 12-13 peak hour trips. The project traffic (approximately 28-33 daily trips to the north and 20-24 trips to the south) would represent an increase of approximately 0.7% to existing volumes (4,140 trips) and near term volumes (4,410 trips) on Silverado Trail.

• Silverado Trail traffic flows would continue to operate at acceptable LOS 'B' conditions with the project.

The northern winery driveway westbound approach operates at LOS 'A' under existing and near term peak hour conditions without the project and would operate at LOS 'B' with the added project trips. The eastbound Larkmead Lane approach operates at LOS 'B' without the project trips and would continue to do so with the project during weekday and weekend peak hours. The middle driveway westbound approach would operate at LOS 'B' and the south driveway westbound approach would operate at LOS 'A' under existing and near term conditions with the project.

• The study intersections would also operate at satisfactory levels-of-service (LOS 'A'-'B') with the proposed winery trips.

The project trips would be distributed at the three driveways with employee and truck trips using the north driveway, visitor trips using the middle driveway, and the private residential trips using the south driveway.

• The winery's volumes would not warrant a left turn lane on Silverado Trail at any of the driveways based on Napa County standards. The volumes would also be below the thresholds at which right turn lanes would be needed.

Based on field observations, the available sight distances along Silverado Trail at the driveways would be adequate. (The project's Civil Engineer should confirm the adequacy of sight distances along Silverado Trail.) However, there is some vegetation south of the project site on the east side of Silverado Trail.

• The vegetation growth south of the project on the east side of Silverado Trail should be monitored and trimmed, if necessary, in order to retain adequate sight distance from the south driveway.



It is our understanding that all of the winery access driveways will be designed to meet the Napa County standards for travel widths and turning radii for inbound and outbound vehicles. Therefore, the access driveways would reflect an adequate design to accommodate the projected traffic flows.

• Any changes or modifications to the driveways should be designed to meet the County standards.

The project driveways would be designated for specific users, with the north driveway serving employee and truck trips, the middle driveway serving visitor trips, and the south driveway serving the private residential trips.

• In order to direct motorists to the appropriate access location, signs explaining the allowed vehicle type should be installed at each driveway.

Cumulative (Year 2030) conditions were assessed based on a review of volume forecasts from the Napa County General Plan Update transportation model as well as historical volume data. The model forecast volumes are substantially higher than historical volume growth over the past twenty years would indicate. Therefore it is unlikely volumes will increase to the model's forecasted levels. The projections on Silverado Trail near the project vicinity represent LOS 'C' or better conditions.

However, the General Plan also seeks to proactively address potential volume increases by implementing planned street improvements and reducing vehicle trips from proposed projects by encouraging alternative transportation modes. In keeping with the policy, the proposed project would provide bicycle racks for visitors who may ride bikes to the winery. The winery should also work with employees to reduce vehicle trips by providing public transit information and allow scheduling options to facilitate carpooling.

A traffic impact fee may be adopted by the County to fund the General Plan improvements or other projects. If a TIF program were enacted, the proposed project could contribute a "fair share" towards such future circulation improvements.



<u>References</u>:

- (1) Napa County daily volume count, March 2003.
- (2) Napa County Baseline Data Report, Chapter 11 Transportation and Circulation, November 2005.
- (3) Omni-Means Engineers & Planners, traffic counts on January 19, 2013 (1:00-3:00 p.m.) and January 28, 2013 (4:00-6:00 p.m.).
- (4) Napa County, Adopted Road and Street Standards, revised November 21, 2006.
- (5) Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.
- (6) Napa County, Larkmead Vineyard Expansion.
- (7) City of Calistoga, Silver Rose Winery/Resort and Indian Springs Expansion Project.
- (8) Omni-Means Engineers & Planners, ibid.
- (9) Caltrans, *Highway Design Manual*, July 1, 2004.
- (10) Napa County, Adopted Road and Street Standards, revised November 21, 2006.
- (11) Napa County, Countywide Bicycle Plan (2012), Planning Area-North Valley, May 2012.
- (12) Napa County, *The Napa County General Plan Update EIR*, prepared by Dowling Associates, Inc., February 9, 2007.



APPENDIX

- Level of Service Definitions
- Level of Service Calculations
- Napa County Left Turn Lane Warrant Graphs
- Right Turn Lane Warrant Graphs
- Existing Volume Counts
- Radar Speed Surveys



LEVEL OF				Contro	OL DELAY (SECONDS/V	EHICLE)
SERVICE	TYPE OF FLOW	DELAY	MANEUVERABILITY	SIGNALIZED	UNSIGNALIZED	ALL-WAY STOP
А	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0 secs. ≤ 0.60 v/c	<u>≤</u> 10.0	<u>≤</u> 10.0
В	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted \downarrow within groups of vehicles.	>10 and ≤ 20.0 secs. 0.61 - 0.70 v/c	>10 and \leq 15.0	>10 and <u><</u> 15.0
С	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and ≤ 35.0 secs. 0.71 – 0.80 v/c	>15 and \leq 25.0	>15 and \leq 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles of stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and \leq 55.0 secs. 0.81 – 0.90 v/c	>25 and ≤ 35.0	>25 and <u><</u> 35.0
Е	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and <u><</u> 80.0 secs. 0.91 - 1.00 v/c	>35 and ≤ 50.0	>35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0 secs. > 1.00 v/c	> 50.0	> 50.0

LEVEL-OF-SERVICE CRITERIA FOR INTERSECTIONS

References: 1. Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000, Contra Costa Transportation Authority (CCTA), Technical Procedures Update, Final, July 9, 2006. For the purposes of this study, CCTA intersection methodology has been used for signalized intersections yielding an LOS and v/c ratio.

Facility Class	Lanes	Area Type	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway	4	All	23,800	39,600	55,200	67,100	74,600
	6	All	36,900	61,100	85,300	103,600	115,300
	8	All	49,900	82,700	115,300	140,200	156,000
Arterial ¹	2	Rural ²	2,600	5,300	8,600	13,800	22,300
	2	Urban ³	1,000	1,900	11,200	15,400	16,300
	4	Rural ²	17,500	28,600	40,800	52,400	58,300
	4	Urban ³	1,500	4,100	26,000	32,700	34,500
	6	Urban ³	2,275	6,500	40,300	49,200	51,800
Collector ¹	2	All	1,067	3,049	9,100	14,600	15,600
	4	All	2,509	7,169	21,400	31,100	32,900
Notes:							

Napa County Roadway Segment Daily LOS Volume Thresholds

Notes:

¹ All two-lane roads are assumed to be undivided. Four- and six-lane roads are assumed to be divided.

² Rural roads are assumed as uninterrupted flow highways; FDOT Capacity Table 4-3.

 $^3\,$ Urban arterials are assumed to be Class III with >4.5 signals per mile; FDOT Capacity Table 4.1

Source: Adapted from Florida Department of Transportation 2002; and Fehr & Peers 2005

Napa County Baseline Data Report, Chapter 11 Transportation and Circulation, November 2005.

HCM Unsignalized Intersection Capacity Analysis 1: Larkmead Ln. & Silverado Trail

	٦		7	1	4	×.		1	1	1	Ť	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR ¹
Lane Configurations		÷ф			ф,			45		2000 Sector Science Sector	_ �	000000000000000000000000000000000000000
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%		00	0%	0	0	0%	
Volume (veh/h)	13	0	18	0	0	0	22	207	0 0.92	0 0.92	203 0.92	14 0.92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92 0	0.92 24	0.92 225	0.92	0.92	221	0.92
Hourly flow rate (vph) Pedestrians	14	0 5	20	0	0 5	U	24	ZZ5 5	U	U	5	10
Lane Width (ft)	2011 - 1930 - 1936 - 1936	12.0	1997 - 1993 (M		12.0			12.0			12.0	
Walking Speed (ft/s)	916 - 17 B	4.0			4.0		d - Constanting	4.0		ansista nis	4.0	
Percent Blockage		0 0			0			0			0	
Right turn flare (veh)				10801/21980339420	888 - 19 7 88	996 (K. 1997) 1997 - Maria Maria		9388 8967 × 5000 -	002010000000000000000000000000000000000	100001-0009-00941-7		#15-8033309#890
Median type		None			None							
Median storage veh)		993 - LUDAUN DAUA	0.924300000.0343000	G MORET (USAS, 2000)	98 99 8888888 - 1970		1000 000 10 0000 00000					-
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	511	511	238	531	519	235	241			230		
vC1, stage 1 conf vol					ender als a state and a state of the	A4179 (\				0000000,00000,000	2 - 66096890 N. 'I HU X	1000 00000000000000
vC2, stage 2 conf vol										000		
vCu, unblocked vol	511	511	238	531	519	235	241			230		uiso ásacost
tC, single (s)	7,1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)		4 0		ר <i>ב</i>	10	3.3	2.2	1940-1940-1945		2.2		
tF (s)	3.5 97	4.0 100	3.3 98	3.5 100	4.0 100	3.3 100	2.2 98			100		
p0 queue free % cM capacity (veh/h)	460	454	794	435	449	797	1320		1999 - SIDO (4	1332		
	******	unen x. 6000000	000000000000000000000000000000000000000	931.11000.0000000000	443	131	1020			1002		
Direction, Lane #	EB 1	WB 1	NB 1									
Volume Total	34	0	249 24	236 0								
Volume Left	14 20	0 0	24	15								
Volume Right cSH	609	1700	1320	1332							80000 - CIRIC	
Volume to Capacity	0.06	0.00	0.02	0.00								
Queue Length 95th (ft)	4	0.00	1	0.00			90000000000000000000000000000000000000			20082600132.413		8890000 °CASAS
Control Delay (s)	11.3	0.0	0.9	0.0								
Lane LOS	В	A	Α	1949-1997-1997-1997 1949-1997-1997-1997						1-1. 1-300-6-6 <i>0</i>	All A. Alberger	
Approach Delay (s)	11.3	0.0	0.9	0.0						i i		
Approach LOS	В	А										
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Uti	lization		39.0%	IC	CU Leve	el of Ser	vice		А			
Analysis Period (min)		~ - 2007 7077777777777777	15							· -		
20000000000000000000000000000000000000	000000000000000000000000000000000000000	02:00:000000000000000000000000000000000	29000000099900993	3.52000000000000000	5779 J.N. (2000)(444				2200014921200000000202		000000000000000000000000000000000000000	121-120315988888

	1	Ł	Ť	p	\$	Ļ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		î,			<u>୍</u>	
Sign Control	Stop		Free			Free	
Grade	0%		0%	997 - 500 0 COLOCOLOGICO		0%	9000500402, wronococococococococococococococococococo
Volume (veh/h)	0	0	229	0	0	221	
Peak Hour Factor	0.92	0.92	0.92	0.92	-0.92	0.92	
Hourly flow rate (vph)	0	0	249	0	0	240	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)	•						n Na kaala karan maananananan kara karan noo baannoonan na karan karan karan karan karan karan karan karan karan i
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)		• • • • • • • • • • • • • • • • • • • •				ene on a six on Lincold	
Upstream signal (ft)							
pX, platoon unblocked				000040200-0000-00108	2000000.20020000		
vC, conflicting volume	489	249			249		
vC1, stage 1 conf vol			000000000000000000000000000000000000000	100000000000000000000000000000000000000	0.000030000 00000000000000000000000000		
vC2, stage 2 conf vol							
vCu, unblocked vol	489	249			249		
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)	~ -	~ ~ ~		2002 111 112 122	~ ~ ~	885866 - 26 6 687 - 263	
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100	20. 140. 120. 120.	200000000000000000000000000000000000000	100		
cM capacity (veh/h)	538	790			1317		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	0	249	240				
Volume Left	0	0	0				
Volume Right	0	0	0				
cSH	1700	1700	1317				
Volume to Capacity	0.00	0.15	0.00				
Queue Length 95th (ft)	0	0	0	-		······································	
Control Delay (s)	0.0	0.0	0.0				
Lane LOS	А					-	
Approach Delay (s)	0.0	0.0	0.0				
Approach LOS	A						
Intersection Summary							
Average Delay			0.0			- <u> </u>	
Intersection Capacity Ut	ilization		15.4%	10	CU Leve	l of Serv	vice A
Analysis Period (min)		urunoocoodu: NJUNKA	15		0 10000000000000	na an a	······································
					31201000		

4900012020000000000000000000000000000000	4	Ł	Ť	Þ	*	Ļ		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	Ŵ		ĥ	•	935.392352353555	_ લે		2013
Sign Control	Stop		Free			Free 0%		
Grade Volume (veh/h)	0% 0	0	0% 229	0	0	221		
Peak Hour Factor	0.92 -	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	0.02	0.02	249	0.02	0.02	240	Na kata kata kata kata kata kata kata ka	
Pedestrians		40988888 7 889			- 10 C			
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)	1	00000000000000000000000000000000000000						
Median type	None							
Median storage veh)	3.2300.000.000 195						- 1990-1990-1990 - 1990-1990-1990-1990-1990-1990-1990-199	
Upstream signal (ft) pX, platoon unblocked								
vC, conflicting volume	489	249			249			10
vC1, stage 1 conf vol	100	210	9808 999 979 97		~ 10		1997 - Serie Series -	
vC2, stage 2 conf vol								
vCu, unblocked vol	489	249	2002/2027 20200003		249	98 ^{- 1} .9232-99979997		
tC, single (s)	6.4	6.2			4.1			
tC, 2 stage (s)		-						
tF (s)	3.5	3.3			2.2			
p0 queue free %	100	100			100			
cM capacity (veh/h)	538	790			1317			
Direction, Lane #	WB 1	NB 1	SB 1					
Volume Total	0	249	240					
Volume Left	0	0	0					
Volume Right	0	0	0					
cSH	1700	1700	1317		.00000000000000000000000000000000000000			
Volume to Capacity	0.00	0.15	0.00					
Queue Length 95th (ft)	0	0	0	neko velo u vice.				
Control Delay (s) Lane LOS	0.0 A	0.0	0.0					
Approach Delay (s)	0.0	0.0	0.0			19. i. 1985 († 1927)	2003	
Approach LOS	0.0 A	0.0	0.0					
Intersection Summary								
Average Delay	lingtion		0.0	10	N I I		line	
Intersection Capacity Ut Analysis Period (min)	mzation		15.4% 15	ب	U Leve	l of Sen	vice	09
			10					R.
						- 1991 - 1991 (R) -		2

HCM Unsignalized Intersection Capacity Analysis 1: Larkmead Ln. & Silverado Trail

	۶		7	F	4	K	1	Ť	p	4	ţ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ŵ			÷.			4			ŵ	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%	an a	un contractor anno e conce	0%	
Volume (veh/h)	9	0	10	0	0	0	9	134	0	0	147	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	11	0	0	0	10	146	0	0	160	7
Pedestrians	00000005550000041111	5		0	5	72:200000000000000000000000000000000000		5			5	9888989997
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0	2000-0020-0010208		4.0	2000-00000000a.	0.0000000.000000	4.0	
Percent Blockage		0			0			0		4.006.464	0	
Right turn flare (veh)	5985: S 204592	None	8000000000000000		Mono				A			
Median type Median storage veh)		None			None							
Upstream signal (ft)												10.00000
pX, platoon unblocked						10000000000000000000000000000000000000			X 1000 - 1 - 1		(1888) (1888) (1 (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1 (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888) (1888)	- 188 F (21-18976)
vC, conflicting volume	338	338	173	349	342	156	171			151		
vC1, stage 1 conf vol	000	000	110	0.0	012							2362108510289
vC2, stage 2 conf vol		1										
vCu, unblocked vol	338	338	173	349	342	156	171			151	24-10-000-00000	202020000000000000000000000000000000000
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	1997 - 1990 - 1997 -	******	999099944 - 00100			000000000000000000000000000000000000000			~~~~~			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	100	99			100		
cM capacity (veh/h)	603	574	863	586	572	883	1400			1424		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	21	0	155	166								
Volume Left	10	0	10	0								
Volume Right	11	0	0	7								
cSH	717	1700	1400	1424					·	0000 / 20 0001 10000005.0000000		
Volume to Capacity	0.03	0.00	0.01	0.00								
Queue Length 95th (ft)	2	0	1	0					-			2012049-005102
Control Delay (s)	10.2	0.0	0.5	0.0								
Lane LOS	В	А	A	~ ~ ~	******				14 CH 18 19 19 19 19	1941,077,078,086,000		
Approach Delay (s)	10.2	0.0	0.5	0.0								
Approach LOS	В	A										
Intersection Summary												
Average Delay			0.9	a					nanan wakata	Sistematic menerali		
Intersection Capacity Uti	lization	2	26.0%	IC	CU Leve	el of Ser	vice		А			
Analysis Period (min)			15	2000007	100-000-0-0	appossionesee		000000000000000000000000000000000000000		gip viegoposoonee.	999 (D-1999)(1999)	
							9662 ÖNKS					

HCM Unsignalized Intersection Capacity Analysis 2: Access B & Silverado Trail

	4	Ł	ŕ	۴	*	↓ ·
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥	,	ß			ର୍କ
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	143	0	0	157
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92 -
Hourly flow rate (vph)	0	0	155	0	0	171
Pedestrians	ente a interación	000000000000000000000000000000000000000				
Lane Width (ft)						
Walking Speed (ft/s)	NENGER CHERT	019265-17-5 88668			1597 S296 ASS	
Percent Blockage					20. SHO. SH	
Right turn flare (veh) Median type	Nono					
Median storage veh)	None					
Upstream signal (ft)						
pX, platoon unblocked				·		
vC, conflicting volume	326	155			155	
vC1, stage 1 conf vol	520	100			100	
vC2, stage 2 conf vol				1997 - 199 1997 - 1997 - 1999		
vCu, unblocked vol	326	155	127. 972277388 1	8873 (B) ((C) (B)	155	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)				59, 5, 500 - 600 - 600 - 80		
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100	000000000000000000		100	0000640/f##60/20000808888888886000008888881103.343.3366,
cM capacity (veh/h)	668	890			1425	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	155	171			
Volume Left	0	0	0		53 58 9 5559995556565	
Volume Right	0	0	0			
cSH	1700	1700	1425			a andre fonder fonder fonder fonder fonder fandere en fonder fra stadere ander fonden of out. Et is fondet for forde stated
Volume to Capacity	0.00	0.09	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	А					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Ut	lization		11.6%	IC	U Leve	I of Service A
Analysis Period (min)			15			

et et en	¢	×.		۴	\$	ţ						
Movement	WBL	WBR	NBT	NBR	SBL	SBT						ł
Lane Configurations	¥		Þ			Â						
Sign Control	Stop		Free			Free						
Grade	0%		0%	0	~	0%		10000000-001.	N.92-100000			
Volume (veh/h) Peak Hour Factor	0	0	143 0.92	0 0.92	0 0.92	157 0.92						
Hourly flow rate (vph)	0.92 0	0.92 0	155	0.92	0.92	171	•. References					
Pedestrians	U	0	100	U	U	11.1						
Lane Width (ft)												
Walking Speed (ft/s)					99778 8888899,55888					19-00000000.1 vi H780	District Marketon (1997)	Carlor a classica do 2
Percent Blockage												
Right turn flare (veh)		10 10 10 10 10 10 10 10 10 10 10 10 10 1										
Median type	None											
Median storage veh)	statio monocimento			0100000.0100000.00		NOCO 1828/2011/16	9.279.000.0000000		100998 (DDA40000)	510000000000000000		
Upstream signal (ft)												
pX, platoon unblocked	200	455		5466 3.9 0810.1	166			2007-01-0000-01-0000			50666966 6 888	
vC, conflicting volume vC1, stage 1 conf vol	326	155			155							
vC1, stage 1 conf vol					2009 - Andreas A							
vCu, unblocked vol	326	155			155	Q12303=3033		1991 - 1995 - 1905 - 19				
tC, single (s)	6.4	6.2			4.1							
tC, 2 stage (s)	0.0~~~~.0.0.785sA68		1777 - 1423 (2017) - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 - 1669 -	******		0800380-1080721		000000000000000000000000000000000000000				
tF (s)	3.5	3.3	i da i		2.2							
p0 queue free %	100	100			100							
cM capacity (veh/h)	668	890			1425				e 11 - 2			
Direction, Lane #	WB 1	NB 1	SB 1									
Volume Total	0	155	171									
Volume Left	0	0	0									
Volume Right	0	0	0									
cSH	1700	1700	1425			an ingga an a			6×11.800.0005		83 5 - 1 9000 499000	
Volume to Capacity	0.00	0.09	0.00 0									
Queue Length 95th (ft) Control Delay (s)	0 0.0	0 0.0	0.0			-						Ú MARIER (MA
ane LOS	0.0 A	0.0	0.0						8440000	5.888 a. a. a.		
Approach Delay (s)	0.0	0.0	0.0									
Approach LOS	A						o s 762702362608	aat 48000 809				
Intersection Summary												
Average Delay			0.0									
Intersection Capacity Ut	ilization		11.6%	IC	CU Leve	l of Se	rvice			А		
Analysis Period (min)	*****************		15	1998-1997-1997-1997-1997-1997-1997-1997-	an agen y ar 1988.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	100003311 (* 11 - 1986) 1	ocorrecta, < - 538	60000000000000000000000000000000000000	
								2618757888837			96. H (M) (M) (M)	

HCM Unsignalized Intersection Capacity Analysis 1: Larkmead Ln. & Silverado Trail

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ŵ			ŵ			4			ф	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	13	0	19	2	1	2	22	209	0	0	204	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	21	2	1	2	24	227	0	0	222	15
Pedestrians		5	000000000000000000000000000000000000000		5	inocomence and com		5		98.000 F 100082/164	5	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)	1994 - 101 200100 - 200	4.0	72210006-00000000000		4.0		en e	4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)			2009 - 4000-1000		K 1			82.000.0000000	1989-1991 (N. 1994) 1989-1991 (N. 1994)	0.0000000000000000000000000000000000000	an a	20032/200340-00
Median type		None			None							
Median storage veh)				885 n. 38 89 5 6 6 6		Sk. 1985 (* 55. 198				1.0000-100093		20031002
Upstream signal (ft) pX, platoon unblocked												
vC, conflicting volume	517	514	239	535	522	237	242			232		
vC, connicting volume vC1, stage 1 conf vol	517	514	239	000	JZZ	231	242			232		
vC1, stage 1 conf vol	Series and											
vCu, unblocked vol	517	514	239	535	522	237	242			232		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)		. 0.0	0.2		0.0	0.2	1	U.V.U.A.P.I.SERING			2020002301.744540	8002-2019-2019
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	97	99	100	100	98		1.	100		
cM capacity (veh/h)	453	452	793	432	447	795	1319			1330		
· · · · · · · · · · · · · · · · · · ·	EB 1	WB 1	NB 1	SB 1	and a started							
Direction, Lane #		5				-						10000
Volume Total	35 14	2	251 24	237 0								
Volume Left	21	2	24	15								
Volume Right cSH	21 608	533	1319	1330								
Volume to Capacity	0.06	0.01	0.02	0.00		84.937.5388			Sec. 1			
Queue Length 95th (ft)	0.00	0.01	0.02	0.00								68-53128736
Control Delay (s)	11.3	11.8	0.9	0.0								
Lane LOS	B	B	A	0.0		99996666666666 -		1997 - 1997 -				
Approach Delay (s)	11.3	11.8	0.9	0.0								
Approach LOS	B	B	0.0	0.0				1999-1720-0000000000000000000000000000000000	12212.50° 7.9982	899999991-91-999991		
	_	-										
Intersection Summary			4.0									
Average Delay			1.3		5111	1-60-			٨		000000000000000000000000000000000000000	0.02000.00000000
Intersection Capacity Ut	ilization		39.1%	10	SO Leve	el of Ser	vice		A			
Analysis Period (min)		041-1-01-550000000	15		200 - C. MAN (1994)							
										1949 B 1860	9. SAN 1998	

HCM Unsignalized Intersection Capacity Analysis 2: Access B & Silverado Trail

Existing +	Project	Weekday	PM	Pk. I	Hr.

	*	Ł	Î	P	\$	Ť		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	¥		Å			র্ন		
Sign Control	Stop		Free			Free		
Grade	0%	-19486-01-194496-1-07	0%	00009633034 (36136463)		0%		
Volume (veh/h)	2	2	229	1	1	224		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	······································	
Hourly flow rate (vph)	2	2	249	1	1	243		
Pedestrians								
Lane Width (ft)						19. 19.		
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)							a a constant of a fact that the total to the total state of the second state of the second state of the second	
Median type	None							
Median storage veh)							1070000000 0000000000000000000000000000	
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	495	249			250			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	495	249	• •• • • • • • • • • • • •		250			· · · · · · · · · · · · · · · · · · ·
tC, single (s)	6.4	6.2			4.1			
tC, 2 stage (s)			nanga ang ang kabupatén kabupatén kabupatén kabupatén kabupatén kabupatén kabupatén kabupatén kabupatén kabupat	000000000000000000000000000000000000000	1000000 <u>20002</u> 0000			
tF (s)	3.5	3.3			2.2			
p0 queue free %	100	100	000000000000000000000000000000000000000		100		87.281 (1.61.000)	
cM capacity (veh/h)	533	789			1316			
Direction, Lane #	WB 1	NB 1	SB 1					
Volume Total	4	250	245					
Volume Left	2	. 0	1				•	
Volume Right	2	1	0					
cSH	637	1700	1316				analannya ay eujarananana madaki 1.500.50	
Volume to Capacity	0.01	0.15	0.00					
Queue Length 95th (ft)	• 1	0	0		N		······	
Control Delay (s)	10.7	0.0	0.0					
Lane LOS	В		A	× 1992 0100000000000000000000000000000000	Records and the second			
Approach Delay (s)	10.7	0.0	0.0					
Approach LOS	В							
Intersection Summary								
Average Delay			0.1					
Intersection Capacity U	tilization		22.6%	IC	CU Leve	l of Serv	ce A	
Analysis Period (min)			15	-	anna 2017 , 2 78 - 2019-338	or the encountry double the	· · · · · · · · · · · · · · · · · · ·	······································

	1	×.	1	M	6	¥	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	Ŵ		^			ર્લ	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Volume (veh/h)	0	0	230	1	1	225	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	250	1	1	245	
Pedestrians							
Lane Width (ft)					н 2.5		
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						

Walking Speed (ft/s)					•
Percent Blockage					
Right turn flare (veh)					
Median type	None				
Median storage veh)				·	
Upstream signal (ft)					
pX, platoon unblocked					
vC, conflicting volume	497	251		251	
vC1, stage 1 conf vol					
vC2, stage 2 conf vol					
vCu, unblocked vol	497	251		251	
tC, single (s)	6.4	6.2		4.1	
tC, 2 stage (s)					ana ana amin'ny fantana amin'ny fantana
tF (s)	3.5	3.3		2.2	
p0 queue free %	100	100		100	
cM capacity (veh/h)	532	788		1314	
Direction, Lane #	WB 1	NB 1	SB 1		
Volume Total	0	251	246		
Volume Left	0	0	1		
Volume Right	0	1	0		
cSH	1700	1700	1314		
Volume to Capacity	0.00	0.15	0.00		
Queue Length 95th (ft)	0	0	0		
Control Delay (s)	0.0	0.0	0.0		
Lane LOS	А		А		
Approach Delay (s)	0.0	0.0	0.0		
Approach LOS	А				
Intersection Summany					

Intersection Summar	/				
Average Delay	······································	0.0			
Intersection Capacity	Utilization 16.	0% ICU	Level of Service	A	
Analysis Period (min)	· · ·	15			

HCM Unsignalized	Intersection Capacity Analysis
1: Larkmead Ln. &	Silverado Trail

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			ф			4>			4	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	rtonon-o-sid 324
Volume (veh/h)	9	0	11	1	0	1	9	135	1	1	149	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	Ō	12	1	0	1	10	147	1	1	162	7
Pedestrians		5			5	2100000101000970		5		2000-000-000-000-000-000-000-000-000-00	5	8888888888888
Lane Width (ft)		12.0			12.0			12.0 4.0			12.0 4.0	
Walking Speed (ft/s)	(1.11.).58888888	4.0			4.0			4.0	0.5.300.2300		4.0 0	
Percent Blockage		0			0			U			U	(99) (1979)
Right turn flare (veh) Median type		None		1912) (C.2003)	None				1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -			
Median storage veh)	800.024845	INCHE			NONC							
Upstream signal (ft)		1999 - SR		- - - -								
pX, platoon unblocked		(81.10° - 60.5° - 4.890)	-1672-0800-00003		÷100010000004800		20038-209-0008	1990-1990-1997 († 1997) 1990-1990 († 1997)		: 30000000-91000		Real (1997) - 1
vC, conflicting volume	345	345	175	356	348	157	173			153		
vC1, stage 1 conf vol			2000 (Contraction Contraction)		989494 - 410 000 19480	0001		200000000000000000000000000000000000000	· · · · · · · · · · · · · · · · · · ·		3	
vC2, stage 2 conf vol												
vCu, unblocked vol	345	345	175	356	348	157	173			153		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)		ana ana ana ana ana ang ang ang ang ang			000000000000000000000000000000000000000	1000000 <u>2000 2</u> 00600		00000000000000000000000000000000000000			000000000000000000000000000000000000000	
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	100	99	-		100		-1.2220000000000
cM capacity (veh/h)	596	569	861	579	567	881	1397			1422		LAND SAL
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	2	158	170							4.0	
Volume Left	10	1	10	1	A		second of the					-
Volume Right	12	1	1	7								
cSH	717	698 0.00	1397 0.01	1422 0.00						2010-11-11-11-11-11-11-11-11-11-11-11-11-		1999-1999 (1999)
Volume to Capacity Queue Length 95th (ft)	0.03 2	0.00	0.01	0.00								
Control Delay (s)	10.2	10.2	0.5	0.1							21	
Lane LOS	10.2 B	10.2 B	A	A		1999 - States States -			•			
Approach Delay (s)	10.2	10.2	0.5	0.1								
Approach LOS	. В	B					1007600000000	4 × .2 + CC/2000000000	101010100000000000000000000000000000000		222983.5400 335.000 19	8989 (1940 - 196
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Uti	lization		25.0%	IC	CU Leve	l of Ser	vice		A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 2: Access B & Silverado Trail

	<	Ł	ł	p	¥.	Ļ						PERSONAL PROPERTY OF
Movement	WBL	WBR	NBT	NBR	SBL	SBT						
Lane Configurations	¥		ą			র						
Sign Control	Stop		Free			Free						
Grade	0%		0%			0%						
Volume (veh/h)	1	2	145	1	2	159						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92						
Hourly flow rate (vph)	1	2	158	1	2	173						
Pedestrians							~~~~~		and here we share			
Lane Width (ft)												
Walking Speed (ft/s)			an man man mada e sed d					1900000000	50000000000000000000000000000000000000	C 44134 202020-00 00 1000	00000-0000-0000000-0400	4990-201
Percent Blockage												
Right turn flare (veh)	10062 - 206000000000000000000000000000000			0.04 Protection and the second	1400-00000000000000		645 MACC 4100002020000	0000-000002.413		enicesen, so		
Median type	None											
Median storage veh)				1970-1970-1970-1970-1970-1970-1970-1970-	SCROMMUNE SC				VA-~0.00000000	• . 		
Upstream signal (ft)												
pX, platoon unblocked	005	450			450	809PC 1 1224196000				x33292 XXX22203		2017-220
vC, conflicting volume	335	158			159			-3-0-180000				
vC1, stage 1 conf vol			982 000 00 0254					-988-9998-998 -988-9998-998-998-998-998-			570.6888.0888488	25X280
vC2, stage 2 conf vol	225	150			159					d i de la		
vCu, unblocked vol	335 6.4	158 6.2			4.1							
tC, single (s)	0.4	0.2			4.1							
tC, 2 stage (s) tF (s)	3.5	3.3		Sec. 19 (19 (19 (19 (19 (19 (19 (19 (19 (19	2.2							38894T
p0 queue free %	100	100		X	100				() () () () () () () () () () () () () (9990016-97007-99		40811ji
cM capacity (veh/h)	659	887	900		1421							
		000000000000000000000000000000000000000	in an		1741							33855
Direction, Lane #	WB 1	NB 1	SB 1									
Volume Total	3	159	175									
Volume Left	1	0	2							n a lin Villager von bestehlt i anveste	in the second	others in
Volume Right	2	1	0									
cSH	795	1700	1421					000000000000000000000000000000000000000				
Volume to Capacity	0.00	0.09	0.00									
Queue Length 95th (ft)	0	0	0	00080000000000000			00074000000000000000000000000000000000	5-1255555775878	1999 (Mar 1997) 1999 (Mar 1997)			
Control Delay (s)	9.5	0.0	0.1						e in the			
Lane LOS	A	~ ~	A	0				888888891475				881 X8N
Approach Delay (s)	9.5	0.0	0.1									
Approach LOS	A											
Intersection Summary												
Average Delay			0.1									
Intersection Capacity Ut	tilization		20.0%	IC	U Leve	l of Servi	ice		Α			
Analysis Period (min)			15					<				eesaa

HCM Unsignalized Intersection Capacity Analysis 3: Access C & Silverado Trail

Existing + Project Saturday Peak Hour

	4	Ł	Å	M	4	tura de la constante de la co
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥		Ъ			4
Sign Control	Stop		Free			Free
Grade	0%		0%	•		0%
Volume (veh/h)	0	1	145	0	1	159
Peak Hour Factor	0.92	+ 0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	158	0	1	173
Pedestrians		r instante dansa i s				
Lane Width (ft)						
Walking Speed (ft/s)	00000-000000000000000000000000000000000	A080000000000000000		000004-01000000000		
Percent Blockage				988 F 888		
Right turn flare (veh)					9-300 C 00000	
Median type	None					
Median storage veh)		XX-70000.064.70000			99.9000 M.S. 9901	
Upstream signal (ft)						
pX, platoon unblocked	000	450	xx :::::::::::::::::::::::::::::::::::		450	
vC, conflicting volume	333	158			158	
vC1, stage 1 conf vol		1				
vC2, stage 2 conf vol	222	158			158	
vCu, unblocked vol	333 6.4	6.2			4.1	
tC, single (s)	0,4	0.2			4.1	
tC, 2 stage (s) tF (s)	3.5	3.3	1997 (1998) (1997) 1997 (1998) (1997)		2.2	
p0 queue free %	100	5.5 100			100	
cM capacity (veh/h)	662	888		2012/02/22	1422	
		000000000000000000000000000000000000000			1722	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	1	158	174			
Volume Left	0	0	1	298320711.0000005		
Volume Right	1	0	0			
cSH	888	1700	1422	******		
Volume to Capacity	0.00	0.09	0.00			
Queue Length 95th (ft)	0	0	0	·		
Control Delay (s)	9.1	0.0	0.1		i i i i i i i i i i i i i i i i i i i	
Lane LOS	A	0.0	A	CONTRACTOR OF T		
Approach Delay (s)	9.1	0.0	0.1			
Approach LOS	A					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity U	tilization		19.2%	IC	U Leve	el of Service A
Analysis Period (min)	1		15			

HCM Unsignalized Intersection Capacity Analysis 1: Larkmead Ln. & Silverado Trail

	۶		*	1	4	Ł	4	1	p	\$	Ļ	*
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ф		-	ф			୍ୱ			4	
Sign Control		Stop			Stop			Free			Free	
Grade	aina lana 2. Lan	0%	10000000000000000000000000000000000000		0%			0%		_	0%	
Volume (veh/h)	13	0	18	0	0	0	22	219	0	0	212	14
Peak Hour Factor	0.92	0.92	0.92	0.92	• 0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	20	0	o	0	24	238	0	0	230	15
Pedestrians		5		ontane 6. menor-	5	200000000000000000000000000000000000000		5		1999/00/00/00/00/00/00	5	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0	2000/	oronosta a trick (s.	4.0			4.0		5 - Cista 166 - Cista -	4.0	
Percent Blockage		0			0			0		5	0	
Right turn flare (veh)		.	1911 - 2003 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004 - 2004		N12		2190-2283.COS		40, N-10 748505888	340000000000000000000000000000000000000	******	
Median type		None			None							
Median storage veh)			84 - 485 8587 - 68	SPAR 83200007200								
Upstream signal (ft)											89 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199	
pX, platoon unblocked	E 7 4	E01	010	553	EAD	248	251			243	aniana ara	12.092 (1 5 833)
vC, conflicting volume	534	534	248	553	542	240	201			243		
vC1, stage 1 conf vol vC2, stage 2 conf vol		2014 - A.S. 20200				10. NR 19838199						
vCu, unblocked vol	534	534	248	553	542	248	251			243		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1		241-567.568	4.1		
tC, 2 stage (s)	1.1	0.0	0.2	7 - 1	0.5	0.2	7.1			101000000000000000000000000000000000000		
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	98	100	100	100	98			100	•	
cM capacity (veh/h)	444	440	784	420	436	784	1309			1318		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	34	0	262	246								
Volume Left	14	0	24	0		- 27-17-17-19-10 + 11 + 01100000						
Volume Right	20	0	0	15								
cSH	593	1700	1309	1318								334 432 92 92 92 92 92
Volume to Capacity	0.06	0.00	0.02	0.00								
Queue Length 95th (ft)	5	0	1	0	NARAANI 22200000 Ko				Salaran sa			Solaan ta a solaata a.
Control Delay (s)	11.4	0.0	0.9	0.0								
Lane LOS	В	A	A	~ ~		สมเวลสมายเหล่ะส			la la parte de composition de			
Approach Delay (s)	11.4	0.0	0.9	0.0								
Approach LOS	В	А										
Intersection Summary												
Average Delay			1.1	inin dan waxaan			2000	sesses accione	000000000000000000000000000000000000000			
Intersection Capacity Uti Analysis Period (min)	lization		39.9% 15	IC	CU Leve	I of Ser	vice		Α			
Analysis renou (11111)			IJ		·				84. T. S.			90.983.588

HCM Unsignalized Intersection Capacity Analysis 2: Access B & Silverado Trail

Near Term Weeko	ay PM Peak Hour
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	•	Ł	Ť	p	1	ł
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		^			र्भ
Sign Control	Stop		Free			Free
Grade	0%		0%		e e e e e e e e e e e e e e e e e e e	0%
Volume (veh/h)	0	0	241	0	0	230
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	262	0	0	250
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)		08000000000000000	0: 1980508864.547	199925 (* 179953)	200000000000000000	8187888975-1 1778
Percent Blockage Right turn flare (veh)						
Median type	None				5005-5396550	6:17/1220
Median storage veh)	NONE					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	512	262			262	
vC1, stage 1 conf vol	· · · ·	20000000-0000-0000				10002000 2100000
vC2, stage 2 conf vol						
vCu, unblocked vol	512	262	aaaggaa, - 100, 000,0	dite, an iteration - e	262	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	522	777			1302	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	262	250			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1302		001 - 20 Dischigson 1	uun Adri seeteteurren
Volume to Capacity	0.00	0.15	0.00			
Queue Length 95th (ft)	0	0	0		8735555555882555555	5000057-00000535
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	0.0	• •	Se Nacionali de la	153355777222286777	
Approach Delay (s) Approach LOS	0.0	0.0	0.0			
•••	A					
Intersection Summary						
Average Delay	1 martin and a second		0.0			
Intersection Capacity Ut	ilization	•	16.0%	IC	U Leve	I of Sei
Analysis Period (min)			15	555.55 TO 2016 50%	208:2011110000000	augulion sanor M

HCM Unsignalized Intersection Capacity Analysis 3: Access C & Silverado Trail

	<		t	M	1	↓ · · · ·	
Movement	WBL	WBR '	NBT	NBR	SBL	SBT	
Lane Configurations	¥		ţ,			â	
Sign Control	Stop		Free			Free	
Grade	0%	****	0%		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0%	22, 22,22 ,252 , 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,
Volume (veh/h)	0	0	241	0	0	230	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	262	0	0	250	
Pedestrians	Mar in which we can be				·.		
Lane Width (ft)							
Walking Speed (ft/s)			1				
Percent Blockage							
Right turn flare (veh)	NISSE	902:300231:34374		1997-998-9780000 - 11			
Median type	None		2000 CON 53				
Median storage veh) Upstream signal (ft)				80.1.486-1.13	1220-00-05-00	X	
pX, platoon unblocked					9444C-1478		
vC, conflicting volume	512	262			262		
vC1, stage 1 conf vol	512	202			202		
vC2, stage 2 conf vol			1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 -				
vCu, unblocked vol	512	262			262		
tC, single (s)	6.4	6.2	na lasta misin		4.1		
tC, 2 stage (s)	000000-0124,986890	- 1999 - A. BARRAN - A. B	1999-1999 (n. 1917-1977) 1997 - Stationary Stationary (n. 1997)	9752111983966771788			
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100			100		
cM capacity (veh/h)	522	777			1302		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	0	262	250				
Volume Left	0	0	0	orae 202002 V 2011		999-999 200 200 12 - 920 - 9292 1	-2020101554437555.2047555.20475555204975255525597462027998220275552555552464255252211-2745553444352279 -
Volume Right	0	0	0			÷	
cSH	1700	1700	1302				nananan " ayay da kaya oo ah " oo sadada kaya kadadada () ii kiyo oo ah yo ayaya da hadaanana
Volume to Capacity	0.00	0.15	0.00				
Queue Length 95th (ft)	0	0	0				
Control Delay (s)	0.0	0.0	0.0				
Lane LOS	Α						
Approach Delay (s)	0.0	0.0	0.0				
Approach LOS	А						
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Ut	ilization		16.0%	IC	U Leve	I of Service	Α
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis 1: Larkmead Ln. & Silverado Trail

	٨		~	4		K.	٩	t	K	1	Ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		(‡)			4			æ			4	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	0	11	0	0	0	9	148	0	0	161	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	12	0	0	0	10	161	0	0	175	7
Pedestrians		5			5			5	×0000000000000000000000000000000000000		5	
Lane Width (ft)		12.0			12.0			12.0			12.0	2000
Walking Speed (ft/s)		4.0		21070-21080-101-1008/	4.0			4.0	. 785-035000000000	Senten and anna s	4.0	h-: 2002000000000
Percent Blockage		0			0			0			0	
Right turn flare (veh)	2814-5022-6-702-64-7940	0.4 2.12 1.000000000000000000000000000000000	230000000000000000000000000000000000000	000000000000000000000000000000000000000					1660 CONEP (1/ 24/22)			1949.000 - 000 - 60
Median type		None			None							
Median storage veh)		and a state of the s	R140-300203243		1994 m. 1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1 1946 (194) (1946 (1946 (194) (1946 (1946 (194) (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (1946 (194) (1946 (1946 (194) (1946 (194) (194) (1946 (194) (1946 (194) (1946 (194) (1946 (194) (1946 (194) (1946 (1946 (194) (1946 (194) (1946 (1946 (194) (1946 (194) (1946 (194) (1946 (194) (1946 (194) (1946 (194) (194) (1946 (194) (194) (1946 (194) (19	2000/00/00/00/00/00/00/00/00/00/00/00/00	. 1 992 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000		000022000000000000			
Upstream signal (ft)												
pX, platoon unblocked	000	200	400	204	~~~~	474	107		5.9198200000	166	0.000.989989	
vC, conflicting volume	369	369	188	381	372	171	187			100	2.53,223,00	
vC1, stage 1 conf vol											1999 - 1999 M	
vC2, stage 2 conf vol	260	369	188	381	372	171	187			166		0183641838
vCu, unblocked vol	369 7.1	- 309 6.5	6.2	7.1	6.5	6.2	4.1			4.1		80.09.09.Q
tC, single (s)	7.1	0.0	0.2	7.4	0.5	0.2	7.1			т . 1 .	80.20	
tC, 2 stage (s) tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	4.0 100	99	100	100	100	99			100		
cM capacity (veh/h)	576	552	847	558	550	866	1382			1406		
	1901-0000-00018-00-10-00	>*<<>>><>>><>>><>>><>>>>>>>>>>>>>>>>>>	^c3600000000000000	8004668639653+>>>	000	000	1002			1100		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	0	171	182		•						2 2
Volume Left	10	0	10	0	norma water and a constant R					andal N. Albana ayada	er dens stad AU S Vi	947.032.0335555
Volume Right	12	0	0	7								
cSH	699	1700	1382	1406		ononnon manager dei L. La	27.124.00000000000000000000000000000000000	a occordantestas	2-112-112-112-112-112-112-112-112-112-1		5000000000.50 2 E000	
Volume to Capacity	0.03	0.00	0.01	0.00								
Queue Length 95th (ft)	2	0	1	0			en sa a 1980-100-100-100					
Control Delay (s)	10.3	0.0	0.5	0.0								
Lane LOS	В	A	A		50036505 KORONO / J	86685, ··· N9901000038	ogonomia (NR		1			660 To 288 BB
Approach Delay (s)	10.3	0.0	0.5	0.0								
Approach LOS	В	A										
Intersection Summary												
Average Delay			0.8							~~~~		
Intersection Capacity Ut	ilization	:	26.7%	10	CU Leve	el of Ser	vice		Α			
Analysis Period (min)			15									
				-								

x * + + + +

MovementWBLWBRNBTNBRSBLSBTLane Configurations \mathbf{Y} $\mathbf{\hat{F}}$ $\mathbf{\hat{F}}$ Sign ControlStopFreeFreeGrade0%0%0%Volume (veh/h)0015700Peak Hour Factor0.920.920.920.920.92Hourly flow rate (vph)0017100187PedestriansLane Width (ft)Walking Speed (ft/s) $\mathbf{\hat{F}}$ $\mathbf{\hat{F}}$ $\mathbf{\hat{F}}$
Sign Control Stop Free Free Grade 0% 0% 0% Volume (veh/h) 0 0 157 0 0 172 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 0 0 171 0 0 187 Pedestrians Lane Width (ft) Valking Speed (ft/s)
Grade 0% 0% Volume (veh/h) 0 0 157 0 0 172 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 - Hourly flow rate (vph) 0 0 171 0 0 187 Pedestrians Lane Width (ft) Valking Speed (ft/s) Valking Speed (ft/s)<
Volume (veh/h) 0 0 157 0 0 172 Peak Hour Factor 0.92
Peak Hour Factor 0.92 <th0.92< th=""> 0.92 0.92</th0.92<>
Hourly flow rate (vph) 0 0 171 0 0 187 Pedestrians Lane Width (ft) Walking Speed (ft/s)
Pedestrians Lane Width (ft) Walking Speed (ft/s)
Lane Width (ft) Walking Speed (ft/s)
Percent Blockage
Right turn flare (veh)
Median type None None
Median storage veh)
Upstream signal (ft)
pX, platoon unblocked
vC, conflicting volume 358 171 171
vC1, stage 1 conf vol
vC2, stage 2 conf vol vCu, unblocked vol 358 171 171
vCu, unblocked vol 358 171 171 tC, single (s) 6.4 6.2 4.1
tC, 2 stage (s)
tF (s) 3.5 3.3 2.2
p0 queue free % 100 100 100
cM capacity (veh/h) 641 873 1407
Direction, Lane # WB 1 NB 1 SB 1
Volume Total 0 171 187
Volume Left 0 0 Volume Right 0 0
Volume Right 0 0 0 cSH 1700 1700 1407
Volume to Capacity 0.00 0.10 0.00
Queue Length 95th (ft) 0 0 0
Control Delay (s) 0.0 0.0 0.0
Lane LOS A
Approach Delay (s) 0.0 0.0 0.0
Approach LOS A
Intersection Summary
Average Delay 0.0 Intersection Capacity Utilization 12.4% ICU Level of Service
Analysis Period (min) 15

	4	×.	1	1	\$	ţ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	Y		ĥ			ર્લ	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Volume (veh/h)	0	0	157	0	0	172	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	7
Hourly flow rate (vph)	0	0	171	0	0	187	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)	- States in the second second						
Percent Blockage							
Right turn flare (veh)				antine and a state	date to cher indicat		
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked			200000000000000000000000000000000000000				
vC, conflicting volume	358	171			171		
vC1, stage 1 conf vol	805. UNIVERSIDAD (J.). (24	1903-001-0020-0020-0020	na 10000005 i 1.0005 i	0000010100000101.014	190000000000000000000000000000000000000		
vC2, stage 2 conf vol					4 - 4		
vCu, unblocked vol	358	171		Seksioone en aantabioo	171	ini da series	Deserved for a second
tC, single (s)	6.4	6.2			4.1	6126216	
tC, 2 stage (s)	<u>о г</u>	~ ^ ^			~ ~ ~		A A A A A A A A A A A A A A A A A A A
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100	NER OSCILLA		100		
cM capacity (veh/h)	641	873			1407		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	0	171	187				
Volume Left	0	0	0	999 2309 3309 596 596 596 5	38669775986637.663		·
Volume Right	0	0	0				
cSH	1700	1700	1407			STATISTICS CONTRACTOR	
Volume to Capacity	0.00	0.10	0.00				
Queue Length 95th (ft)	0	0	0				
Control Delay (s)	0.0	0.0	0.0				
Lane LOS	A	~ ^ ^	0 0		0 1288 - 434 - 13		
Approach Delay (s) Approach LOS	0.0 A	0.0	0.0				
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Ut	ilization		12.4%	IC	U Leve	l of Se	rvice A
Analysis Period (min)			15	1999 - 1999 (19 7	1000 1000 1000 1		90000000009099090090090000000000000000
						1557988000	in a start a st

HCM Unsignalized Intersection Capacity Analysis Near Term + Project Weekday PM Pk. Hr. 1: Larkmead Ln. & Silverado Trail

	٨		*	×	E	×	*	Â	p	1	Ļ	~
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			ą.			ф	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	13	0	19	2	1	2	22	221	0	0	213	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	21	2	1	2	24	240	0	0	232	15
Pedestrians	1000 - 1 000 - 1,600	5	Secola collections		5			5		20000000000000000000000000000000000000	5	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0		- 76991 S 14:000-47800	4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)		None			None		8 366-0263					
Median type Median storage veh)		None			none							
Upstream signal (ft)								12000-0200000				
pX, platoon unblocked												
vC, conflicting volume	540	537	249	558	545	250	252			245		
vC1, stage 1 conf vol	0.0		~ IV	000		200				- 10	- 2000 - 2004 2012 20	200000000000000000000000000000000000000
vC2, stage 2 conf vol												
vCu, unblocked vol	540	537	249	558	545	250	252			245		88869886687.7W
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	1.0.10000000000000			000000000000000000000000000000000000000		000000000000000000000000000000000000000	000000000000000000000000000000000000000); U000000000000000000000000000000000000	000001000-metan in (i	100000000000000000000000000000000000000	11.1119 - 43 48.80 1
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	97	99	100	100	98			100		
cM capacity (veh/h)	438	438	783	417	434	782	1308			1315		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	35	5	264	247								
Volume Left	14	2	24	0			-					
Volume Right	21	2	0	15								
cSH	593	517	1308	1315			oomeers ada a a ade	A.IIIIXX5-1, C.COX, 5,000	-	00000000materia - a	NATURAL ST GRAVES &	Xo: mo-emilier en
Volume to Capacity	0.06	0.01	0.02	0.00								
Queue Length 95th (ft)	5	1	1	0	NUMBER OF STREET				ana ang Kalandur	-15355 F1206 50000	55552555555555555555555555555555555555	000000000000000000000000000000000000000
Control Delay (s)	11.4	12.0	0.9	0.0								
Lane LOS	В	B	A	• •			CELAREN VERMEN	1.52220000000000		999999999999 199999999		
Approach Delay (s)	11.4	12.0	0.9	0.0			1.00.25					
Approach LOS	В	В										
Intersection Summary												
Average Delay			1.3					000000000000000000				5752": 27 67235
Intersection Capacity Uti	lization	Ĺ	40.1%	10	U Leve	el of Ser	vice		Α			
Analysis Period (min)	\$2000.000		15	20000.02.07.00.0							andrata ar con tana	Alta ang ang ang ang ang ang ang ang ang an
		887. SR 8										

HCM Unsignalized Intersection Capacity Analysis Near Term + Project Weekday PM Pk. Hr. 2: Access B & Silverado Trail

	4	Ł	Î	p	\$	Ļ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		Þ			đ	
Sign Control	Stop		Free			Free	
Grade	0%	án chunh a cuirteac	0%			0%	
Volume (veh/h)	2	2	241	1	1	233	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph) Pedestrians	2	2	262	1	1	253	
Lane Width (ft)						990 99 7 83	
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)	na der Augeriche	an aligidanistada					
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked			-			aaaadaala soo a	
vC, conflicting volume	518	262			263		
vC1, stage 1 conf vol vC2, stage 2 conf vol						2000.000	
vCu, unblocked vol	518	262			263		
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)			en e	11018-884 - 1888	an an tao 1986. An		
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	100		
cM capacity (veh/h)	517	776			1301		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	4	263	254				
Volume Left	2	0	1				
Volume Right	2	1	0				
cSH	621	1700	1301		591 - J. (1993 - 1983)		
Volume to Capacity	0.01	0.15	0.00				
Queue Length 95th (ft) Control Delay (s)	1 10.8	0 0.0	0 0.0			1990 - 1990	
Lane LOS	10.0 B	0.0	0.0 A				
Approach Delay (s)	10.8	0.0	0.0				
Approach LOS	B			2008) - S. (1968,) -			
Intersection Summary							
Average Delay			0.1				
Intersection Capacity Ut	ilization	;	23.1%	IC	U Leve	l of Sei	rvice A
Analysis Period (min)	est obstant materia	na ang pangangan an	15		giya yeysaaaci sooo	052050000000000000000000000000000000000	
				499. Ú - M			

HCM Unsignalized Intersection Capacity Analysis Near Term + Project Weekday PM Pk. Hr. 3: Access C & Silverado Trail

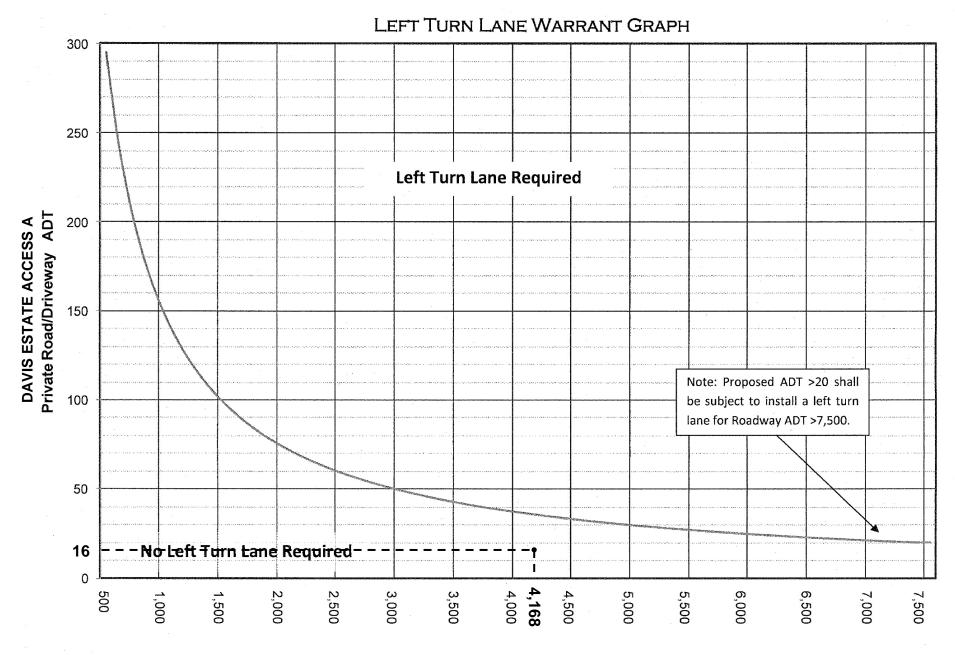
an a		Ł	· 1	p	\$	Ļ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		Þ			4	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Volume (veh/h)	0	0	242	1	1	234	
Peak Hour Factor -	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	263	1	1	254	
Pedestrians				967-978-988 (989-2666)	3800 300 300 300	88863/16/14/5281.3	References and construction of the Local Construction of the
Lane Width (ft)							
Walking Speed (ft/s) Percent Blockage	89-39-30-30-1899						
Right turn flare (veh)							
Median type	None						
Median storage veh)	TAONG		88-869 × 288				
Upstream signal (ft)				t.			
pX, platoon unblocked				x 0.000000000000000000000000000		statesta line in an	en e
vC, conflicting volume	520	264			264		
vC1, stage 1 conf vol	0000.02/==000000.00000	00110000028000011000	0.12000001000000		01301 7030000000	32208010-22080-	-1440126_4242424242424242424242424242424242444444
vC2, stage 2 conf vol							
vCu, unblocked vol	520	264			264		
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100			100		
cM capacity (veh/h)	516	775			1300		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	0	264	255				
Volume Left	0	0	1				• • • • • • • • • • • • • • • • • • •
Volume Right	0	1	0				
cSH	1700	1700	1300			······	university and the state of the transmission of the state of the
Volume to Capacity	0.00	0.16	0.00				
Queue Length 95th (ft)	0	0	0	5005,0005,0007100.10 ⁴ 00			
Control Delay (s)	0.0	0.0	0.0				
Lane LOS	A		A				
Approach Delay (s)	0.0	0.0	0.0				
Approach LOS	A						
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Ut	ilization		16.4%	IC	U Leve	l of Sei	rvice A
Analysis Period (min)			15				
	2.2		84. NGC 10			(0. <u></u>	

HCM Unsignalized Intersection Capacity Analysis 1: Larkmead Ln. & Silverado Trail

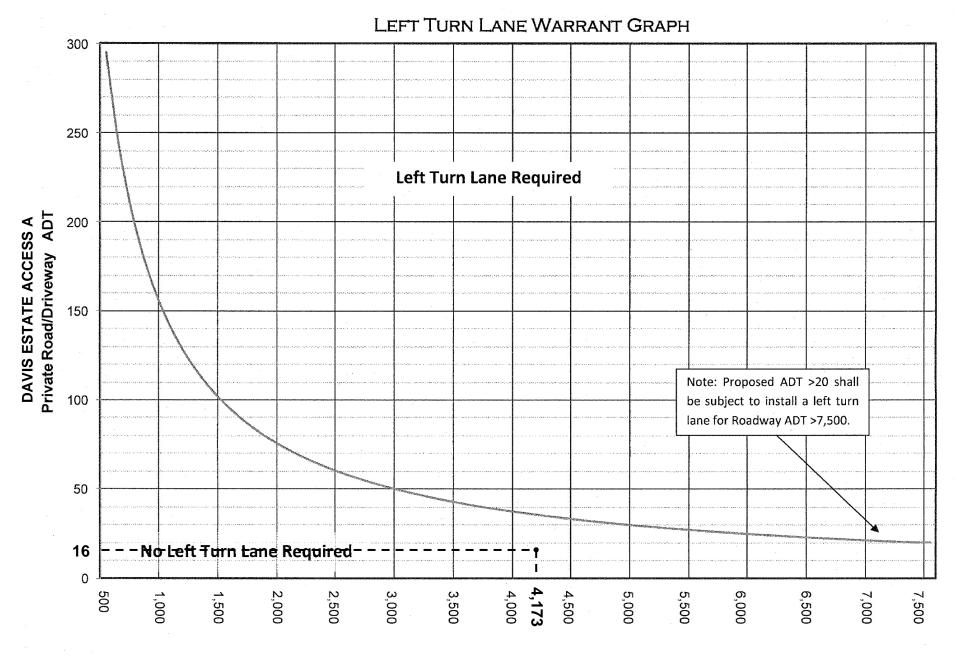
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			÷.	1			1	Ť	M	\$	¥.	×
Movement	'EBL-	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ф			4>			4			49	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	0	12	1	0	1	9	149	1	1	163	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	13	1	0	1	10	162	1	1	177	7
Pedestrians		5			5			5	2000 - 11 20 11 - 11 2000	000000386600-2000-0	5	2012/10/120000000
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)					enguare controlación		100000000000000000000000000000000000000		. > 4000-000000000	unter ere die bleite		
Median type		None			None							
Median storage veh)	anaanaana toonakees			8	9700malis.2000 % (7:00	Jaagaanere v., 1998			0.01/12/07/08/88/98	1999,000 08 (1798), 2010	- -2 1000111000000	
Upstream signal (ft)												
pX, platoon unblocked						(100	80x355-5,459955	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	400	5809801-1158742	
vC, conflicting volume	376	375	190	388	378	172	189			168		
vC1, stage 1 conf vol	07 80800×1×-0000000	006000000000000000000000000000000000000	Angogers underschrieden	00000000000000000000000000000000000000		95 - 399 (199 (199 (199	cassicily incold	000000000000000000000000000000000000000		3493693253.4284554		5.084.248 - 209
vC2, stage 2 conf vol		075	400		070	470	400			100		
vCu, unblocked vol	376	375	190	388	378	172	189	15.00220240033	14. 1012000 000	168		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	~ ~	4.0	~ ~ ~	<u>о</u> г	4.0	<u></u>	<u></u>		87858833- S T 1988	2.2	9852 (QAA C.24	
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2 100		
p0 queue free %	98	100	98	100 554	100	100	99 1280			1404		0000-0000
cM capacity (veh/h)	569	547	844	551	545	864	1380			1404		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	23	2	173	185								
Volume Left	10	1	10	1								and a state of the
Volume Right	13	1	1	7								
cSH	699	673	1380	1404	100010 1910 11 (1900-1990)					8 1. 9. 8 E. BANKS AD		
Volume to Capacity	0.03	0.00	0.01	0.00								
Queue Length 95th (ft)	3	0	1	0						200388033200588445		
Control Delay (s)	10.3	10.4	0.5	0.1								. T. S.
Lane LOS	В	B	A	A			1800000000-11 ⁷ 0188			1000000000 SJ - 0), 1), 2,3 KSR6887	AN 18, 1995 - 19
Approach Delay (s)	10.3	10.4	0.5	0.1								
Approach LOS	В	B										
Intersection Summary												
Average Delay			0.9									and a second second
Intersection Capacity Ut	ilization		25.8%	(CU Leve	el of Ser	vice		А			
Analysis Period (min)			15									

Movement WBL WBR NBR SBL SBT Lane Configurations M h -4 Sign Control Stop Free Free Crade 0% 0% 0% Volume (veh/h) 1 2 159 1 2 174 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 1 2 173 1 2 189 PedestHour Factor 0.92 0.92 0.92 0.92 0.92 Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median storage veh) Upstream signal (ft) PX, platon unblocked VC, conficting volume 367 VC, conficting volume 367 173 174 174 VC, single (s) 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 VC, unblocked vol		ŕ	- 	t.	1	\	Ļ		<u> </u>
Sign Control Stop Free Free Grade 0% 0% 0% Volume (veh/h) 1 2 159 1 2 174 Peak Hour Factor 0.82 0.92 0.92 0.92 0.92 - Hourly flow rate (vph) 1 2 173 1 2 189 Peak strians Lane Width (ft) Walking Speed (ft/s) Percent Blockage - - Right turn flare (veh) Median storage veh) Upstream signal (ft) - - - YC, conflicting volume 367 173 174 - - VC2, stage 1 conf vol - - - - - VC1, unblocked vol 367 173 174 - - - VC2, stage 2 conf vol - - - - - - Vc1, unblocked vol 367 173 174 - - - - - - - - </th <th>Movement</th> <th>WBL</th> <th>WBR</th> <th>NBT</th> <th>NBR</th> <th>SBL '</th> <th>SBT</th> <th></th> <th></th>	Movement	WBL	WBR	NBT	NBR	SBL '	SBT		
Grade 0% 0% 0% Volume (veh/h) 1 2 159 1 2 174 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 1 2 173 1 2 189 Pedestrians Lane Width (ft) Valking Speed (ft/s) Percent Blockage Valking Speed (ft/s) Percent Blockage None Median type None Valking Speed (ft/s) Median type None Median storage veh) Upstream signal (ft) pX, platoon unblocked VC, onflicting volume 367 173 174 VC1, stage 1 conf vol VC2, stage 2 conf vol VC1, stage 1 conf vol VC1, stage 1 conf vol VC2, stage 2 conf vol VC1, stage 1 conf vol 00 100 100 VC2, stage (s) 173 174 174 174 174 tC, stage (s) 163 3.3 2.2 100 100 cm capacity (veh/h) 632 870 1403 1100 100 cm capacity (veh/h) 632 87									
Volume (ven/h) 1 2 159 1 2 174 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 1 2 173 1 2 189 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) Upstream signal (ft) pX, platoon unblocked VC, conflicting volume 367 173 174 VC1, stage 1 conf vol VC2, stage 2 conf vol VC4, unblocked vol 367 173 174 VC2, stage 2 conf vol VC4, unblocked vol 367 173 174 VC3, stage 1 conf vol VC2, unblocked vol 367 173 174 VC3, stage 2 conf vol VC4, unblocked vol 367 173 174 VC3, stage (s) 64 6.2 4.1 152 150 JP oucue free % 100 100 100 100 100 100 CM capacity (veh/h) 632 870 1403 1403 1403 1403									
Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 Houry flow rate (vph) 1 2 173 1 2 189 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) Upstream signal (ft) Px, platoon unblocked VC, conflicting volume 367 173 174 174 vC1, stage 1 conf vol vC2, stage 2 conf vol 174 174 vC2, stage 2 conf vol vC4, unblocked vol 367 173 174 vC1, stage 1 conf vol vC2, stage 3 3.5 3.3 2.2 p0 queue free % 100 100 100 100 cM capacity (veh/h) 632 870 1403 1403 Direction_Lane # WB 1 NB 1 SB 1 Volume Event 1 0 2 Volume Total 3 174 191 Volume Event 1 0 2 1403 Volume Event 1 0 0 0 0 0 1403 1403			ാ		. 1	ე			NGC 1983
Hourly flow rate (vph) 1 2 173 1 2 189 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage 1									6388239
Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median storage veh) Upstream signal (ft) pX, platoon unblocked vC, conflicting volume vG, conflicting volume vG, stage 1 conf vol vCL, stage 1 conf vol vCL, stage 2 conf vol vCL, unblocked vol vCL, unblocked vol vG, stage 1 conf vol vCL, sigle (s) 64 6.2 4.1 tC, sigle (s) 64 6.2 4.1 tC, sigle (s) 64 6.2 4.1 tC, sigle (s) 64 6.2 90 queue free % 100 6M capacity (veh/h) 632 870 1403 Direction 1 0 2 Volume Ent 1 1 0 CSH 770 770 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median type None Median storage veh) Upstream signal (ft) px, platoon unblocked vC; conflicting volume vC1, stage 1 conf vol vC; conflicting volume vC2, stage 2 conf vol vC/vu vC4, unblocked vol 367 173 tC, single (s) 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 tC, stage 2 conf vol vc/vu vclume interve vclume interve p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction Lane # WB 1 NB 1 SB 1 Volume Ent 1 0 2 volume Right 2 1 0 cSH 773 1700 1403 Volume Left 1 0 2 volume to Capacity 0.0 0.1 Lane LOS A A Approach LOS A		00000-X (0.0000-X) 2 0	*****************	000000000000000000000000000000000000000		>>>000000	200422 - 254 F 254 A		
Percent Blockage Right turn flare (veh) Median type None Median torage veh) Upstream signal (ft) pX, platoon unblocked vC, conflicting volume 367 vC1, stage 1 conf vol vC2, stage 2 conf vol vC2, stage 1 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC4, unblocked vol v64 6.4 c, single (s) 6.4 c, single (s) 6.4 ft (s) 3.5 go queue free % 100 100 100 cdapacity (veh/h) 632 82 870 1403 Direction, Lane # WB 1 Volume Total 3 volume Right 2 1 0 2 1 volume to Capacity 0.0 Volume to Capacity 0.0 Volume to Capacity 0.0 0.1 0 Lane LOS A A A Approach LOS A	AND ADD ADD ADD AND ADD ADD ADD ADD ADD								
Right turn flare (veh) None Median storage veh) Upstream signal (ft) pX, platoon unblocked vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC4, unblocked vol vC4, unblocked vol 367 173 174 vC2, stage 2 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC4, unblocked vol 367 173 174 tC, 2 stage (s) tF (s) 6.4 6.2 4.1 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 2.2 p0 queue free % 100 100 100 100 cM capacity (veh/h) 632 870 1403 Direction Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Right 2 1 0 2 volume tot 3 174 191 Volume tot 3 174 191 Volume tot 0 0 0 Costh 773 </td <td></td> <td>00000000000000000</td> <td>an o seosana tetas</td> <td>1. 1 x 25 1005.02.00</td> <td></td> <td>N. A.S.A. N. M. 7898</td> <td>840355555557</td> <td></td> <td>0.0000000000000000000000000000000000000</td>		00000000000000000	an o seosana tetas	1. 1 x 25 1005.02.00		N. A.S.A. N. M. 7898	840355555557		0.0000000000000000000000000000000000000
Median type None Median storage veh) Upstream signal (ft) pX, platoon unblocked vC, conflicting volume 367 173 174 vC1, stage 1 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC2, unblocked vol 367 173 174 vC2, stage 2 conf vol vC4, unblocked vol 367 173 174 175 174 174 174 175 174 174 175 176 177 170 170 170 170 170 170 170 170 170 170 1703 1700 170 1703 1700 1403 174 191 174 191 174 171 1700 1403 174 191 174 191 174 191 174 191 174 191 174 191 174 171 1700 1403 174 171 1									
Median storage veh) Upstream signal (ft) pX, platoon unblocked		None		052.0228					
Upstream signal (ft) pX, platoon unblocked vC, conflicting volume 367 173 174 vC1, stage 1 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vC2, unblocked vol 367 173 174 tC, single (s) 6.4 6.2 4.1 tC, stage (s) tf (s) 3.5 3.3 2.2 pO queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.1 0 cueue Length 95th (ft) 0 0 0 Queue Length 95th (ft) 0 0 0 Approach LOS		Home		870 (PA) (PA) (PA)			26036802083		Sector - Sector
vC, conflicting volume 367 173 174 vC1, stage 1 conf vol vCu, unblocked vol 367 173 174 vCu, unblocked vol 367 173 174 174 tC, single (s) 6.4 6.2 4.1 174 tC, 2 stage (s) 5 3.5 3.3 2.2 p0 queue free % 100 100 100 100 cM capacity (veh/h) 632 870 1403 Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.1 Queue Length 95th (ft) 0 0 0 Queue Length 95th (ft) 0 0 0 Queue Logs (s) 9.7 0.0 0.1 Lane LOS A A Approach LOS A A Average Delay 0.1 0.1									
vC1, stage 1 conf vol vC2, stage 2 conf vol vCu, unblocked vol 367 173 174 tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.1 Lane LOS A A Approach LOS A A Approach LOS A A Average Delay 0.1 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service A			× .						00044.01.200000
vC2, stage 2 conf vol vCu, unblocked vol 367 173 174 tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume kight 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.0 0.00 Queue Length 95th (ft) 0 0 Queue Length 95th (ft) 0 0 0 0 0 Control Delay (s) 9.7 0.0 0.1 1 1 Lane LOS A A A A Approach LOS A A Approach LOS A A A A Average Delay 0.1 1 Intersection Capacity Utilization 20.8% ICU Level of Service		367	173			174			
vCu, unblocked vol 367 173 174 tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.00 Queue Length 95th (ft) 0 0 Queue Length 95th (ft) 0 0 Queue Loos A A Approach Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach LOS A A Arerage Delay 0.1 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service A									880.03
tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Left 1 0 2 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach LOS A A Average Delay 0.1 1CU Level of Service A		367	173			174			1960) VIII
tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach LOS A A Approach LOS A A Average Delay 0.1 100 Intersection Capacity Utilization 20.8% ICU Level of Service									
tF (s) 3.5 3.3 2.2 p0 queue free % 100 100 100 cM capacity (veh/h) 632 870 1403 Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach LOS A A Approach LOS A A Average Delay 0.1 1CU Level of Service A		99716238995639 3 , 9 9 97	200000 10000 20000	19222222222222-035	2012 - 19 20 2003 - 20			996666995668447464, 20142606996669000, 1494000699660008966008864, 1496446666498946064686888	200000000000000
cM capacity (veh/h) 632 870 1403 Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach LOS A A Average Delay 0.1 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service		enness ibreghnes posses				-Phologia - Shi bohubbook			
Direction, Lane # WB 1 NB 1 SB 1 Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Average Delay 0.1 1 Intersection Capacity Utilization 20.8% ICU Level of Service A							5-1000-0000-00085		8888-17785-17
Volume Total 3 174 191 Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Average Delay 0.1 10.1 Intersection Capacity Utilization 20.8% ICU Level of Service A		632				1403			\$8-29C3
Volume Left 1 0 2 Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Approach LOS A A Average Delay 0.1 1 Intersection Capacity Utilization 20.8% ICU Level of Service A									
Volume Right 2 1 0 cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Intersection Summary 0.1 Intersection Capacity Utilization 0.1	200000000000000000000000000000000000000	//////////////////////////////////////		0007000000002460022					
cSH 773 1700 1403 Volume to Capacity 0.00 0.10 0.00 Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Average Delay 0.1 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service		•						·	
Volume to Capacity0.000.100.00Queue Length 95th (ft)000Control Delay (s)9.70.00.1Lane LOSAAApproach Delay (s)9.70.00.1Approach LOSAAIntersection Summary0.1Average Delay0.1Intersection Capacity Utilization20.8%ICU Level of ServiceAA		007/001/02020007777							85492576
Queue Length 95th (ft) 0 0 0 Control Delay (s) 9.7 0.0 0.1 Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Intersection Summary 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service									
Lane LOS A A Approach Delay (s) 9.7 0.0 0.1 Approach LOS A A Intersection Summary 0.1 Average Delay 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service				-		******	81° 688° 689° 68" (* 76.1"		
Approach Delay (s) 9.7 0.0 0.1 Approach LOS A Intersection Summary 0.1 Average Delay 0.1 Intersection Capacity Utilization 20.8%	 Monocommonocom alteration to common the second s second second se	9.7	0.0						
Approach LOS A Intersection Summary 0.1 Average Delay 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service A			~ ~ ~			2002-001-16-00-175		eren betrik en de seken en de seken de	200-258 × 6
Intersection Summary 0.1 Average Delay 0.1 Intersection Capacity Utilization 20.8%			0.0	0.1					
Average Delay 0.1 Intersection Capacity Utilization 20.8% ICU Level of Service A	•••	A							
Intersection Capacity Utilization 20.8% ICU Level of Service A				0.4					
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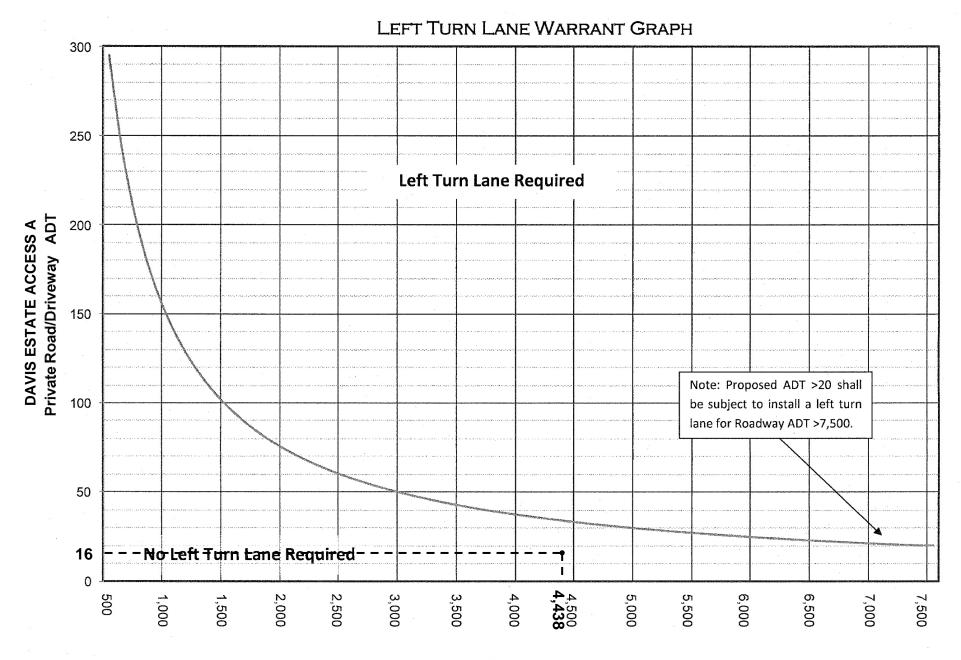
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	¥	~		r	\$r	*	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	Y		î>			<u>્</u> વ	
Sign Control	Stop		Free			Free	
Grade	0%	xxx: 0000100.0 . 0000	0%	ಾರ್ಷ ಜಾರ್ಕವೇರ್ಣ		0%	
Volume (veh/h)	0	1	159	0	1	174	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	-0.92	
Hourly flow rate (vph)	0	1	173	0	1	189	
Pedestrians			antes de la como) MACELORISE	
Lane Width (ft)							
Walking Speed (ft/s)		\$22204222228883855					
Percent Blockage							
Right turn flare (veh)	Nono	99. (2009 - 11					
Median type Median storage veh)	None						
Upstream signal (ft)					96 S S C 2005		
pX, platoon unblocked							
vC, conflicting volume	364	173			173		
vC1, stage 1 conf vol	504	175			170		
vC2, stage 2 conf vol							
vCu, unblocked vol	364	173		25 STA 18 BARAN	173		
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)			1999/01/10 476882	88998899889989999	69090-54 8 0989		
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100	009853080-5062	1 24/97/02/25/19/03/03	100	1992,998,999,999	ala de la constante de la const El constante de la constante de
cM capacity (veh/h)	635	871			1404		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	1	173	190				
Volume Left	0	0	100				
Volume Right	1	Õ	Ö				
cSH	871	1700	1404	88888 - 9 A. : 57			
Volume to Capacity	0.00	0.10	0.00				
Queue Length 95th (ft)	0	0	0				en e
Control Delay (s)	9.1	0.0	0.0				
Lane LOS	A	000.000.70707070	A	98.: 11, 142, 2008, 244			
Approach Delay (s)	9.1	0.0	0.0				
Approach LOS	А			· ·			Szeze Boefe ⁿ , ^m) é typiszta szadalazata a killan killadalatterepeketet i szageny a tek interek szedek seren terenet sona teren terenet.
Intersection Summary							
Average Delay			0.1				
Intersection Capacity UI	tilization		20.0%	JC	CU Leve	l of Se	ervice A
Analysis Period (min)	aqepta sobtiétélés	- 4300-43055555555555555555555555555555555	15	andinin y state	n, ar a shagaalaa '	2000000135235	-mi-d-rovov orovov depodence za za zase soonennonderen kont - dri - dra ende a konde se soonen soonen soonen de
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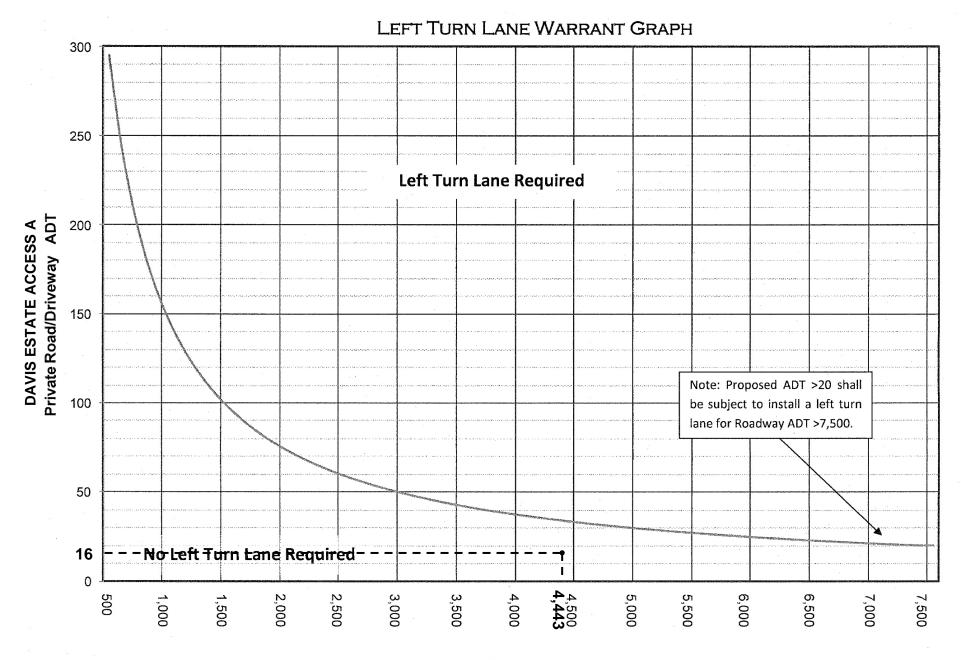
Davis Estate Winery Access A: Weekday Existing + Project Conditions: Left Turn Lane Not Warranted



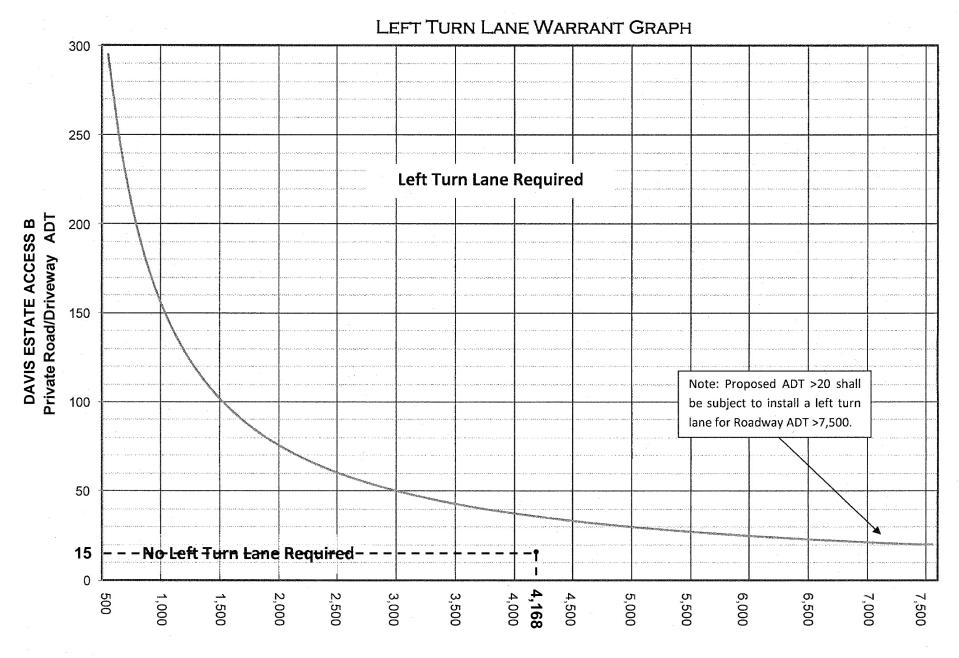
Davis Estate Winery Access A: Weekend Existing + Project Conditions: Left Turn Lane Not Warranted



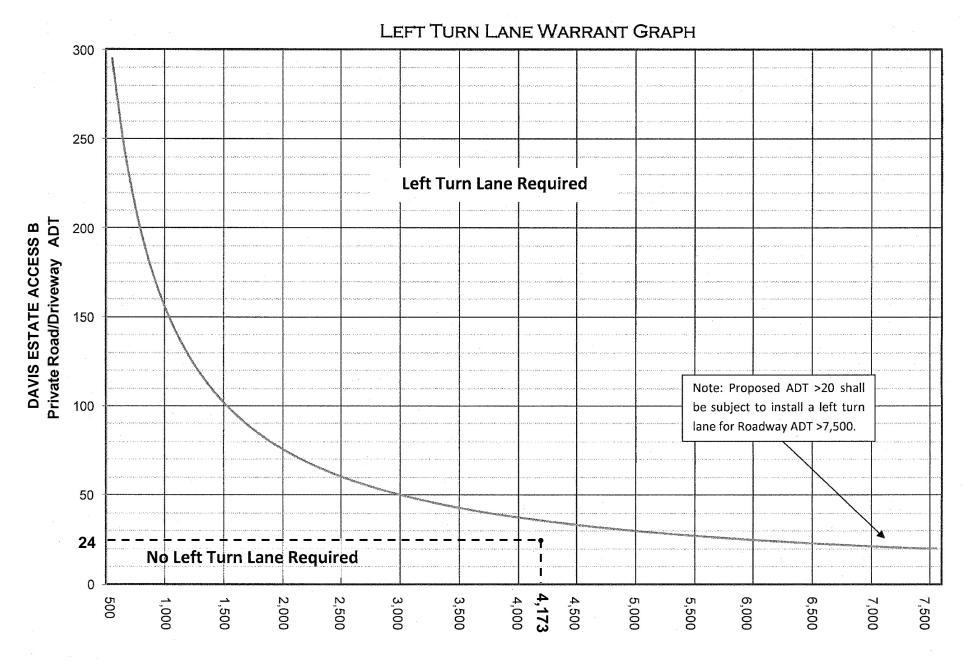
Davis Estate Winery Access A: Weekday Near Term + Project Conditions Left Turn Lane Not Warranted



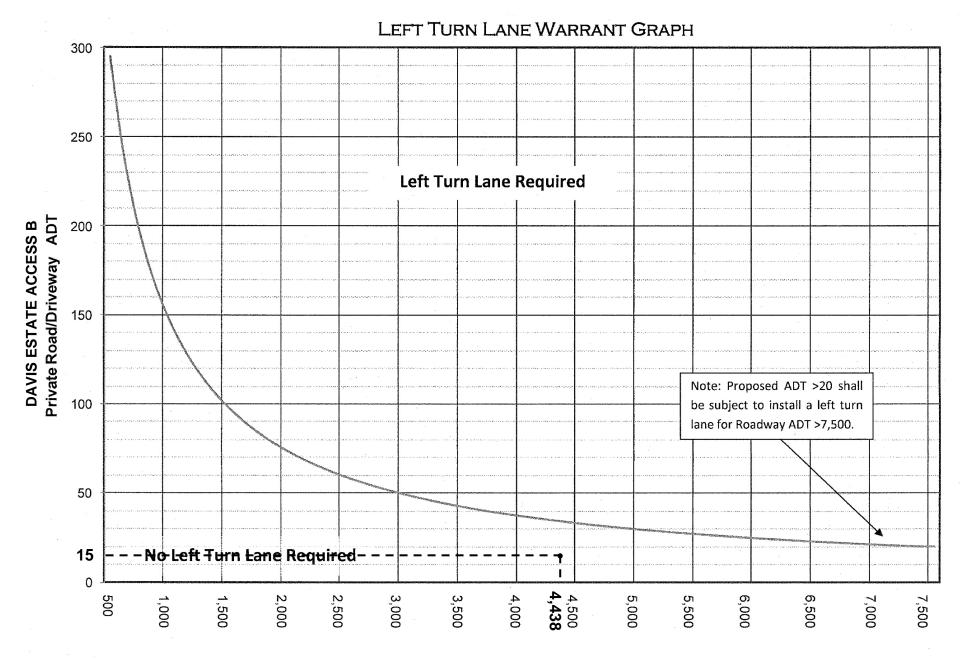
Davis Estate Winery Access A: Weekend Near Term + Project Conditions Left Turn Lane Not Warranted



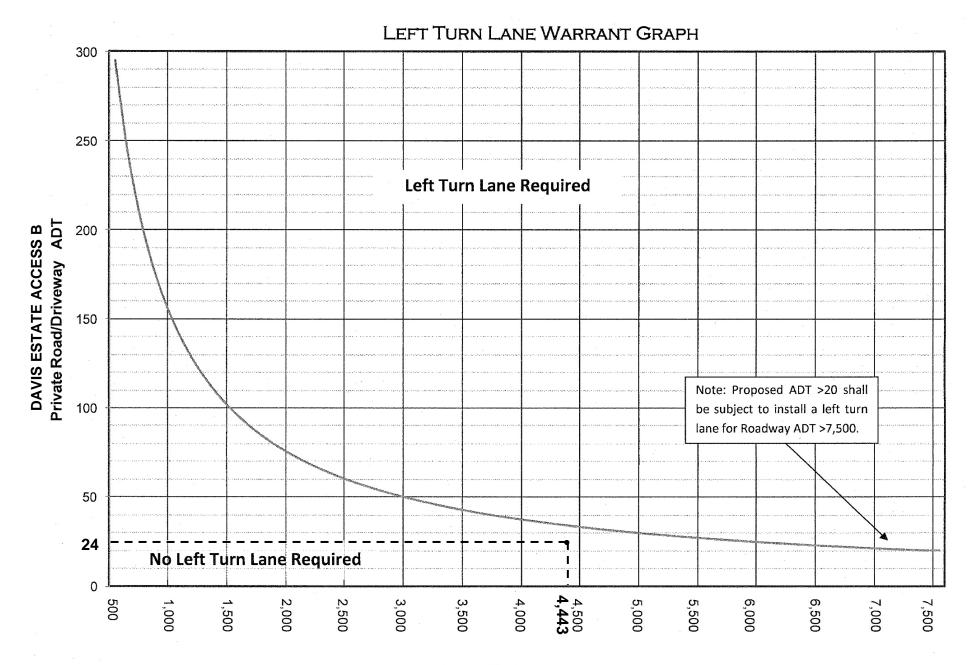
Davis Estate Winery Access B: Weekday Existing + Project Conditions: Left Turn Lane Not Warranted



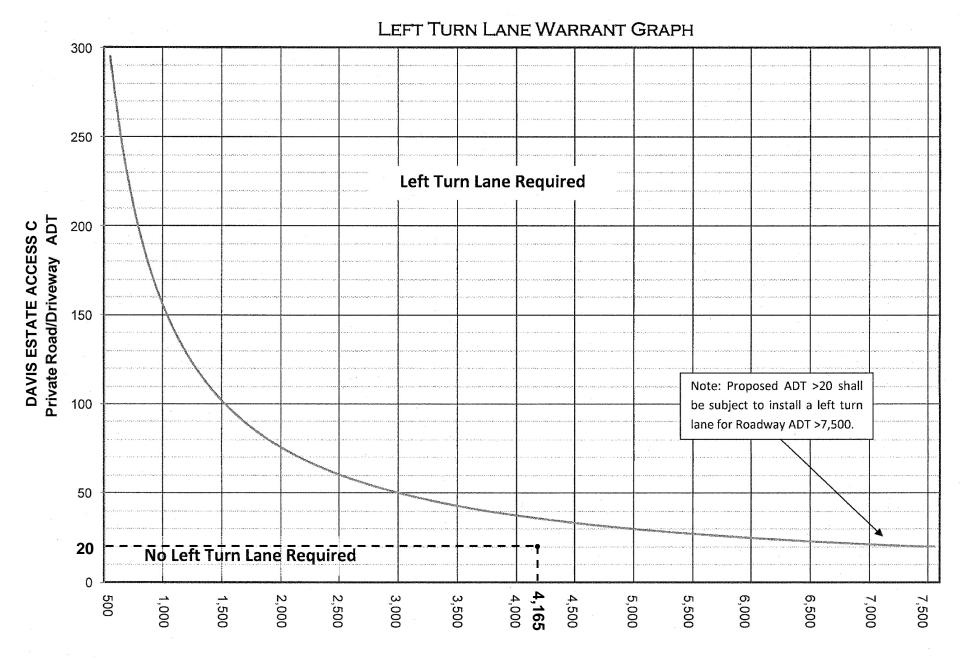
Davis Estate Winery Access B: Weekend Existing + Project Conditions Left Turn Lane Not Warranted



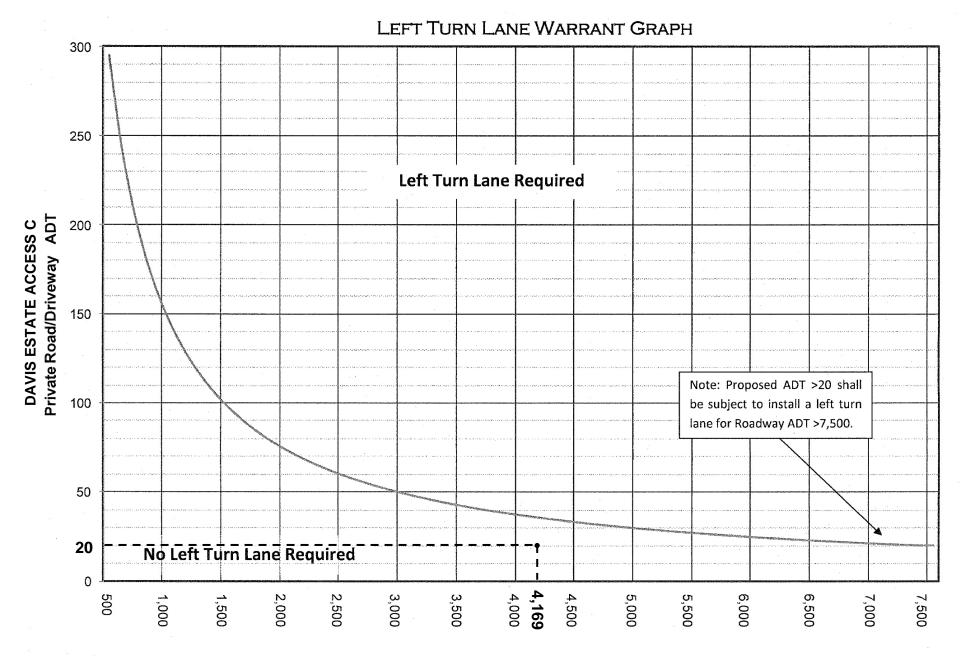
Davis Estate Winery Access B: Weekday Near Term + Project Conditions: Left Turn Lane Not Warranted



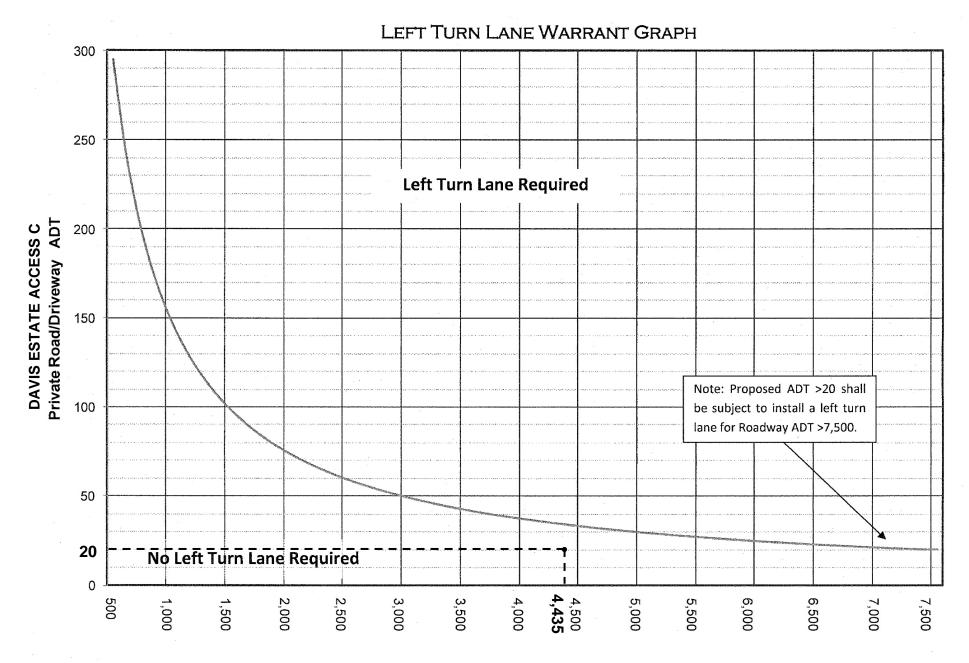
Davis Estate Winery Access B: Weekend Near Term + Project Conditions Left Turn Lane Not Warranted



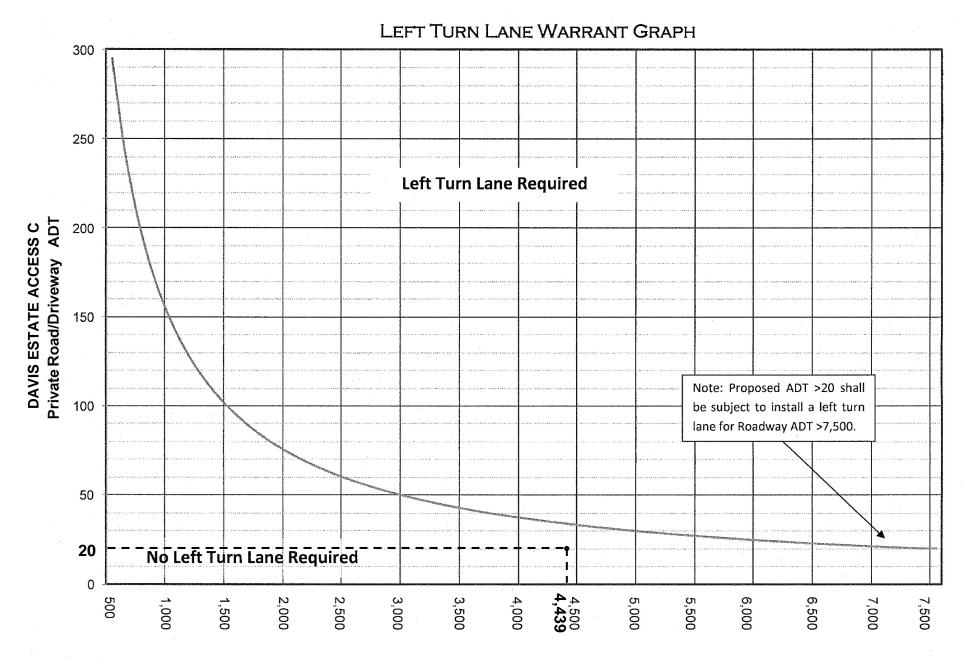
Davis Estate Winery Access C: Weekday Existing + Project Conditions Left Turn Lane Not Warranted



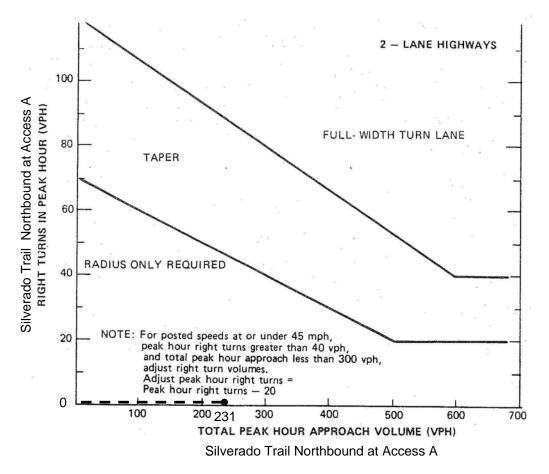
Davis Estate Winery Access C: Weekend Existing + Project Conditions Left Turn Lane Not Warranted



Davis Estate Winery Access C: Weekday Near Term + Project Conditions Left Turn Lane Not Warranted



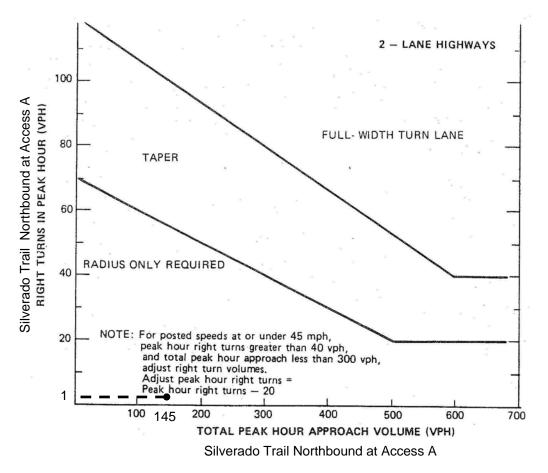
Davis Estate Winery Access C: Weekend Near Term + Project Conditions Left Turn Lane Not Warranted



Davis Estate Winery Project

Silverado Trail / Winery Access A Intersection

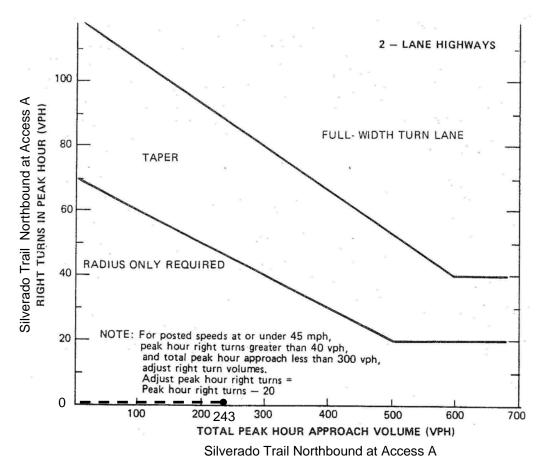
EXISTING + PROJECT WEEKDAY PM PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access A Intersection

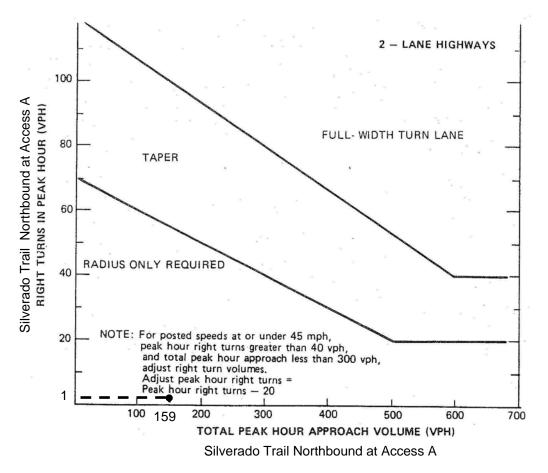
EXISTING + PROJECT WEEKEND PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access A Intersection

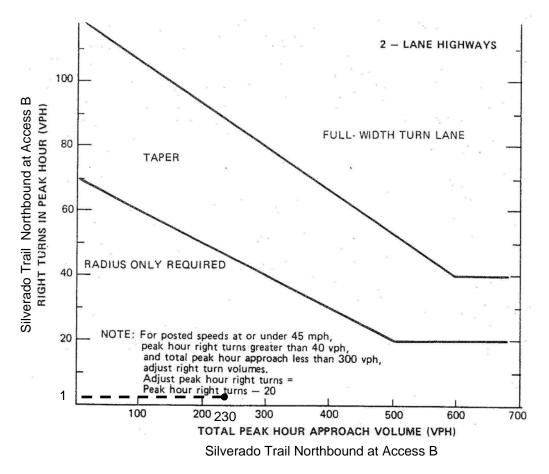
NEAR TERM + PROJECT WEEKDAY PM PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access A Intersection

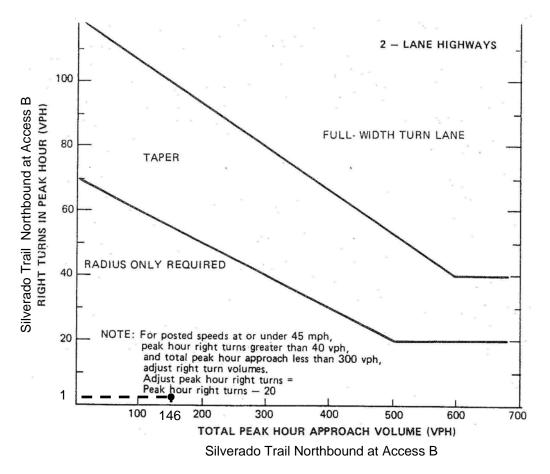
NEAR TERM + PROJECT WEEKEND PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access B Intersection

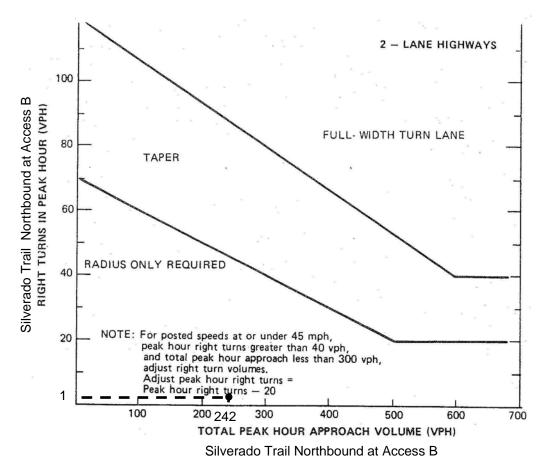
EXISTING + PROJECT WEEKDAY PM PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access B Intersection

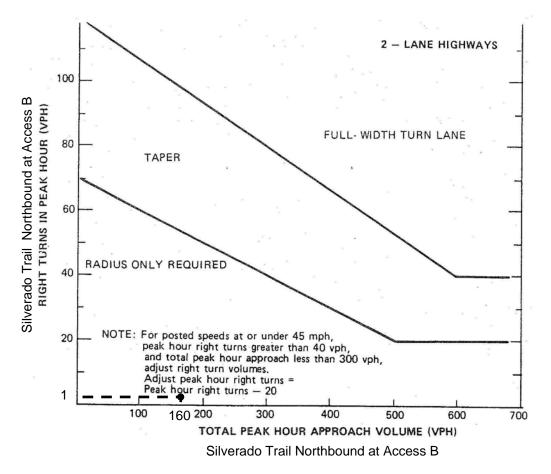
EXISTING + PROJECT WEEKEND PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access B Intersection

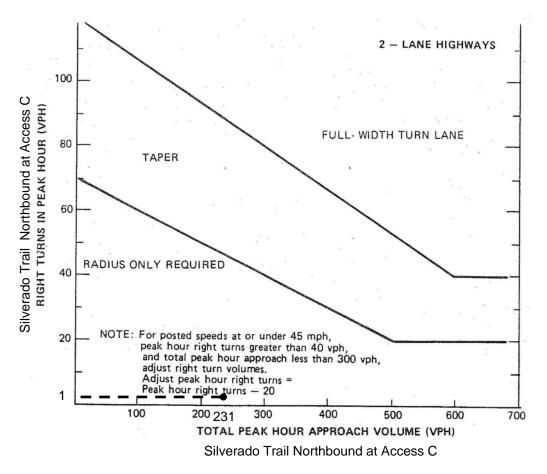
NEAR TERM + PROJECT WEEKDAY PM PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access B Intersection

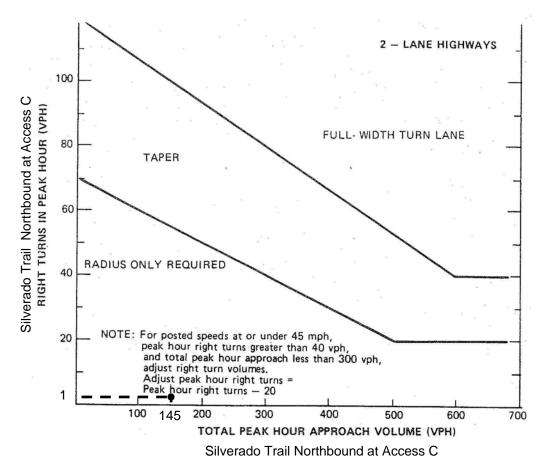
NEAR TERM + PROJECT WEEKEND PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access C Intersection

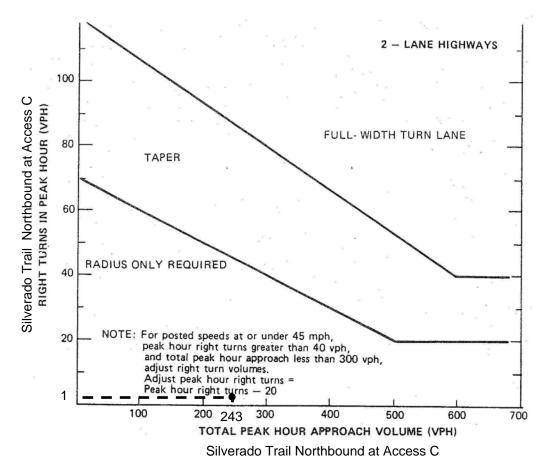
EXISTING + PROJECT WEEKDAY PM PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access C Intersection

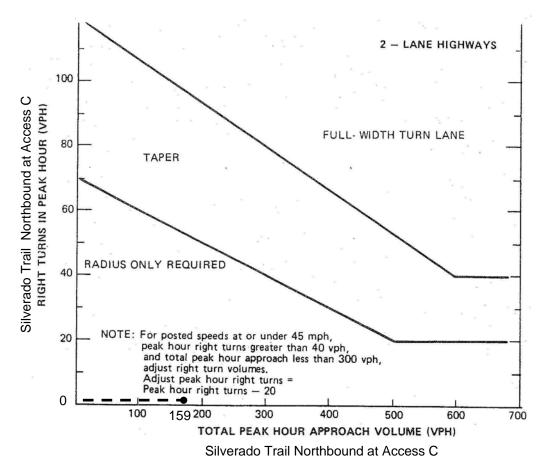
EXISTING + PROJECT WEEKEND PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access C Intersection

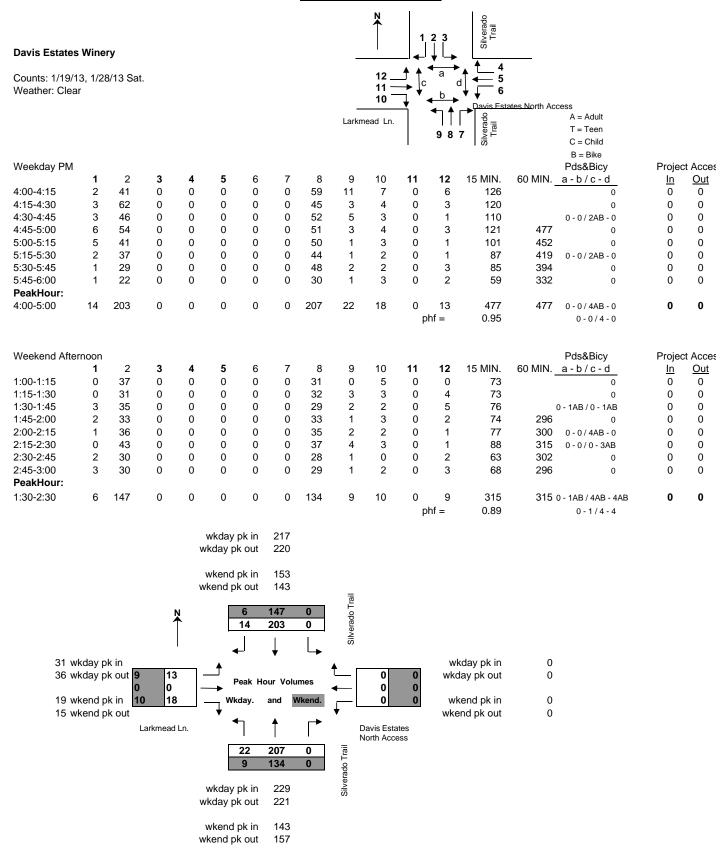
NEAR TERM + PROJECT WEEKDAY PM PEAK HOUR



Davis Estate Winery Project

Silverado Trail / Winery Access C Intersection

NEAR TERM + PROJECT WEEKEND PEAK HOUR



OMNI-MEANS

RADAR SPEED SURVEY

omvi-means LTD.

Silverado Trail at Frostfire property

DATE: 1/3/12 Tue TIME START: 2:00 pm TIME END: 3:00 pm WEATHER: Clear ROAD TYPE: 2 lanes

DIRECTION: Northbound

SPEED LINIT: 55 mph

.

OBSERVER: O-M CALIBRATION TEST: Yes

speed	FREQUENCY	ACUM %	PERCENTAGE BREAKDOWN 000
	6		-0102030
47	2	8.0	
48	5	14.0	
49	6	20.0	\$\$\$\$ <u>5</u>]\$\$\$\$[\$\$\$\$ 5]
50	8	28.0	1####5###5###5###5###5###5###
51	15	44,0	<u> ++++5++++1++++2+++5++++3++++5+++++++++++</u>
52	10	54.0	\#### 5####5####5####5####5### 5####5####5###5###5###
53	5	50.0	;****5***1****5***2****5****3****5****5**
54	8	68.0	####5####[####5####2####5####5####5####
35	8	76.0	####5####1[####5####22####5####3####5####4####5####5
56	6	82.0	****5 <u>****</u> 5****2 <u>****5****3****3****</u> 5****5***55***55***
57	2	84.0	\####{\####J####J####J####J####J####J##
58	4	88.0	****5;****1****5;****2****5;****5;*****5;***5;
59	6	94.0	****5x***!****5x***5****5**************
50	4	98.0	, ************************************
51	0	98.0	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
62	0	98.0	▏⋇⋇⋇⋬⋤⋼⋇⋇⋇⋠⋇⋇⋇⋶⋇⋇⋇⋩⋝⋇⋇⋇⋬⋇⋇⋧⋳⋇⋇⋇⋳⋇⋇⋇⋳⋇⋇⋇⋳⋇⋇⋳⋇⋇⋶⋇⋇⋸⋇⋵⋕⋇⋳⋧⋇⋇⋸⋧⋇⋇⋸⋧⋇⋇⋸⋇⋇⋸⋇⋇⋸⋇⋇⋸⋇⋇∊⋎∊⋇∊∊∊∊∊∊∊∊∊∊∊∊∊
85	0	98.0	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
54	2	100.0	****5********5****2****5****3****5****5
			-0

100

AVERAGE SPEED = 52.8 Soth PERCENTILE = 51.6 B5th PERCENTILE = 57.2 Soth PERCENTILE = 58.3 S5th PERCENTILE = 59.2	PACE = 46 - 55 % IN PACE = 76 Vehicles IN PACE = 76	SAMPLE VARIANCE = 16.51263 STANDARD DEVIATION = 4.063573 RANGE 1*6 = 68 RANGE 2*6 = 98 RANGE 3*6 = 100
--	---	--

RADAR SPEED SURVEY

ofni-Means LTD.

Silverado Trail at Frostfire property

DATE: 1/3/12 Tue TIME START: 2:00 pm TIME END: 5:00 pm WEATHER: Clear

ROAD TYPE: 2 lanes

CALIBRATION TEST: Yes

DIRECTION: Southbound

SPEED LINIT: 55 mph

DEDACHTAGE BORAKHAUN

OBBERVER: O-M

gred	FREQUENCY	ACUM %	PERCENTAGE BREAKDOWN
			-0607080
43	4		
석석	0	4.0	· 꽃 붕울풍
45	Ô	4.0	
46		6.0	
47	4	10.0	
48	6	16.0	
49	6	22.0	<u> ***55****1***5***2**</u>
50	18	40.0	\####J####J####Z####Z####J####J####4
51		54.0	\#\$#\$5#\$#{!##x#5####2####5####3####5####4###5####5F####
52	5	60.0	\####5####{####5 <u>####</u> 5###5 <u>####5</u> ####4####5 ####5 ####5
53	8	68.0	<u> ****56***1****5****5****5****5****5****</u>
54	8	75.0	\####5####1####5####2####5####3####5#####5####5
55	6	82.0	\\$***5****1****5***2****5****3****5****5**
56	.	90.0	}####\$ <u>5####}#####}####</u> \$#### <u>\$####\$####\$###</u> \$### <u>\$###</u> \$### <u>\$###</u> }#### <u>}####</u> }#### <u>5####</u> }####}###}
57	2	92.0	\####\$####\$###\$####\$####\$####\$####\$###
58	0	92.0	\####55####1####52####5####5############
59	2	94.0	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
60	4	98.0	\#***5}####{]####5}####{]####5}####5}####5####5
61	0	98.0	\+\$**5;***{****5;****2***5****3****5***4***5;****5***5;***5;**
62	2	100.0	****5#####]****5#####5####3#####4####5####5####6####5####6####5####5####5####5####5####5####5####5####
	the because we are used and the state with the		-0

100

AVERAGE SPEED =	51.9	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SAMPLE VARIANCE = 15,72727
50th PERCENTILE =	50.7	% IN PACE = 04	STANDARD DEVIATION = 3.965763
85th PERCENTILE =	년 년 년 1919년 - 1919년 - 1919년 1919년 - 1919년 -	VEHICLES IN PACE = 84	RANGE 148 = 72
90th PERCENTILE =	56		RANGE 248 = 90
95th PERCENTILE =	er s		RANGE 3+5 = 100