Final Transportation Impact Study for

Sierra Pine Residential Project

Prepared for:
City of Rocklin

July 12, 2017

RS16-3486

FEHR PEERS

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EXECUTIVE SUMMARY

This study analyzes the transportation impacts associated with the proposed Sierra Pine residential project to be located along Dominguez Road between Pacific Street and Granite Drive in the City of Rocklin. The analysis covers project impacts to the roadway, bicycle, pedestrian, and transit systems under near-term and long-term conditions. An evaluation of project access along Dominguez Road is also conducted.

PROJECT DESCRIPTION

The proposed project would consist of 199 single-family detached dwelling units. Access to the project would be provided by two access points on Dominguez Road, which would be located 450 feet apart.

STUDY AREA, ANALYSIS PERIODS, AND SCENARIOS

Five study intersections along Granite Drive, Pacific Street, and Rocklin Road were selected for study under weekday AM and PM peak hour conditions. These facilities were analyzed under existing, existing plus approved projects, and cumulative conditions, both without and with the proposed project in place.

EXISTING PLUS PROJECT CONDITIONS

All study intersections currently operate at an acceptable Level of Service (LOS) C or better during the AM and PM peak hours. The addition of project trips would result in slight increases in delay at study intersections. However, the LOS at all study intersections would remain unchanged and operations would remain acceptable. The unsignalized Granite Drive/Dominguez Road intersection would not require installation of a traffic signal.

EXISTING PLUS APPROVED PROJECTS PLUS PROJECT CONDITIONS

This scenario considers traffic generated by various pending and approved land development projects that have not yet been constructed. The list of approved projects totals 1,387 single-family units, 595 multi-family units, and 235,000 square feet of new retail within the study area. The LOS at all study intersections would remain acceptable under existing plus approved projects plus project conditions. The unsignalized Granite Drive/Dominguez Road intersection would not require installation of a traffic signal.

CUMULATIVE CONDITIONS

Project impacts under cumulative (2030) conditions were also evaluated. The following study intersections would operate unacceptably (i.e., LOS D or worse) under "No Project" conditions:

- Granite Drive / Rocklin Road (LOS D during PM peak hour)
- Granite Drive / Dominguez Road (LOS D during PM peak hour)
- Granite Drive / Sierra College Boulevard (LOS F during PM peak hour)

The addition of project trips would cause slight delay increases, but not cause a cumulatively considerable impact according to the established significance criteria.

IMPACTS AND MITIGATION MEASURES

The proposed project would cause less-than-significant impacts to the roadway, pedestrian, and transit systems. Impacts associated with non-standard design features and emergency access would also be less-than-significant. Impacts to the bicycle system would also be less than significant because it would not conflict with the City of Rocklin General Plan Bikeway Diagram. Dominguez Road has adequate width to accommodate Class II bike lanes. See Figure ES-1 for illustration of how they could be added. The evaluation of cumulative project impacts yielded the same conclusions as above.

PROJECT ACCESS EVALUATION

Dominguez Road is recommended to be restriped from the south of the railroad spur to the southerly limits of the project site. The following cross-section is recommended (and would not require any widening):

- 6-foot Class II bike lane and 11.5-foot travel lane in each direction, separated by an 11-foot two-way left-turn lane.

This cross-section would introduce Class II bike lanes on both side of the street and provide a median lane for left-turning traffic. It would require removal of on-street parking on both sides of the street. Refer to Chapter VII for details and Figure ES-1 for an illustration of the restriping. Stop-control is recommended on the two project access approaches to Dominguez Road.

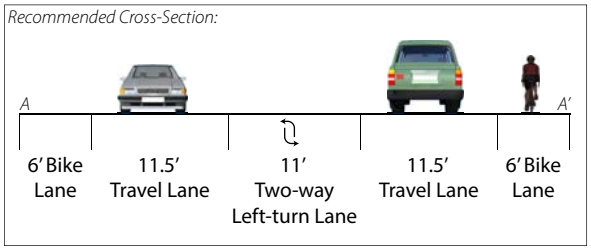


Figure ES-1

Recommended Cross-Section of Dominguez Road along Project Frontage

I. INTRODUCTION

PURPOSE

This study analyzes the transportation impacts associated with the proposed Sierra Pine residential project to be located along Dominguez Road between Pacific Street and Granite Drive in the City of Rocklin. This study analyzes project impacts under existing, existing plus approved projects, and cumulative conditions. An evaluation of project access along Dominguez Road is also conducted.

PROJECT DESCRIPTION

Figure 1 shows the project location in the context of the study area, including study intersections. According to the most recent project site plan[1] (*Sierra Pine Tentative Subdivision Map*, Burrell Consulting Group, July 15, 2016), the project would consist of 199 single-family detached dwelling units. Access to the project would be provided by two access points on Dominguez Road, which would be located 450 feet apart. Refer to Figure 2 for project site plan.

STUDY AREA AND PERIODS

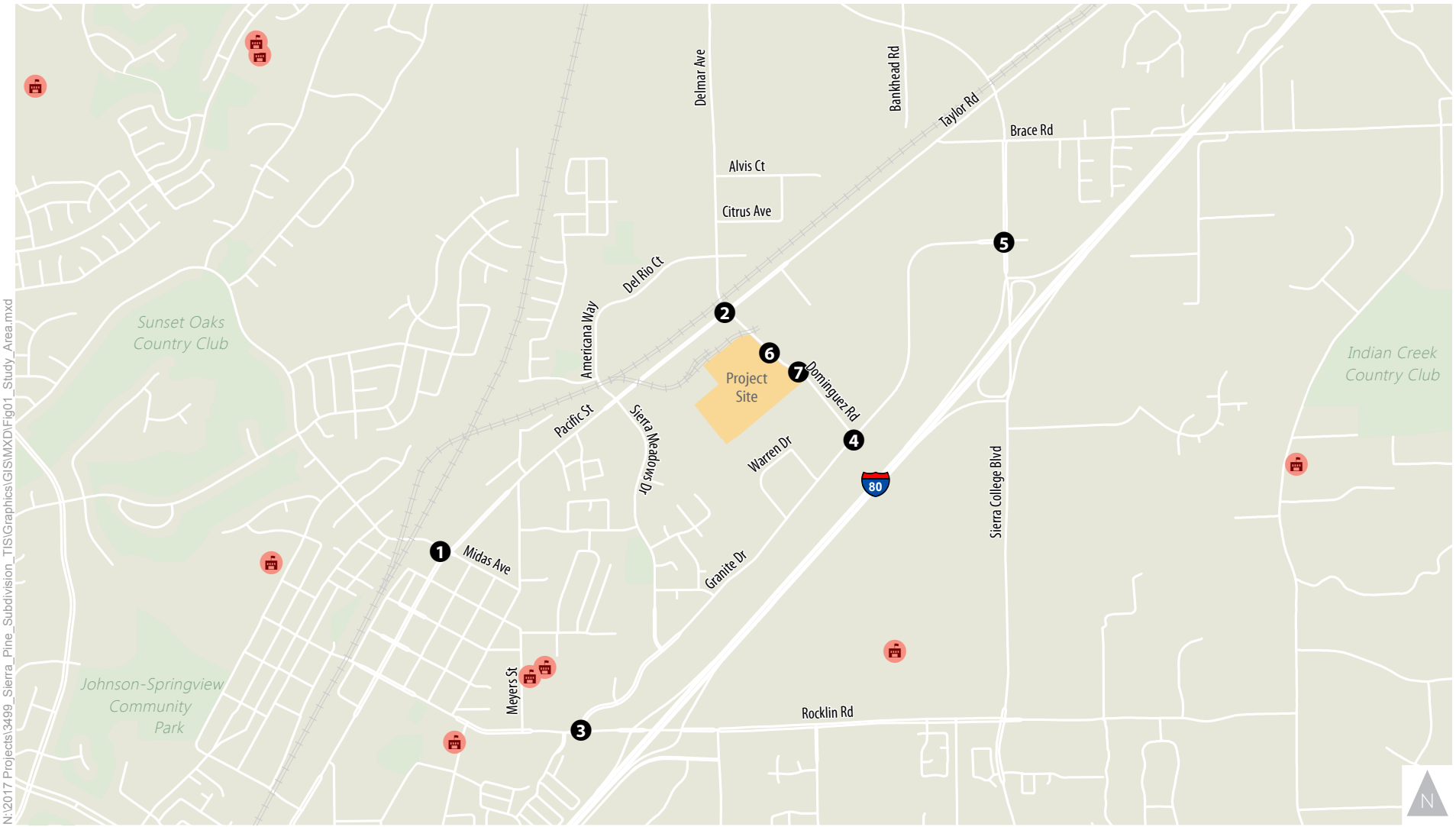
The study area includes the following five intersections in the project vicinity:

1. Pacific Street/Midas Avenue
2. Pacific Street/Del Mar Avenue/Dominguez Road
3. Rocklin Road/Granite Drive
4. Granite Drive/Dominguez Road
5. Granite Drive/Sierra College Boulevard

These intersections were selected in consultation with City of Rocklin staff and consider the project's size, location, and expected generation and distribution of trips.

Study intersections were analyzed for weekday AM and PM peak hour conditions.

[1] Per email from applicant (Phil Rodriguez) dated January 10, 2017.



1 Study Intersection

School

Railroad

Figure 1

Study Area

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Figure 2

Project Site Plan

ANALYSIS METHODOLOGIES

This study analyzes traffic operating conditions using level of service (LOS) as the primary measure of operational performance. Vehicle LOS is a qualitative measure of traffic flow from the perspective of motorists and are an indication of the comfort and convenience associated with driving. The LOS analysis uses procedures identified in the *2010 Highway Capacity Manual* (HCM) published by the Transportation Research Board of the National Academies of Science. The HCM defines six levels of service ranging from LOS A (representing free-flow vehicular traffic conditions with little to no congestion) to LOS F (oversaturated conditions where traffic demand exceeds capacity resulting in long queues and delays).

SIGNALIZED INTERSECTIONS

According to Page 4.4-38 of the *City of Rocklin General Plan Update DEIR* (2011), signalized intersections in the City were analyzed in the General Plan using the *Interim Materials on Highway Capacity – Circular 212* (Transportation Research Board, 1980) methodology. As part of an ongoing update to its Circulation Element, the City is migrating away from 'Circular 212' to instead use the state-of-the-practice *Highway Capacity Manual* (HCM) methodology. Nevertheless, all signalized study intersections are analyzed using both methods, with HCM results found within the report and Circular 212 results found in Appendix A.

The LOS at signalized intersections is based on the average delay experienced by all motorists traveling through the intersection. Table 1 presents the delay range for each LOS category for signalized intersections as presented in Chapter 18 of 2010 HCM.

This study uses the SimTraffic microsimulation model software at intersections 3 and 5. This program was selected for use because the intersections are closely spaced to other intersections along Sierra College Boulevard and Rocklin Road and are affected by traffic conditions at adjacent interchanges. This software considers the effects of signal coordination, vehicle queue spillbacks between intersections, and variation in driver and vehicle types. At the remaining study intersections, the Synchro software program, which also employs 2010 HCM procedures, was used. This program is appropriate for those intersections given their location and general level of operations.

UNSIGNALIZED INTERSECTIONS

At unsignalized study intersection 5, HCM 2010 procedures were also used, and the average delay is reported for the entire intersection as well as the minor street movement with the greatest delay. Table 1 presents the delay range for each LOS category for unsignalized intersections. Additionally, a peak hour

traffic signal warrant analysis was conducted using applicable criteria from the *California Manual of Uniform Traffic Control Devices* (MUTCD), 2014.

TABLE 1:
LEVEL OF SERVICE DEFINITIONS – INTERSECTIONS

Level of Service	Description (at Signalized Intersections)	Average Control Delay[1]	
		Signalized	Unsignalized
A	Volume-to-capacity ratio is low and either progression is exceptionally favorable or cycle length is very short. Most vehicles arrive during the green phase and travel through the intersection without stopping.	≤ 10	≤ 10.0
B	Volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	>10 to 20	> 10.0 to 15.0
C	Progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 to 35	> 15.0 to 25.0
D	Volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35 to 55	> 25.0 to 35.0
E	Volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	>55 to 80	> 35.0 to 50.0
F	Volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80	> 50.0

Notes: [1]Average control delay presented in seconds per vehicle. Delay values are rounded to the nearest second.
Source: *Highway Capacity Manual* (Transportation Research Board, 2010).

STANDARDS OF SIGNIFICANCE

Policy C-10 of the *City of Rocklin General Plan Circulation Element* (2012) states the following:

A. Maintain a minimum traffic Level of Service "C" for all signalized intersections during the p.m. peak hour on an average weekday, except in the circumstances described in C-10.B and C. below.

B. Recognizing that some signalized intersections within the City serve and are impacted by development located in adjacent jurisdictions, and that these impacts are outside the control of the City, a development project which is determined to result in a Level of Service worse than "C" may be approved, if the approving body finds (1) the diminished level of service is an interim situation which will be alleviated by the implementation of planned improvements or (2) based on the specific circumstances described in Section C. below, there are no feasible street improvements that will improve the Level of Service to "C" or better as set forward in the Action Plan for the Circulation Element.

C. All development in another jurisdiction outside of Rocklin's control which creates traffic impacts in Rocklin should be required to construct all mitigation necessary in order to maintain a LOS C in Rocklin unless the mitigation is determined to be infeasible by the Rocklin City Council. The standard for determining the feasibility of the mitigation would be whether or not the improvements create unusual economic, legal, social, technological, physical or other similar burdens and considerations".

The following thresholds of significance have been used to determine whether implementing the proposed project would result in a significant transportation impact. These thresholds of significance are derived from questions posed in Appendix G of the CEQA Guidelines, the above General Plan LOS policy, significance thresholds used in previous environmental documents in the City, and professional judgment.

For purposes of this study, a significant impact would occur if the project would:

1. Cause a study intersection to be degraded as follows during the PM peak hour.
   - For intersections currently operating at LOS C or better, worsen operations to LOS D or worse.
   - For intersections that currently operate at LOS D or worse, increase the total amount of traffic at the intersection by five percent or more.
2. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the Circulation system taking into account all applicable modes of transportation including public transit and non-motorized travel modes.
3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.

II. EXISTING CONDITIONS

This chapter describes the existing transportation system including the roadway, bicycle, pedestrian, transit, and rail systems within the study area.

ROADWAY SYSTEM

The following roadways would provide access to the site:

- **Dominguez Road** is a two-lane collector street that extends from Granite Drive to Pacific Street where it becomes Del Mar Avenue. It has a posted speed limit of 35 miles per hour (mph) and provides access to residential uses on the south portion of the street and industrial/retail uses on the north portion of the street. The northerly portion also permits on-street parking.
- **Granite Drive** is a four-lane arterial that extends from Rocklin Road to Sierra College Boulevard. Within the study area, it has a posted speed limit of 40 mph with two travel lanes in each direction separated by a center median or channelized left-turn pockets.
- **Pacific Street** is an east-west arterial street that extends from downtown Rocklin to Sierra College Boulevard, where it becomes Taylor Road. It narrows from four to two lanes between Midas Avenue and Dominguez Road/Del Mar Avenue. Within the study area, it has a posted speed limit of 40 mph.

View of Dominguez Road (in southbound direction) along project frontage

PEAK HOUR TRAFFIC VOLUMES

Traffic counts were obtained at all study intersections in April 2016 as part of the existing conditions analysis for the Circulation Element Update. Schools were in session at the time of the counts and generally typical traffic conditions were observed. Figure 3 shows the weekday AM and PM peak hour traffic volumes, lane configurations, and traffic controls at each study intersection.

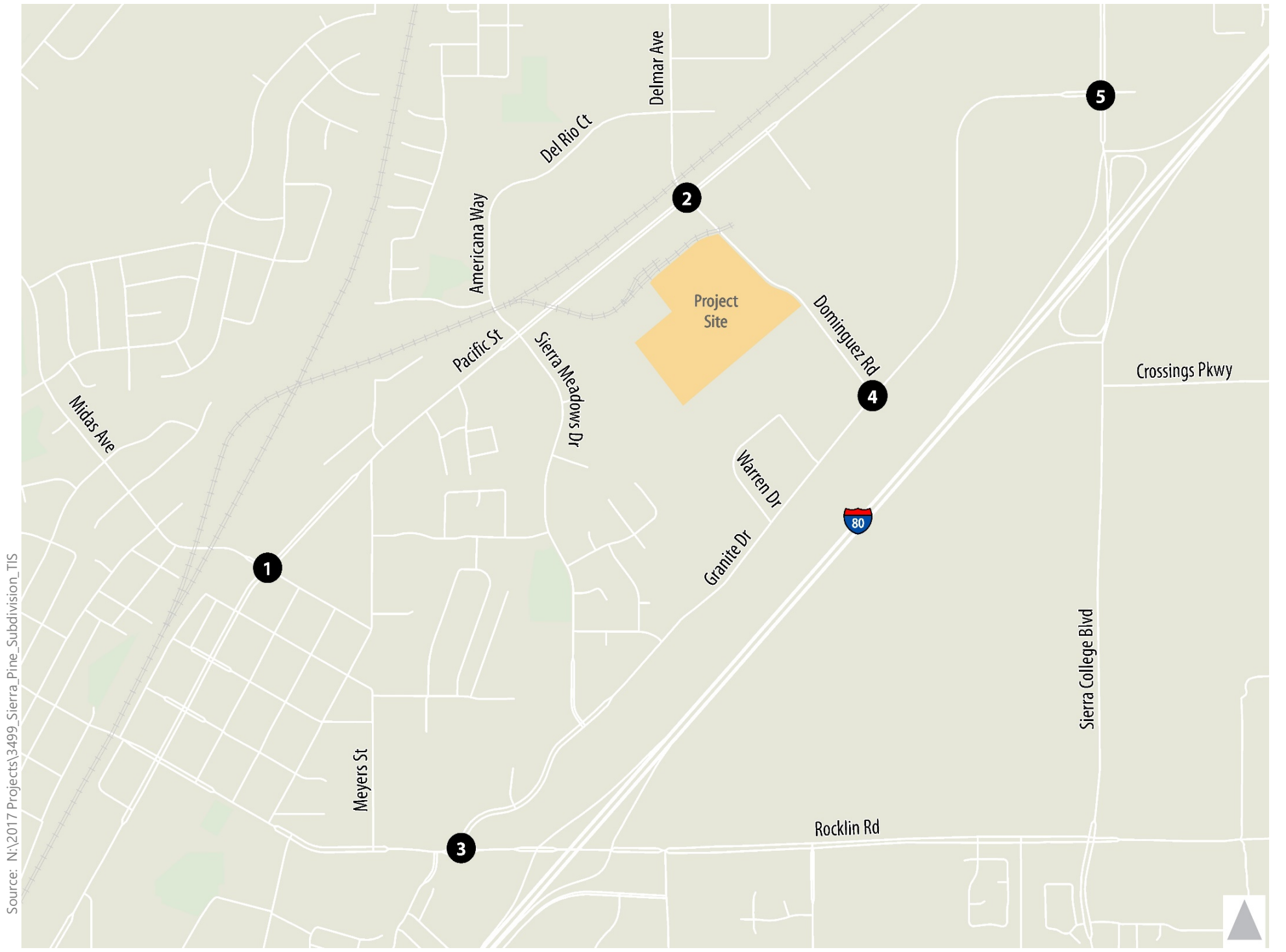
INTERSECTION OPERATIONS

Table 2 displays the existing weekday AM and PM peak hour traffic operations analysis results at the five study intersections (refer to Appendix B for detailed calculations). As shown, all intersections currently operate at LOS C or better during each peak hour. The Granite Drive/Dominguez Road intersection does not currently satisfy the peak hour warrant for consideration of a traffic signal (see Appendix B).

TABLE 2:
PEAK HOUR INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing Conditions	
			Delay[1]	LOS
1. Pacific Street / Midas Avenue	Signal	AM	19	B
		PM	22	C
2. Pacific Street / Dominguez Road	Signal	AM	16	B
		PM	16	B
3. Granite Drive / Rocklin Road	Signal	AM	12	B
		PM	21	C
4. Granite Drive / Dominguez Road	SSSC[2]	AM	3 (12)	A (B)
		PM	3 (14)	A (B)
5. Granite Drive / Sierra College Boulevard	Signal	AM	21	C
		PM	19	B

Notes: [1] Average delay (rounded to the nearest second) and LOS for signalized intersections is the weighted average for all movements.
[2] For side street stop controlled intersections, the weighted average of all movements for delay and LOS is reported, followed by the worst movement (in parentheses).
Source: Fehr & Peers, 2017.



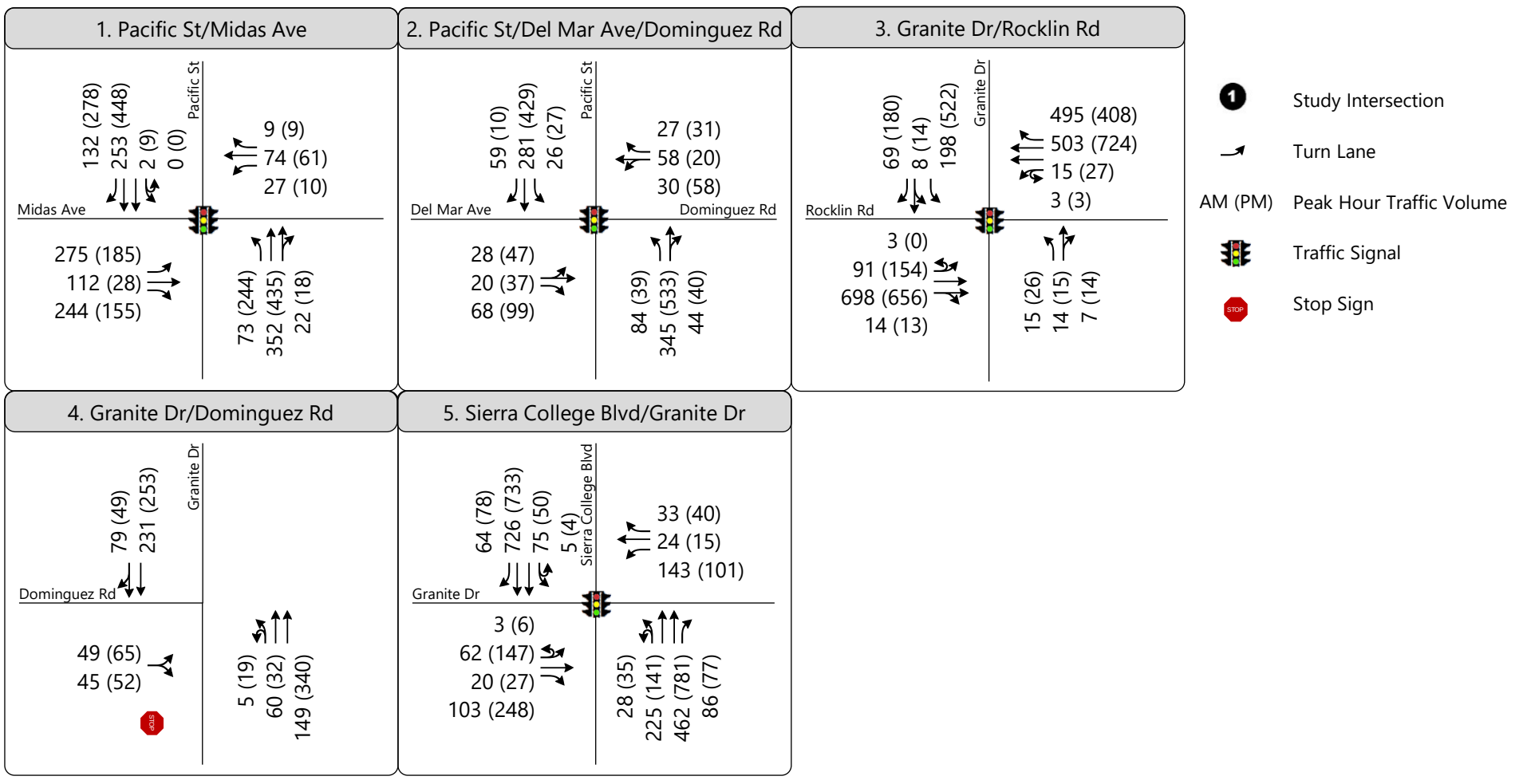


Figure 3

Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

BICYCLE/PEDESTRIAN SYSTEM

Figure 4 displays the existing bicycle facilities located near the project site. As shown, Class II facilities (designated on-street with appropriate signing and striping) exist along portions of Granite Drive and Pacific Street. Bicycle facilities are not present along Dominguez Road nor are there any planned bicycle facilities along Dominguez Road depicted in the General Plan Bikeway Diagram.

Sidewalks are present along the majority of the streets within the project vicinity including all of Dominguez Road (with the exception of the railroad crossing located north of the project site). At signalized intersections, crosswalks with push-button pedestrian activation are present.

TRANSIT SYSTEM

Transit service in the project vicinity is provided by Placer County Transit (PCT). Bus routes operate along Pacific Street, Rocklin Road, Sierra College Boulevard, and Granite Drive, stopping at major destinations such as the Rocklin Commons Retail Center and Sierra College-Rocklin campus. Other bus routes provide commuter express service to downtown Sacramento.

Buses do not currently run along Dominguez Road. The nearest bus stops from the project site are located about 0.5 miles away at Pacific Street and Sierra Meadows, and about 0.7 miles from the site at Granite Drive/Rocklin Commons. Buses on that route operate from about 7:30 AM to 7:30 PM with two-hour headways.

RAIL SYSTEM

An at-grade railroad crossing traverses Dominguez Road approximately 400 feet north of the MDF Products Driveway (which would be opposite the project's primary access). Stop signs are posted on each approach to the railroad crossing. No equipment is present such as gates or warning bells. Advanced pavement markings are present on each approach.

The level of usage of this spur line is not known, but appears infrequent based on multiple sets of field observations. On one occasion, a rail car was observed being loaded at the adjacent MDF Products building.

*Note: Class 2 bicycle lanes presenting both directions of travel unless otherwise noted.

Figure 4

Existing Bicycle/Pedestrian Network

View of at-grade railroad crossing on Dominguez Road

View of rail car being loaded at MDF Products Site on east side of Dominguez Road

III. PROJECT TRAVEL CHARACTERISTICS

This chapter describes the expected travel characteristics of the proposed project.

TRIP GENERATION

Table 3 presents the weekday daily, AM peak hour, and PM peak hour vehicle trip generation of the proposed project based on trip rates published in the *Trip Generation Manual*, *9th Edition* (Institute of Transportation Engineers, 2012) for the single-family detached housing land use (ITE code 210). As shown, the project would generate approximately 1,900 trips per day, with about 150 occurring during the AM peak hour and 200 occurring during the PM peak hour. The majority (75 percent) of AM peak hour trips are outbound, while most (63 percent) percent of PM peak hour trips are inbound.

TABLE 3:
TRIP GENERATION ESTIMATE – PROPOSED PROJECT

Land Use	Units	Trip Rates							Vehicle Trips						
		Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out		Total	In	Out	Total	In	Out
Single Family Residential	199	9.52	0.75	25%	75%	1.00	63%	37%	1,894	149	37	112	199	125	74

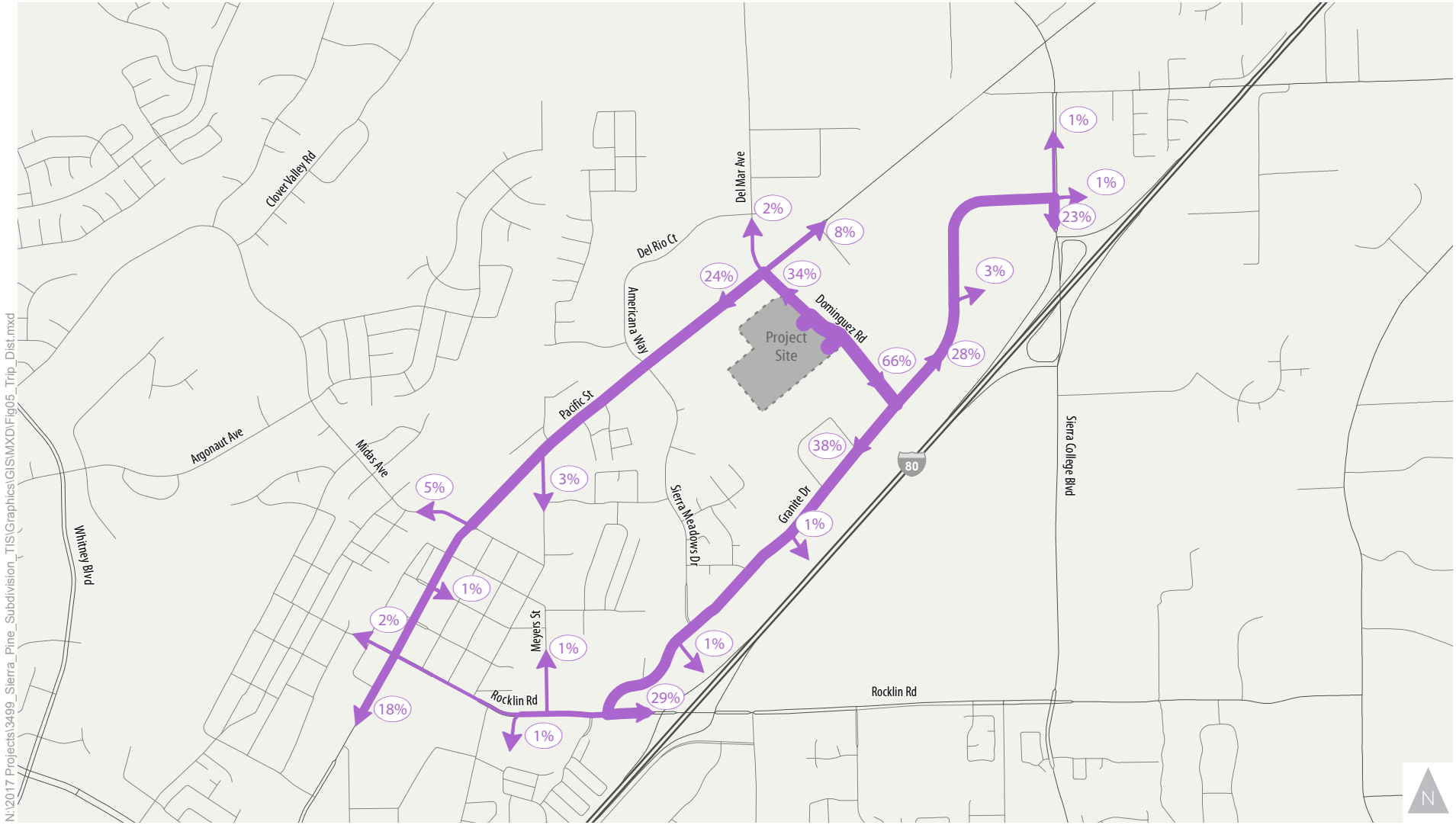
Notes:
[5]Based on trip rates contained in *Trip Generation Manual, 9th Ed.* (Institute of Transportation Engineers, 2012).
Source: Fehr & Peers, 2017.

TRIP DISTRIBUTION CHARACTERISTICS

Figure 5 shows the expected distribution of vehicle trips to and from the project. The trip distribution was developed based on the following data sources:

- Review of existing directional travel patterns to and from nearby housing developments.
- Review of existing travel patterns along Pacific Street and Granite Drive.
- Regional travel patterns including diversion of traffic to Pacific Street to avoid congestion on I-80 and State Route 65.
- Complementary land uses (i.e., employment, retail, and schools) within the study area.
- A 'project-only' traffic assignment from the City of Rocklin base year travel demand model.
- Travel time comparison from Google Maps for routes along Pacific Street or Granite Drive.

Figure 5 shows that about two-thirds of project trips would be distributed to/from the south on Dominguez Road to Granite Drive. This route provides access to I-80 via interchanges at Sierra College Boulevard and Rocklin Road. Of the one-third using Pacific Street, most trips would have origins/destinations west of Rocklin Road (i.e., access to Sunset Boulevard, Taylor Road, etc.). As shown, a portion of trips would be relatively short based on the variety of complementary land uses within the study area (e.g., retail centers, employment, schools, recreation centers, churches, etc.).



xx% Trip Distribution

Figure 5

Project Trip Distribution

IV. EXISTING PLUS PROJECT CONDITIONS

This chapter analyzes the potential impacts of the proposed project on the roadway system under an "existing plus project" conditions.

TRAFFIC FORECASTS

The trip generation presented in Table 3 and the trip distribution shown in Figure 5 shows the expected distribution of vehicle trips to and from the project. The trip distribution was developed based on the following data sources:

- Review of existing directional travel patterns to and from nearby housing developments.
- Review of existing travel patterns along Pacific Street and Granite Drive.
- Regional travel patterns including diversion of traffic to Pacific Street to avoid congestion on I-80 and State Route 65.
- Complementary land uses (i.e., employment, retail, and schools) within the study area.
- A 'project-only' traffic assignment from the City of Rocklin base year travel demand model.
- Travel time comparison from Google Maps for routes along Pacific Street or Granite Drive.

Figure 5 shows that about two-thirds of project trips would be distributed to/from the south on Dominguez Road to Granite Drive. This route provides access to I-80 via interchanges at Sierra College Boulevard and Rocklin Road. Of the one-third using Pacific Street, most trips would have origins/destinations west of Rocklin Road (i.e., access to Sunset Boulevard, Taylor Road, etc.). As shown, a portion of trips would be relatively short based on the variety of complementary land uses within the study area (e.g., retail centers, employment, schools, recreation centers, churches, etc.).

Figure 5 was used to calculate the assignment of project trips. Figure 6 displays the AM and PM peak hour project trip assignment at the study intersections.

Project trips were added to the existing traffic volumes shown in Figure 3. Figure 7 presents the resulting AM and PM peak hour traffic forecasts under existing plus project conditions.

INTERSECTION OPERATIONS

Table 4 displays the average delay and LOS at the study intersections under existing plus project conditions. Refer to Appendix C for technical calculations.

The LOS at all intersections would remain unchanged, though delay would increase slightly at some intersections. The Granite Drive/Dominguez Road intersection would not satisfy the peak hour warrant for consideration of a traffic signal (see Appendix C).

City staff requested that a conceptual roundabout sketch be created at the Granite Drive/Dominguez Road intersection should the intersection reach unacceptable levels and meet the peak hour warrant for consideration of a traffic signal. But since neither criteria is met, a conceptual roundabout sketch and evaluation have not been performed.

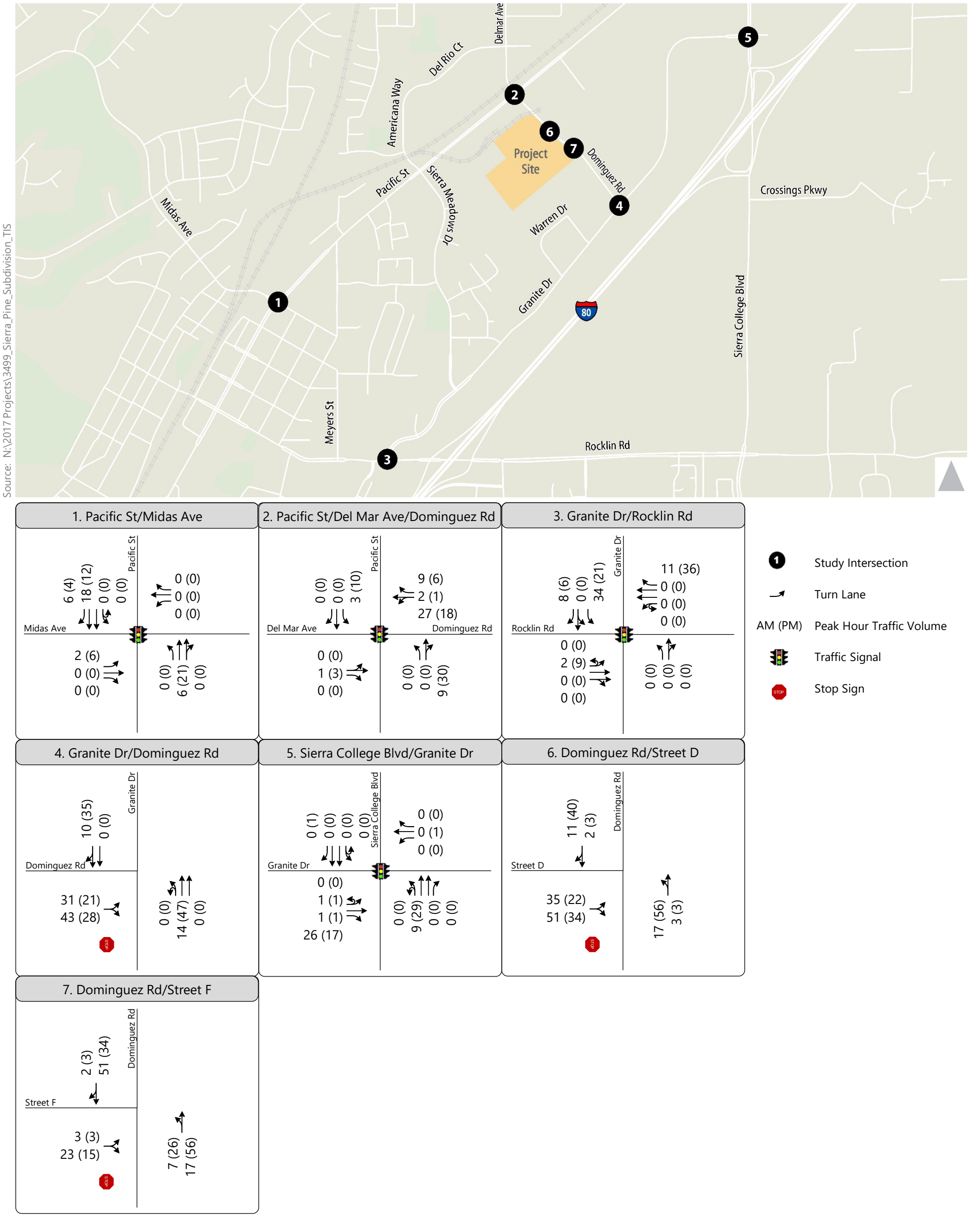


Figure 6

Peak Hour Traffic Volumes and Lane Configurations
Project Only Trips

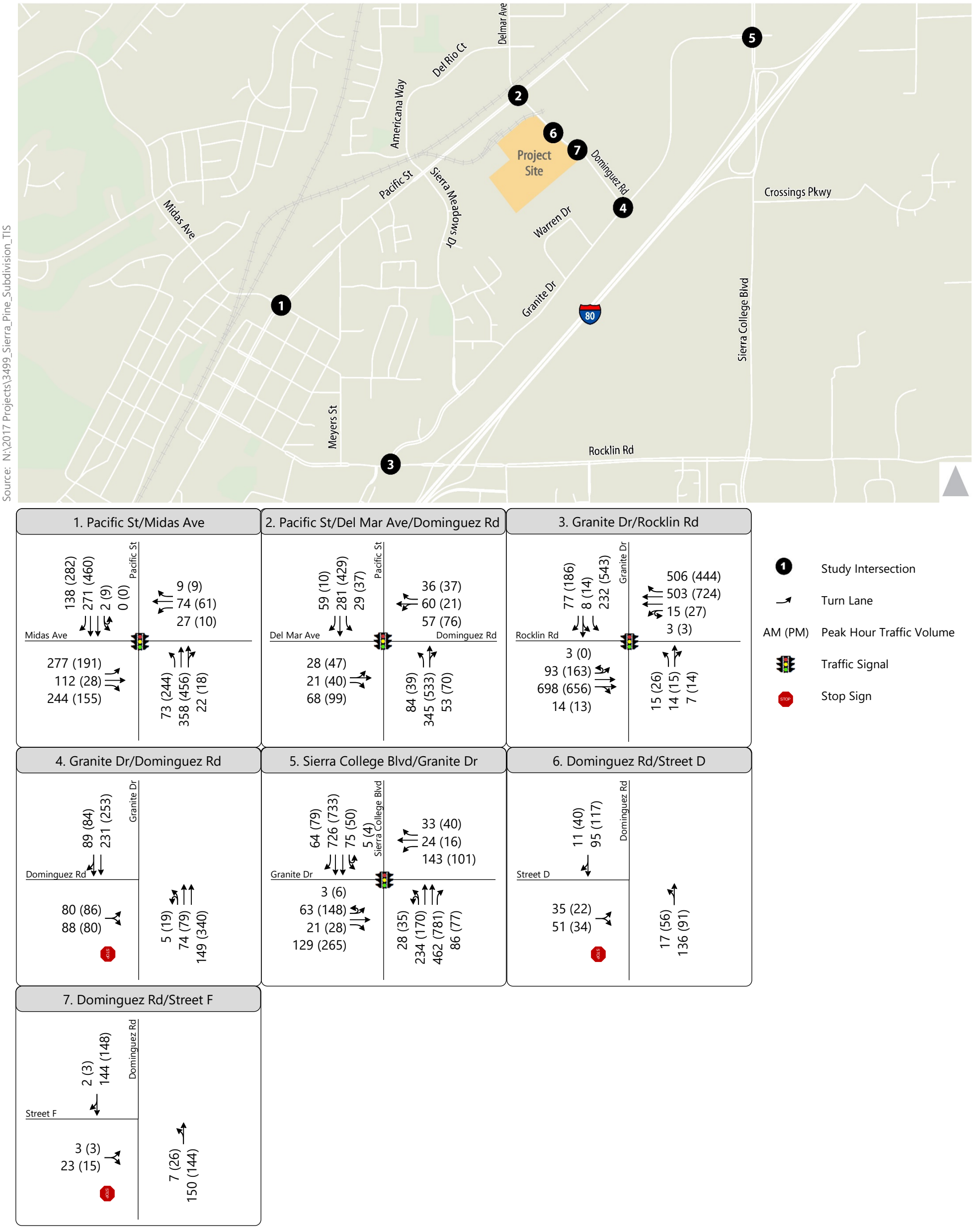


Figure 7

Peak Hour Traffic Volumes and Lane Configurations
Existing Plus Project Conditions

TABLE 4:
PEAK HOUR INTERSECTION OPERATIONS – EXISTING PLUS PROJECT CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing		Existing Plus Project	
			Delay[1]	LOS	Delay[1]	LOS
1. Pacific Street / Midas Avenue	Signal	AM	19	B	19	B
		PM	22	C	22	C
2. Pacific Street / Dominguez Road	Signal	AM	16	B	17	B
		PM	16	B	17	B
3. Granite Drive / Rocklin Road	Signal	AM	12	B	13	B
		PM	21	C	25	C
4. Granite Drive / Dominguez Road	SSSC[2]	AM	3 (12)	A (B)	4 (14)	A (B)
		PM	3 (14)	A (B)	4 (18)	A (C)
5. Granite Drive / Sierra College Boulevard	Signal	AM	21	C	21	C
		PM	19	B	19	B

Notes: [1] Average delay (rounded to the nearest second) and LOS for signalized intersections is the weighted average for all movements.
[2] For side street stop controlled intersections, the weighted average of all movements is reported, followed by worst movement delay and LOS (in parentheses).
Source: Fehr & Peers, 2017.

V. EXISTING PLUS APPROVED PROJECTS PLUS PROJECT CONDITIONS

This chapter analyzes the potential impacts of the proposed project under a scenario that considers development of various approved and pending (but not yet constructed) land development projects in the study area.

APPROVED PROJECTS

City of Rocklin staff provided a list of pending and approved land development projects that should be included for purposes of estimating traffic forecasts for an "existing plus approved projects" scenario. These projects have either already been approved or are pending approval. Since they have not been constructed, their trips are not reflected in the existing volumes. However, it is noted that some of the projects (i.e., Brighton, Rocklin 60, Croftwood Unit 1, Avalon, Parklands) were partly occupied at the time of the 2016 traffic counts. By virtue of adding all of these units to the model, this analysis is therefore considered conservative.

Table 5 displays the list of approved projects. While this list does not include all approved projects in the City of Rocklin, it does represent those projects whose trips may have an effect on traffic volumes at the study intersections. In total, this list includes 1,387 single-family units, 595 multi-family units, and 235,000 square feet of new retail. As noted above, a small number of these uses were occupied when the counts were performed in 2016, but the vast majority were not. It is also worth noting that the ZL Rocklin project is now proposed as 204 multi-family dwelling units and no retail (whereas it was modeled using the approved land uses shown in Table 5).

TRAFFIC FORECASTS

The approved projects shown in Table 5 were added to the base year (2016) version of the City of Rocklin travel demand model. The model was then run and increases in traffic volumes at the study intersections (caused by the addition of these projects) were calculated. Those increases were then added to the existing traffic volumes to yield the "existing plus approved projects" forecasts, which are shown on Figure 8.

Project trips were added to the existing plus approved projects forecasts using the same trip generation and distribution analysis procedures described previously. The resulting "existing plus approved projects plus project" traffic forecasts are shown on Figure 9.

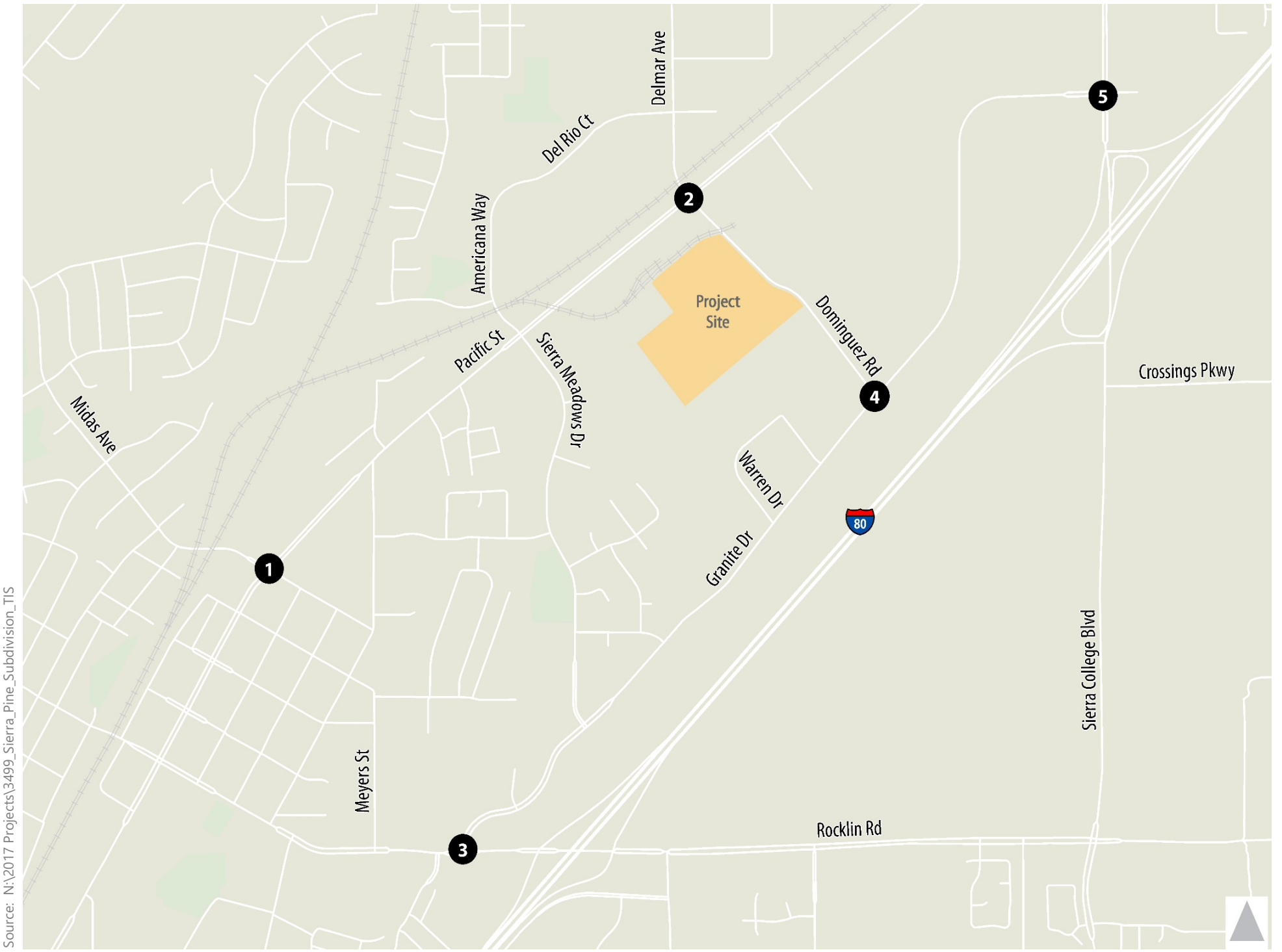
INTERSECTION OPERATIONS

Table 6 displays the average delay and LOS at the study intersections under existing plus approved projects conditions, without and with the proposed project. Refer to Appendix D for technical calculations.

TABLE 5:
APPROVED PROJECTS LIST

Name	Land Use Type/Quantity	Location
Rocklin Crossings	83 ksf retail	SE quadrant of I-80/Sierra College Blvd.
Rocklin Commons	120 ksf retail	NW quadrant of I-80/Sierra College Blvd.
Garnet Creek	81 SF du's and 260 MF du's	On Granite Drive, opposite Target
Granite Dominguez Subdivision	71 SF du's	On Granite Drive, west of Dominguez Rd.
Los Cerros Subdivision	115 SF du's	On ridge along Hillside Dr.
Brighton Subdivision	72 SF du's	NE corner of Granite and Dominguez
Rocklin 60	179 SF du's	Behind Rocklin Crossings along Schriber Way
Croftwood, Unit 1	51 SF du's	East of Schriber Way
Granite Terrace	42 SF du's	Behind Rocklin library
Avalon Subdivision	76 SF du's	On Rocklin Road east of Grove Street
Sierra Gateway Apts	195 MF du's	SE corner of Rocklin Road/Sierra College Blvd.
Clover Valley Residential	558 SF du's	West of Sierra College Boulevard and east of Whitney Oaks
Parklands Subdivision	142 SF du's	North of Pacific Street west of Del Mar Ave.
The Center at Secret Ravine	16 ksf retail	East of Sierra College south Rocklin Crossings
ZL Rocklin	140 MF du's and 16 ksf retail	North of Pacific St, and east of Midas Ave.

Notes: SF = Single-Family. MF = Multi-Family. Du=Dwelling Unit. Ksf = thousand square feet.
Source: Fehr & Peers, 2017.



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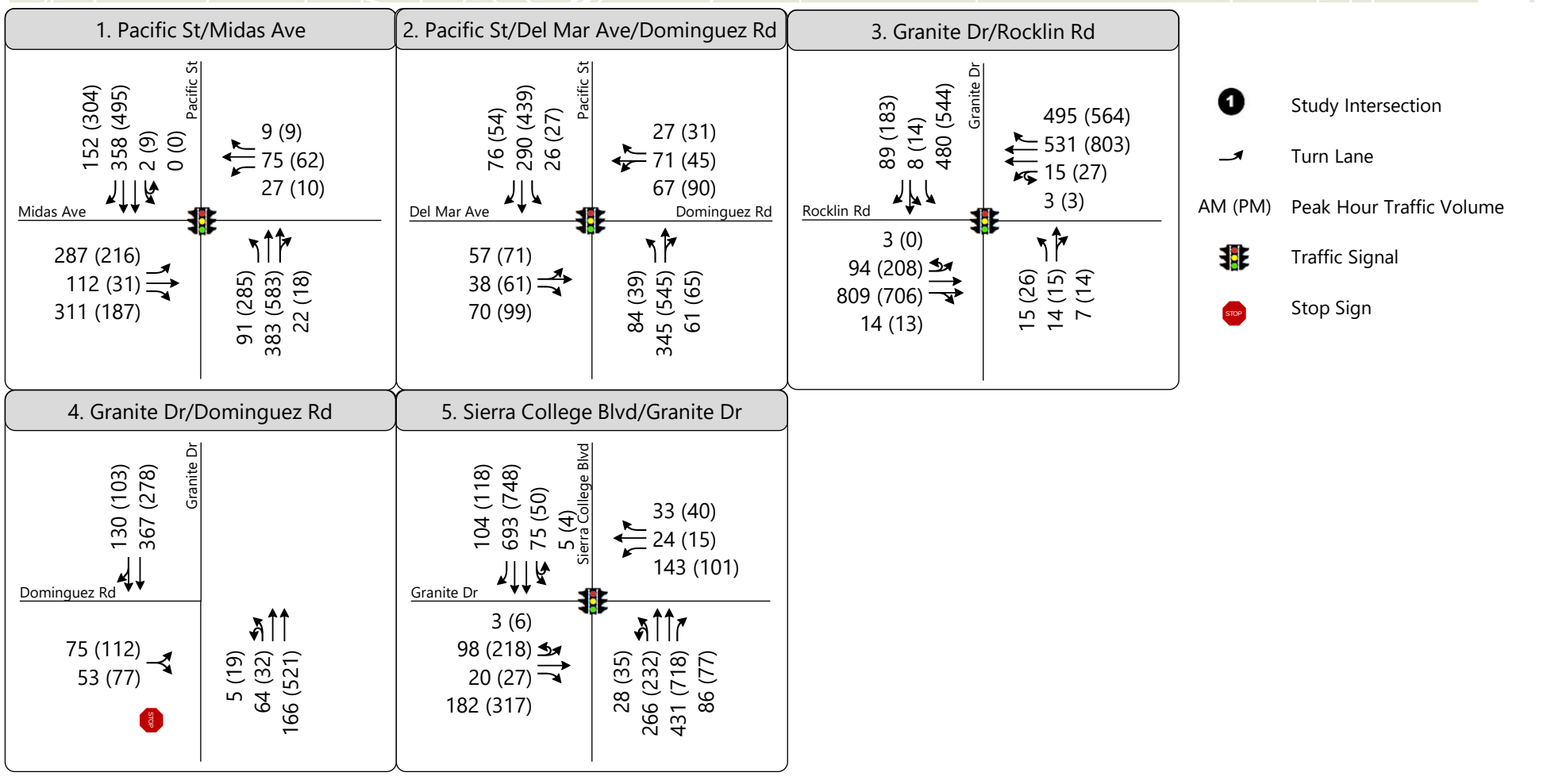


Figure 8

Peak Hour Traffic Volumes and Lane Configurations
Existing Plus Approved Projects Conditions

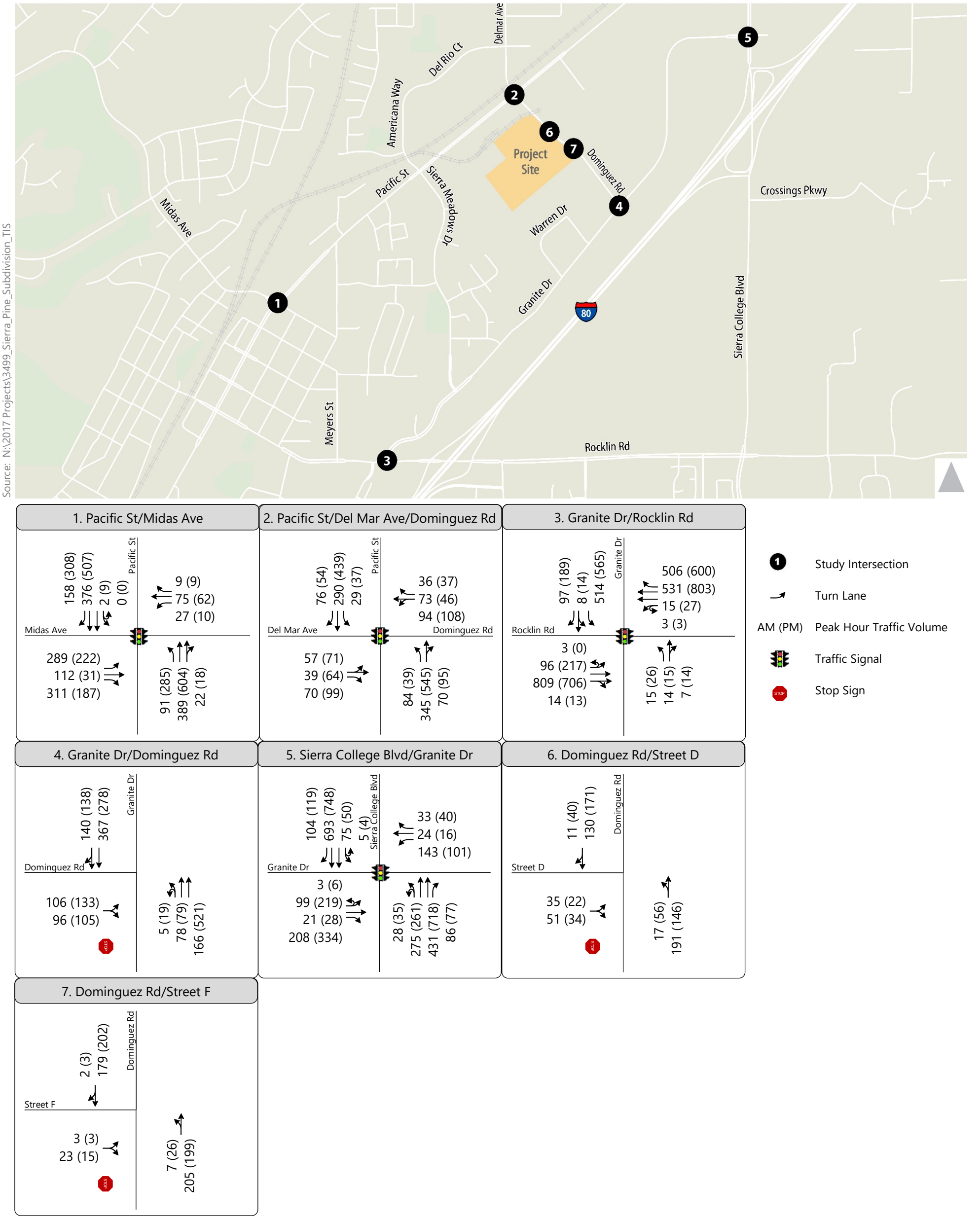


Figure 9

Peak Hour Traffic Volumes and Lane Configurations
Existing Plus Approved Projects Plus Project Conditions

TABLE 6:
PEAK HOUR INTERSECTION OPERATIONS – EXISTING PLUS APPROVED PROJECTS PLUS PROJECT CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing Plus Approved Projects		Existing Plus Approved Projects Plus Project	
			Delay[1]	LOS	Delay[1]	LOS
1. Pacific Street / Midas Avenue	Signal	AM	20	B	19	B
		PM	24	C	24	C
2. Pacific Street / Dominguez Road	Signal	AM	19	B	19	B
		PM	21	C	22	C
3. Granite Drive / Rocklin Road	Signal	AM	18	B	21	C
		PM	30	C	34	C
4. Granite Drive / Dominguez Road	SSSC[2]	AM	3 (17)	A (C)	5 (22)	A (C)
		PM	4 (24)	A (C)	9 (46)	A (E)
5. Granite Drive / Sierra College Boulevard	Signal	AM	22	C	24	C
		PM	24	C	24	C

Notes: [1] Average delay (rounded to the nearest second) and LOS for signalized intersections is the weighted average for all movements.
[2] For side street stop controlled intersections, the weighted average of all movements is reported, followed worst movement delay and LOS (in parentheses).
Source: Fehr & Peers, 2017.

Table 6 shows that all study intersections would continue operating at LOS C or better under existing plus approved projects plus project conditions. The addition of project trips would cause modest increases in average vehicle delay. However, no intersections would worsen from LOS C or better to LOS D or worse.

The project would cause the side-street stop-controlled Dominguez Road approach to Granite Drive to worsen from LOS C to LOS E during the PM peak hour. However, the intersection would not satisfy the peak hour warrant for consideration of a traffic signal (see Appendix D).

VI. CUMULATIVE CONDITIONS

This chapter analyzes the cumulative impacts of the proposed project on the roadway system.

LAND USE AND ROADWAY NETWORK ASSUMPTIONS

The cumulative analysis is based on the version of the City of Rocklin 2030 travel demand model most recently used for the Northwest Rocklin Annexation Area "trip caps" study. The following describes the key roadway network assumptions in the model within the study area:

- The model assumes the extension of Dominguez Road southeasterly from Granite Drive to Sierra College Boulevard (as two lanes) since this roadway extension is included in the City's Circulation Element.
- Additional turn lanes were assumed at signalized study intersections consistent with mitigation measures contained in the *City of Rocklin General Plan* (2011). These improvements can be identified by comparing existing lane configurations on Figure 3 with the cumulative lane configurations shown in this chapter.
- The City's Circulation Element shows an upgrade to the Granite Drive/Dominguez Road intersection in conjunction with the Dominguez Road extension. Although the specific type of improvement at that intersection was not identified, it is reasonable to assume a traffic signal would be installed given the level of cumulative traffic.
- Pacific Street is assumed to be widened to have two continuous lanes in each direction from Midas Avenue to Sierra College Boulevard.
- No additional improvements were assumed at the I-80/Rocklin Road and I-80/Sierra College Boulevard interchanges. However, Rocklin Road and Sierra College Boulevard southeast of I-80 are each assumed to be widened to consist of six continuous travel lanes (including three lanes in each direction on each road passing through the Granite Drive intersection).

The 2030 land use assumptions include buildout of vacant and partially developed parcels throughout Rocklin. It also assumes redevelopment of downtown Rocklin with high-density mixed-use.

TRAFFIC FORECASTS

The traffic forecasting process utilizes the difference method calculation to develop cumulative forecasts. The procedure adds the growth in traffic between the base and future year traffic models to the existing

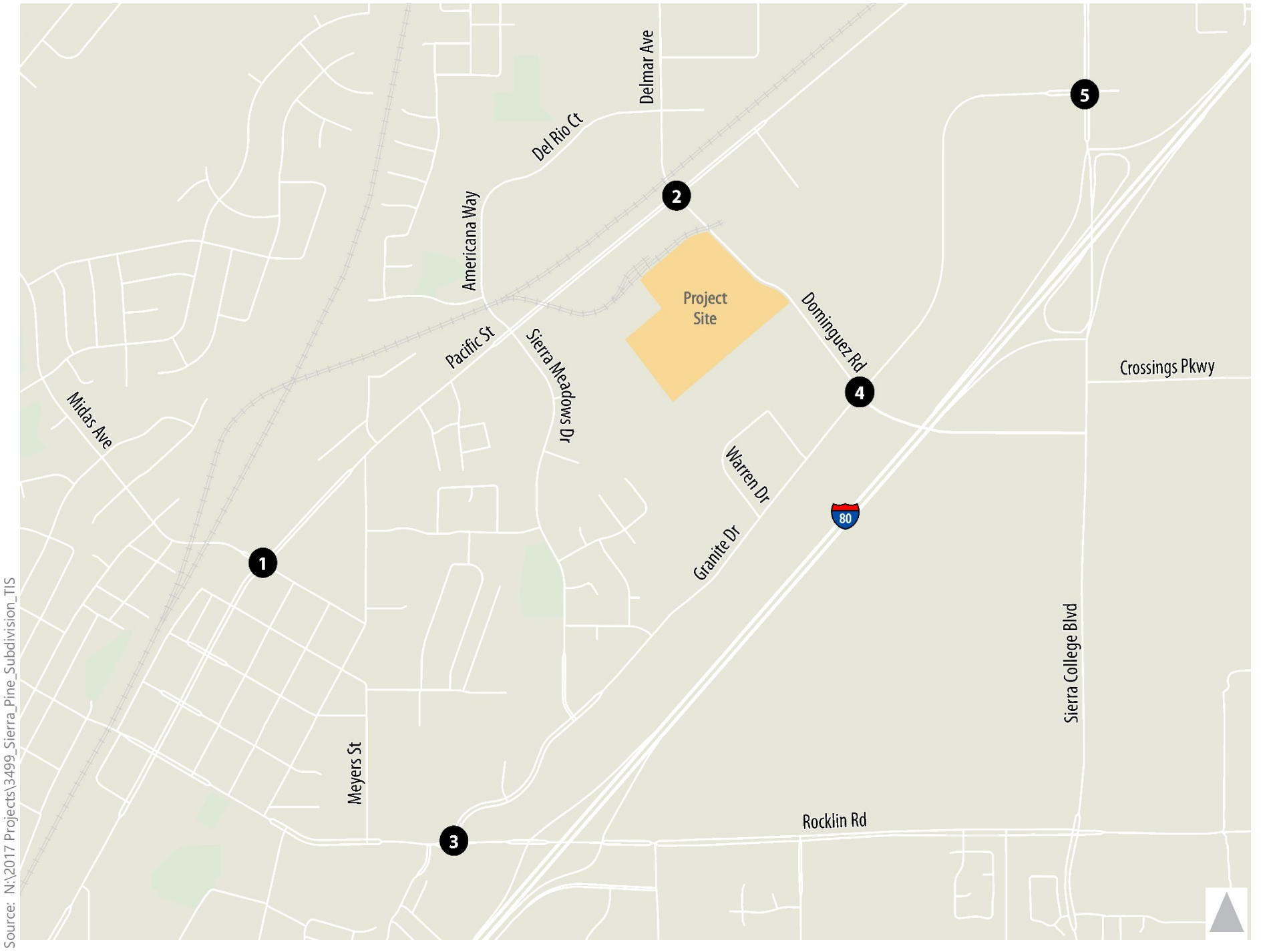
traffic volume. This process accounts for inaccuracies in the base year model, which if not accounted for, would translate into the future year model.

The "no project" scenarios assume no development on the project site. The "proposed project" scenarios assume development of the Sierra Pine project. Figures 10 and 11 display the cumulative AM and PM peak hour traffic forecasts for the no project and plus project scenarios, respectively.

INTERSECTION OPERATIONS

Table 7 displays the average delay and LOS at the study intersections under cumulative conditions, without and with proposed project. Refer to Appendix E for technical calculations. Under cumulative no project conditions, three of the five study intersection would operate at LOS D or worse. The following describes their operating conditions:

- Granite Drive/Rocklin Road (LOS D during PM peak hour) – operations at this intersection worsen to LOS D due to queue spillback from the I-80 WB Ramps/Rocklin Road intersection. As noted previously, this interchange was not assumed to be upgraded. This intersection was analyzed in the General Plan EIR and reported to operate at LOS C based on the same lane configurations assumed in this study.
- Granite Drive/Dominguez Road (LOS D during PM peak hour) – operations are just slightly into the LOS D category based on the level of traffic expected and the assumed lane configurations. This intersection was analyzed in the General Plan EIR and reported to operate at LOS C.
- Granite Drive/Sierra College Boulevard (LOS F during AM and PM peak hours) – operations are at LOS F due to queue spillback from the I-80 WB Ramps/Sierra College Boulevard intersection. Additionally, the heavy eastbound and northbound left-turn movements served by a single lane also contribute to LOS F conditions. This intersection was analyzed in the General Plan EIR and reported to operate at LOS B (though analyzed using a different methodology which contributed to differing results).



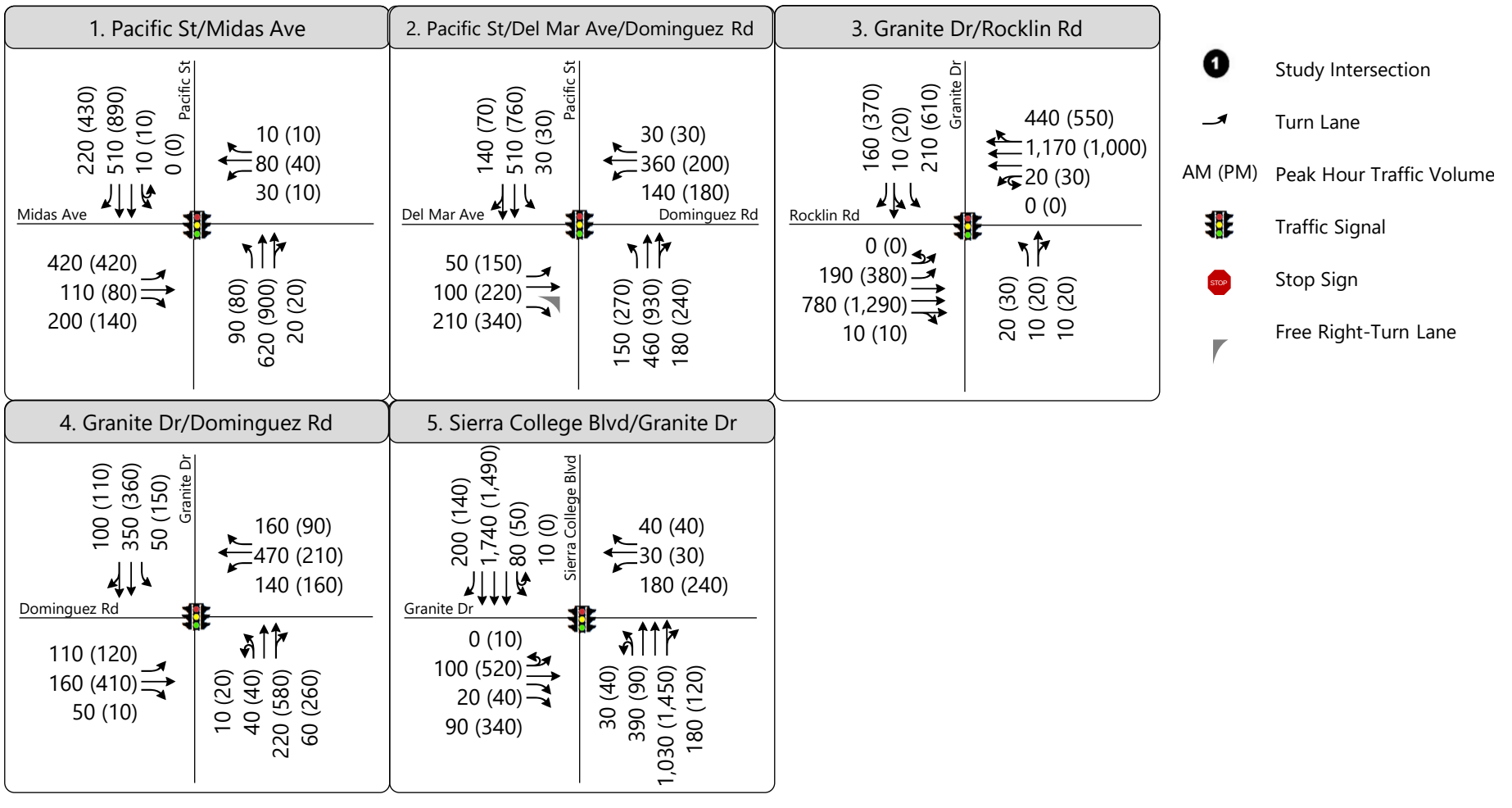


Figure 10

Peak Hour Traffic Volumes and Lane Configurations
Cumulative No Project Conditions

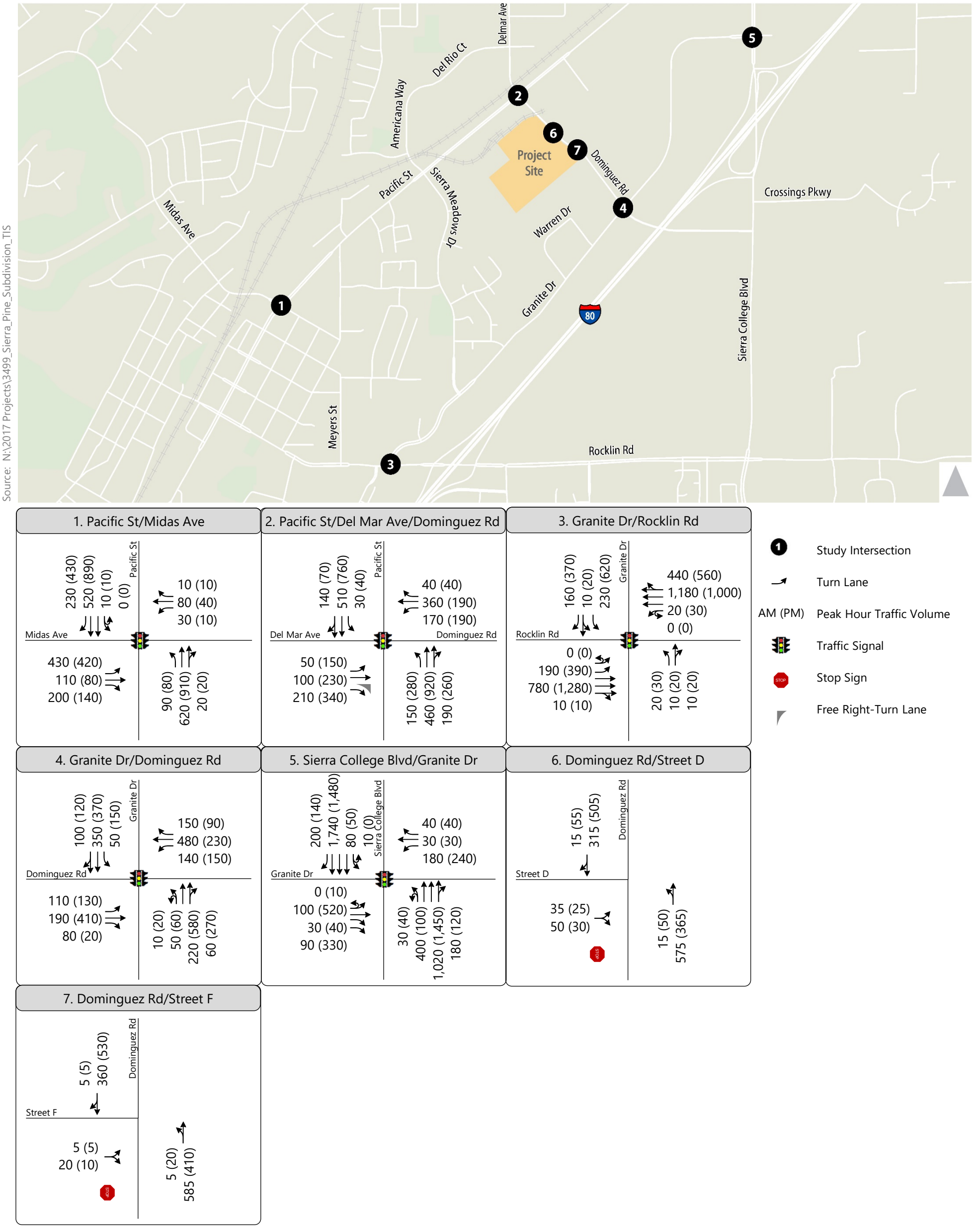


Figure 11

Peak Hour Traffic Volumes and Lane Configurations
Cumulative Plus Project Conditions

The addition of project trips to cumulative no project conditions would not cause any changes in LOS results, and modest (two seconds or less) increases in delay.

The following section in this chapter presents an evaluation of opportunities that are available to achieve LOS C conditions at some of these intersections, as well as constraints that may cause difficulties or preclude the ability to achieve LOS C conditions.

TABLE 7:
PEAK HOUR INTERSECTION OPERATIONS – CUMULATIVE PLUS PROJECT CONDITIONS

Intersection	Traffic Control	Peak Hour	Cumulative No Project		Cumulative Plus Project	
			Delay[1]	LOS	Delay[1]	LOS
1. Pacific Street / Midas Avenue	Signal	AM	26	C	27	C
		PM	25	C	25	C
2. Pacific Street / Dominguez Road	Signal	AM	26	C	27	C
		PM	32	C	34	C
3. Granite Drive / Rocklin Road	Signal	AM	19	B	19	B
		PM	41	D	42	D
4. Granite Drive / Dominguez Road	Signal	AM	23	C	24	C
		PM	38	D	38	D
5. Granite Drive / Sierra College Boulevard	Signal	AM	86	F	85	F
		PM	99	F	99	F

Notes: [1]For signalized intersections and roundabouts, average delay (rounded to the nearest second) and LOS is reported for the weighted average of all movements.
Source: Fehr & Peers, 2017.

OPPORTUNITIES TO ACHIEVE LOS C CONDITIONS

The City of Rocklin General Plan Policy C-10 identifies a goal of maintaining LOS C or better conditions during the PM peak hour. Table 7 indicates that this condition is not likely to be achieved with the current level of assumed improvements under cumulative conditions.

That said, the City is currently revisiting its LOS policies as part of its General Plan Circulation Element update, and with consideration being to adopting a different LOS standard that acknowledges the tradeoffs between a modest travel time savings and the capital cost and ongoing operations and maintenance cost

of additional roadway widening. The City is also revisiting land use assumptions in downtown Rocklin, which will most likely result in less development and fewer trips along Pacific Street.

The following would be necessary to achieve an LOS C condition at selected study intersections under Cumulative Plus Project conditions:

- Granite Drive/Dominguez Road (LOS D during PM peak hour) – Operations could be improved to LOS C by the addition of an eastbound right-turn lane on Granite Drive to accommodate the 270 right-turning vehicles. However, right-of-way (ROW) may not be available for this improvement. Alternatively, a multi-lane roundabout could also be considered. It would operate at LOS C, but would also require ROW acquisition (refer to Appendix C for a sketch that overlays the multi-lane roundabout present at Rocklin Road/Grove Street on top of this intersection.

At the remaining two study intersections that would operate at LOS D or worse under Cumulative Plus Project conditions, opportunities to achieve LOS C conditions are limited by various constraints described below:

- Granite Drive/Rocklin Road (LOS D during PM peak hour) – eastbound traffic at the I-80 WB Ramps/Rocklin Road intersection queues back into this intersection causing LOS D conditions. Some type of interchange upgrade would be required to achieve LOS C conditions. It should be noted that partial funding (approximately 50 percent) is included in the City's CIP for its reconstruction, with the remainder anticipated to be collected from other sources.
- Granite Drive/Sierra College Boulevard (LOS F during AM and PM peak hours) – Even if the eastbound and westbound approaches had reconfigured lane assignments to better match demand and this signal was coordinated with the interchange ramp signals, operations would not return to LOS C. To achieve LOS C, a second northbound left-turn lane would be needed to accommodate the AM peak hour volume of 430 vehicles. It may be possible to provide this additional lane through lane restriping (and removal of Class II bike lanes). Alternatively, widening of Sierra College Boulevard to the east or west would be needed.

As shown in Appendix A, four of the five study intersections are reported to operate at LOS C or better during each peak hour under Cumulative Plus Project conditions using the "Circular 212" methodology. The Granite Drive/Sierra College Boulevard intersection is reported to operate at LOS D during the AM and PM peak hours. As is described previously, these different analysis methodologies result in these different outcomes. Whereas Circular 212 evaluates conditions over the entire peak hour and does not consider queue spillbacks that affect upstream intersections, the HCM methodology analyzes conditions during the busiest 15-minutes and considers the effect of queue spillbacks. The HCM results are considered more accurate and state-of-the-practice.

VII. OTHER CONSIDERATIONS

This chapter presents a variety of other information relating to daily traffic conditions, vehicles miles of travel, recommended cross-section of Dominguez Road, trip generation comparison, and review of project access.

ADT ON DOMINGUEZ ROAD

Table 8 displays the average daily traffic (ADT) on Dominguez Road along the project frontage for all analysis scenarios. This information is provided for informational purposes, but is also an important consideration when evaluating its ultimate street cross-section.

TABLE 8:
AVERAGE DAILY TRAFFIC ON DOMINGUEZ ROAD ALONG PROJECT FRONTAGE

Scenario	Average Daily Traffic (ADT) [2]	
	On Dominguez Road north of Street D	On Dominguez Road south of Street F
Existing Conditions[1]	2,500	2,500
Existing Plus Project Conditions	3,150	3,750
Existing Plus Approved Projects Conditions	3,500	3,500
Existing Plus Approved Projects Plus Project Conditions	4,150	4,750
Cumulative No Project Conditions	12,400	12,400
Cumulative Plus Project Conditions	12,900	13,200

Notes: [1] Estimated based on AM and PM peak hour volume using a 0.18 k-factor (i.e., ratio of AM+PM peak hour to daily traffic).
[2] Refer to previous chapter for process used to develop forecasting for future year scenarios and project trips.
Values rounded to the nearest 50 vehicles.
Fehr & Peers, 2017.

RECOMMENDED CROSS-SECTION OF DOMINGUEZ ROAD

This section contains recommendations for reconfiguring Dominguez Road from the south of the railroad spur to the southerly limits of the project site. The recommendations consider the need to provide access to the project site, accommodate through travel, and maintain access to the existing uses on the east side of the street.

Dominguez Road has an approximate width of 46 feet, measured from face of curb to face of curb along the project frontage. It currently consists of on-street parallel parking and one travel lane in each direction. Curb, gutter, and sidewalks are present on both sides of the street. The following cross-section is recommended along the project frontage (see Figure 12):

- 6-foot Class II bike lane and 11.5-foot travel lane in each direction, separated by an 11-foot two-way left-turn lane.

This recommendation has been made in consideration of the following:

1. Need for Two-Way Left-Turn Lane (TWLTL): As shown on Figure 7, the project's main access (Street D) would serve 56 northbound left-turns during the PM peak hour. Additional left-turns would be would be made from driveways on the east side of the street, as well as the project's southerly access (Street F). Given that Dominguez Road carries over 200 through vehicles during each peak hour, a TWLTL is the preferred solution for serving left-turns while minimizing disruptions to through traffic (that would otherwise be caused by left-turns being made from a through lane).
2. Accommodation of Bicycle Travel: The City of Rocklin General Plan Bikeway Diagram does not show any planned bicycle facilities along Dominguez Road. However, that plan was likely developed prior to the current proposal to rezone the project site from light industrial to residential. It would be desirable to provide bicycle facilities that enable connections with the Class I and II bicycle facilities located along Granite Drive and Pacific Street.
3. Cumulative Conditions: Traffic volumes on Dominguez Road along the project frontage would increase substantially reaching just over 12,000 vehicles per day. These volumes are better served by the recommended three-lane cross-section versus the current configuration.
4. Loss of On-Street Parking: The recommended configuration would result in the removal 12 on-street parking spaces on east side and 13 on-street spaces on the west side of the street. Field observations revealed that vehicles occasionally park in the spaces on the east side of the street. Since these vehicles are presumably associated with adjacent businesses, those vehicles would instead need to be parked off-street.

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Recommended Cross-Section:

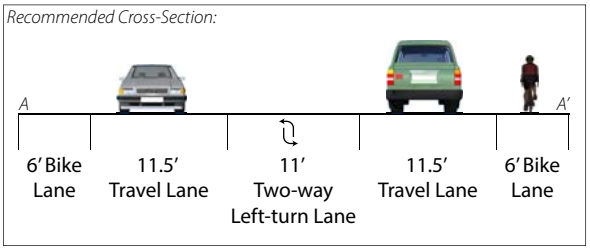

Figure 12

Recommended Cross-Section of Dominguez Road along Project Frontage

It should be noted that an alternative scenario for maintaining on-street parking on the east side of Dominguez Road was developed, but dismissed. This scenario would have consisted of a 12-foot protected two-way Class IV bikeway (cycle track) on the west side, two 13-foot travel lanes, and 8-foot parking lane on the east side. It was ultimately removed from further consideration because left-turning traffic would need to turn from a through lane, which would cause operational issues due to the level of through traffic.

Because travel speeds are relatively low along Dominguez Road, right-turn deceleration lanes are not necessary at the project accesses. Stop-control is recommended on the Street D and F approaches to Dominguez Road.

TRIP GENERATION COMPARISON

Table 9 compares the trip generation of the proposed project versus the trip generation potential of the vacant property if it were to be redeveloped in accordance with its current heavy industrial zoning. The analysis employs a 30 percent floor-to-area ratio based on the 28.4-acres of vacant land. Trip rates for the General Heavy Industrial (ITE Code 120) land use category from the *Trip Generation Manual*, *9th Edition* (Institute of Transportation Engineers, 2012) were used for the comparison.

As shown, the proposed project would generate approximately 1,337 more daily trips, but 40 fewer AM peak hour trips and 53 fewer PM peak hour trips than the existing Heavy Industrial zoning.

TABLE 9:
TRIP GENERATION COMPARISON

Land Use	Units	Trip Rates [1]							Vehicle Trips						
		Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out		Total	In	Out	Total	In	Out
Single Family Residential	199 du's	9.52	0.75	25%	75%	1.00	63%	37%	1,894	149	37	112	199	125	74
Heavy Industrial	371.1 ksf	1.50	0.51	88%	12%	0.68	12%	88%	557	189	166	23	252	30	222
							Difference		+1,337	-40	-129	+89	-53	+95	-148

Notes:
[1] Based on trip rates contained in *Trip Generation Manual, 9th Ed.* (Institute of Transportation Engineers, 2012).
Source: Fehr & Peers, 2017.

VMT CALCULATIONS

This section describes the methodology used to calculate the average weekday Vehicle Miles of Travel (VMT) associated with the proposed project. VMT is presented for informational purposes in this study. However, the values shown here may be used as inputs to other technical studies such as air quality, noise, and greenhouse gas emissions.

VMT is considered a useful metric in understanding of the overall impacts of a project on the transportation system. VMT is often expressed on a 'per unit", "per capita", or "per employee" basis to understand the relative efficiency of one project versus another. By definition, one VMT occurs when a vehicle is driven one mile. In addition, a given VMT value represents vehicular miles of travel for an entire weekday. Lastly, VMT values in this chapter represent the full length of a given trip, and are not truncated at city, county, or region boundaries.

To estimate the project's VMT, the project was input into the recently developed City of Rocklin base year (2016) travel demand model. The model was run, and all travel to/from the traffic analysis zone (TAZ) representing the project were tracked throughout model. The model estimated that the project would generate 12,915 VMT, which equates to about 65 VMT per dwelling unit.

This section describes the methodology used to calculate the average weekday Vehicle Miles of Travel (VMT) associated with the proposed project under cumulative conditions. To estimate the project's VMT, the project was input into the 2030 City of Rocklin travel demand model. The model was run, and all travel to/from the traffic analysis zone (TAZ) representing the project was tracked throughout model. Following are the results:

- Project VMT under cumulative conditions = 9,018 VMT (45 VMT per unit).

The decrease in project VMT under cumulative conditions is likely caused by the addition of new complementary land uses in the project vicinity such as additional retail at I-80/Sierra College Boulevard interchange, and employment opportunities in downtown.

VIII. IMPACTS AND MITIGATION MEASURES

This chapter evaluates the significance of project impacts under existing plus project and cumulative conditions using the thresholds of significance described in the Introduction chapter.

PROJECT-SPECIFIC IMPACTS

EVALUATION OF INTERSECTION IMPACTS

According to Tables 4 and 6, the proposed project would not cause any study intersections to worsen to an unacceptable level under existing plus project or existing plus approved projects plus project conditions. This conclusion is true regardless of whether the HCM methodologies presented in this report are used as the basis for identifying impacts, or whether the "Circular 212" methodology (whose results are shown in Appendix A) are used. Therefore, impacts to the City of Rocklin roadway system are considered less-than-significant and no mitigation is required.

EVALUATION OF BICYCLE IMPACTS

The project would not preclude construction of any planned bicycle facilities as identified in the City of Rocklin General Plan Bikeway Diagram. Policy C-55 of the *City of Rocklin General Plan* states that the City shall "require Class II bike lanes in the design and construction of major new streets and to establish bike lanes on those City streets that are wide enough to accommodate bicycles safely". Since the project does not conflict with the City of Rocklin General Plan Bikeway Diagram, this impact is considered less than significant. However, Dominguez Road has adequate width to accommodate Class II bike lanes. See Figure 12 for illustration of how they could be added.

EVALUATION OF PEDESTRIAN IMPACTS

The project would not be in conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the City's pedestrian system. The project would include a continuous sidewalk along its frontage on Dominguez Road. Project impacts to pedestrian facilities are considered less-than-significant and no mitigation is required.

EVALUATION OF TRANSIT IMPACTS

The project would not be in conflict with an applicable plan, ordinance or policy establishing measures of effectiveness relating to transit within the City of Rocklin. The project would not disrupt any existing transit operations. Therefore, project impacts to transit facilities are considered less-than-significant and no mitigation is required.

EVALUATION OF IMPACTS DUE TO HAZARDOUS DESIGN FEATURES

The project would add 650 vehicles per day to the at-grade railroad spur located on Dominguez Road north of the project site. This would represent a 26 percent increase over existing conditions. The resulting volumes would not exceed the capacity of the all-way stop (i.e., a stop sign is posted in each direction of Dominguez Road at the crossing). However, the crossing does not have typical railroad crossing equipment such as crossing arms and flashing lights. As noted previously, the volume of rail traffic is not currently known but considered to be modest given field observations and the function of this spur line. Since the City has not identified an accident history at this location, and has not received complaints or calls for service at this location, and given that the project would not cause adverse queuing or delays at the crossing, this impact is considered less-than-significant and no mitigation is required.

EVALUATION OF IMPACTS DUE TO INADEQUATE EMERGENCY ACCESS

A Rocklin Fire Station is located on Rocklin Road between Pacific Street and Grove Street. Emergency vehicles from this station would require a three-minute drive to access the project site via either of two possible routes. Emergency vehicle pre-emption devices are present on the majority of traffic signals along each route. Therefore, this impact is considered less-than-significant and no mitigation is required.

CUMULATIVELY CONSIDERABLE IMPACTS

EVALUATION OF INTERSECTION IMPACTS

According to Table 7, the proposed project would not cause any cumulative intersection operations to degrade from acceptable to unacceptable. However, it would add traffic to four intersections that would operate unacceptably under "no project" conditions. Because the project would not cause a five percent or greater increase in the total amount of traffic at any of these intersections, impacts would be less than cumulatively considerable and no mitigation is required.

EVALUATION OF BICYCLE IMPACTS

The project would not preclude construction of any planned bicycle facilities as identified in the City of Rocklin General Plan Bikeway Diagram. Policy C-55 of the *City of Rocklin General Plan* states that the City shall "require Class II bike lanes in the design and construction of major new streets and to establish bike lanes on those City streets that are wide enough to accommodate bicycles safely". Since the project does not conflict with the City of Rocklin General Plan Bikeway Diagram, this impact is considered less than cumulatively considerable. However, Dominguez Road has adequate width to accommodate Class II bike lanes. See Figure 12 for illustration of how they could be added.

EVALUATION OF PEDESTRIAN IMPACTS

The project would not be in conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the City's pedestrian system. The project would include a continuous sidewalk along its frontage on Dominguez Road. Project impacts to pedestrian facilities are considered less than cumulatively considerable and no mitigation is required.

EVALUATION OF TRANSIT IMPACTS

The project would not be in conflict with an applicable plan, ordinance or policy establishing measures of effectiveness relating to transit within the City of Rocklin. The project would not disrupt any existing or planned transit operations. Therefore, project impacts to transit facilities are considered less than cumulatively considerable and no mitigation is required.

EVALUATION OF IMPACTS DUE TO HAZARDOUS DESIGN FEATURES

The project would not cause a cumulative considerable impact at the at-grade railroad spur crossing of Dominguez Road north of the project site. If Dominguez Road is extended over I-80 to Sierra College Boulevard, the resulting volume on this crossing would be over 12,000 ADT. Since this level of traffic would not function adequately with stop-control on each approach to the crossing, an alternative strategy would be necessary. The most likely solution would be to upgrade the crossing arms/warning lights and remove the stop signs. If the Dominguez Road extension was not constructed, this improvement would most likely not be needed. This impact is considered less than cumulatively considerable and no mitigation is required.

EVALUATION OF IMPACTS DUE TO INADEQUATE EMERGENCY ACCESS

A Rocklin Fire Station is located on Rocklin Road between Pacific Street and Grove Street. Emergency vehicles from this station would require a three-minute drive to access the project site via either of two possible routes. Emergency vehicle pre-emption devices are present on the majority of traffic signals along each route. Therefore, this impact is considered less than cumulatively considerable and no mitigation is required.

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APPENDIX A:
CIRCULAR 212 INTERSECTION LOS CALCULATIONS (ALL SCENARIOS)

Sierra Pine Subdivision TIS
Circular 212 Signalized Intersection LOS Summary

ID	Intersection	Control Type	Analysis Type	LOS - V/C							
				Existing				Existing Plus Project			
				AM		PM		AM		PM	
2	Pacific Street / Midas Avenue	Signal	Circular 212	A	0.385	A	0.501	A	0.393	A	0.509
3	Pacific Street / Dominguez Road	Signal	Circular 212	A	0.391	A	0.531	A	0.420	A	0.573
4	Granite Drive / Rocklin Road	Signal	Circular 212	A	0.343	A	0.568	A	0.355	A	0.582
5	Granite Drive / Dominguez Road	SSSC[1]	-	-	-	-	-	-	-	-	-
6	Granite Drive / Sierra College Boulevard	Signal	Circular 212	A	0.571	A	0.566	A	0.592	A	0.596

Notes: [1]Granite Drive/Dominguez Road has side-street stop control, except for under Cumulative No Project and Cumulative Plus Project where the intersection is analyzed with signalized control.

Sierra Pine Subdivision TIS
Circular 212 Signalized Intersection LOS Summary

ID	Intersection	Control Type	Analysis Type	LOS - V/C							
				Existing Plus Approved Projects No Project				Existing Plus Approved Projects Plus Project			
				AM		PM		AM		PM	
2	Pacific Street / Midas Avenue	Signal	Circular 212	A	0.444	A	0.569	A	0.451	A	0.577
3	Pacific Street / Dominguez Road	Signal	Circular 212	A	0.467	A	0.597	A	0.496	B	0.639
4	Granite Drive / Rocklin Road	Signal	Circular 212	A	0.483	B	0.642	A	0.495	B	0.655
5	Granite Drive / Dominguez Road	SSSC[1]	-	-	-	-	-	-	-	-	-
6	Granite Drive / Sierra College Boulevard	Signal	Circular 212	B	0.652	B	0.699	B	0.673	C	0.728

Notes: [1]Granite Drive/Dominguez Road has side-street stop control, except for under Cumulative No Project and Cumulative Plus Project where the intersection is analyzed with signalized control.

Sierra Pine Subdivision TIS
Circular 212 Signalized Intersection LOS Summary

ID	Intersection	Control Type	Analysis Type	LOS - V/C							
				Cumulative No Project				Cumulative Plus Project			
				AM		PM		AM		PM	
2	Pacific Street / Midas Avenue	Signal	Circular 212	A	0.593	B	0.691	B	0.604	B	0.691
3	Pacific Street / Dominguez Road	Signal	Circular 212	B	0.656	C	0.775	B	0.656	C	0.782
4	Granite Drive / Rocklin Road	Signal	Circular 212	A	0.547	C	0.761	A	0.549	C	0.775
5	Granite Drive / Dominguez Road	SSSC[1]	-	B	0.600	C	0.800	B	0.614	C	0.796
6	Granite Drive / Sierra College Boulevard	Signal	Circular 212	D	0.853	D	0.834	D	0.86	D	0.839

Notes: [1]Granite Drive/Dominguez Road has side-street stop control, except for under Cumulative No Project and Cumulative Plus Project where the intersection is analyzed with signalized control.

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	73	352	22	2	253	132	275	112	244	27	74	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	352	22	2	253	132	275	112	244	27	74	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	18	88	6	1	63	26	69	28	49	7	19	2
Total Analysis Volume [veh/h]	73	352	22	2	253	106	275	112	195	27	74	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.391

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	84	345	44	26	281	59	28	20	68	30	58	27
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	345	44	26	281	59	28	20	68	30	58	27
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	21	86	11	7	70	12	7	5	14	8	15	5
Total Analysis Volume [veh/h]	84	345	44	26	281	47	28	20	54	30	58	22
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.343

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	15	14	7	198	8	69	91	698	14	15	503	495
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	14	7	198	8	69	91	698	14	15	503	495
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	4	4	2	50	2	14	23	175	4	4	126	0
Total Analysis Volume [veh/h]	15	14	7	198	8	55	91	698	14	15	503	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	225	462	86	75	726	64	62	20	103	143	24	33
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	225	462	86	75	726	64	62	20	103	143	24	33
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	56	116	17	19	182	13	16	5	21	36	6	7
Total Analysis Volume [veh/h]	225	462	69	75	726	51	62	20	82	143	24	26
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	244	435	18	9	448	278	185	28	155	10	61	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	244	435	18	9	448	278	185	28	155	10	61	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	61	109	5	2	112	56	46	7	31	3	15	2
Total Analysis Volume [veh/h]	244	435	18	9	448	222	185	28	124	10	61	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	39	533	40	27	429	10	47	37	99	58	20	31
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	533	40	27	429	10	47	37	99	58	20	31
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	10	133	10	7	107	2	12	9	20	15	5	6
Total Analysis Volume [veh/h]	39	533	40	27	429	8	47	37	79	58	20	25
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	26	15	14	522	14	180	154	656	13	27	724	408
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	15	14	522	14	180	154	656	13	27	724	408
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	7	4	4	131	4	36	39	164	3	7	181	0
Total Analysis Volume [veh/h]	26	15	14	522	14	144	154	656	13	27	724	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.566

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	141	781	77	50	733	78	147	27	248	101	15	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	781	77	50	733	78	147	27	248	101	15	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	35	195	15	13	183	16	37	7	50	25	4	8
Total Analysis Volume [veh/h]	141	781	62	50	733	62	147	27	198	101	15	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	73	358	22	2	271	138	277	112	244	27	74	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	358	22	2	271	138	277	112	244	27	74	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	18	90	6	1	68	28	69	28	49	7	19	2
Total Analysis Volume [veh/h]	73	358	22	2	271	110	277	112	195	27	74	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.420

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	84	345	53	29	281	59	28	21	68	57	60	36
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	345	53	29	281	59	28	21	68	57	60	36
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	21	86	13	7	70	12	7	5	14	14	15	7
Total Analysis Volume [veh/h]	84	345	53	29	281	47	28	21	54	57	60	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.355

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	15	14	7	232	8	77	93	698	14	15	503	506
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	14	7	232	8	77	93	698	14	15	503	506
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	4	4	2	58	2	15	23	175	4	4	126	0
Total Analysis Volume [veh/h]	15	14	7	232	8	62	93	698	14	15	503	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	234	462	86	75	726	64	63	21	129	143	24	33
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	234	462	86	75	726	64	63	21	129	143	24	33
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	59	116	17	19	182	13	16	5	26	36	6	7
Total Analysis Volume [veh/h]	234	462	69	75	726	51	63	21	103	143	24	26
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	244	456	18	9	460	282	191	28	155	10	61	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	244	456	18	9	460	282	191	28	155	10	61	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	61	114	5	2	115	56	48	7	31	3	15	2
Total Analysis Volume [veh/h]	244	456	18	9	460	226	191	28	124	10	61	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	39	533	70	37	429	10	47	40	99	76	21	37
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	533	70	37	429	10	47	40	99	76	21	37
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	10	133	18	9	107	2	12	10	20	19	5	7
Total Analysis Volume [veh/h]	39	533	70	37	429	8	47	40	79	76	21	30
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	26	15	14	543	14	186	163	656	13	27	724	444
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	15	14	543	14	186	163	656	13	27	724	444
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	7	4	4	136	4	37	41	164	3	7	181	0
Total Analysis Volume [veh/h]	26	15	14	543	14	149	163	656	13	27	724	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	170	781	77	50	733	79	148	28	265	101	16	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	781	77	50	733	79	148	28	265	101	16	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	43	195	15	13	183	16	37	7	53	25	4	8
Total Analysis Volume [veh/h]	170	781	62	50	733	63	148	28	212	101	16	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.444

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	91	383	22	2	358	152	287	112	311	27	75	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	383	22	2	358	152	287	112	311	27	75	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	23	96	6	1	90	30	72	28	62	7	19	2
Total Analysis Volume [veh/h]	91	383	22	2	358	122	287	112	249	27	75	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	84	345	61	26	290	76	57	38	70	67	71	27
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	345	61	26	290	76	57	38	70	67	71	27
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	21	86	15	7	73	15	14	10	14	17	18	5
Total Analysis Volume [veh/h]	84	345	61	26	290	61	57	38	56	67	71	22
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	15	14	7	480	8	89	97	809	14	18	531	495
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	14	7	480	8	89	97	809	14	18	531	495
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	4	4	2	120	2	18	24	202	4	5	133	0
Total Analysis Volume [veh/h]	15	14	7	480	8	71	97	809	14	18	531	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	294	431	86	80	693	104	101	20	182	143	24	33
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	294	431	86	80	693	104	101	20	182	143	24	33
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	74	108	17	20	173	21	25	5	36	36	6	7
Total Analysis Volume [veh/h]	294	431	69	80	693	83	101	20	146	143	24	26
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.569

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	285	583	18	9	495	304	216	31	187	10	62	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	285	583	18	9	495	304	216	31	187	10	62	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	71	146	5	2	124	61	54	8	37	3	16	2
Total Analysis Volume [veh/h]	285	583	18	9	495	243	216	31	150	10	62	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.597

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	39	545	65	27	439	54	71	61	99	90	45	31
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	545	65	27	439	54	71	61	99	90	45	31
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	10	136	16	7	110	11	18	15	20	23	11	6
Total Analysis Volume [veh/h]	39	545	65	27	439	43	71	61	79	90	45	25
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	26	15	14	544	14	183	208	706	13	30	803	564
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	15	14	544	14	183	208	706	13	30	803	564
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	7	4	4	136	4	37	52	177	3	8	201	0
Total Analysis Volume [veh/h]	26	15	14	544	14	146	208	706	13	30	803	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	267	718	77	54	748	118	224	27	317	101	15	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	267	718	77	54	748	118	224	27	317	101	15	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	67	180	15	14	187	24	56	7	63	25	4	8
Total Analysis Volume [veh/h]	267	718	62	54	748	94	224	27	254	101	15	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	91	389	22	2	376	158	289	112	311	27	75	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	389	22	2	376	158	289	112	311	27	75	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	23	97	6	1	94	32	72	28	62	7	19	2
Total Analysis Volume [veh/h]	91	389	22	2	376	126	289	112	249	27	75	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	84	345	70	29	290	76	57	39	70	94	73	36
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	345	70	29	290	76	57	39	70	94	73	36
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	21	86	18	7	73	15	14	10	14	24	18	7
Total Analysis Volume [veh/h]	84	345	70	29	290	61	57	39	56	94	73	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.495

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	15	14	7	514	8	97	99	809	14	18	531	506
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	14	7	514	8	97	99	809	14	18	531	506
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	4	4	2	129	2	19	25	202	4	5	133	0
Total Analysis Volume [veh/h]	15	14	7	514	8	78	99	809	14	18	531	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	303	431	86	80	693	104	102	21	208	143	24	33
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	303	431	86	80	693	104	102	21	208	143	24	33
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	76	108	17	20	173	21	26	5	42	36	6	7
Total Analysis Volume [veh/h]	303	431	69	80	693	83	102	21	166	143	24	26
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	285	604	18	9	507	308	222	31	187	10	62	9
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	285	604	18	9	507	308	222	31	187	10	62	9
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	71	151	5	2	127	62	56	8	37	3	16	2
Total Analysis Volume [veh/h]	285	604	18	9	507	246	222	31	150	10	62	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	39	545	95	37	439	54	71	64	99	108	46	37
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	545	95	37	439	54	71	64	99	108	46	37
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	10	136	24	9	110	11	18	16	20	27	12	7
Total Analysis Volume [veh/h]	39	545	95	37	439	43	71	64	79	108	46	30
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	26	15	14	565	14	189	217	706	13	30	803	600
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	15	14	565	14	189	217	706	13	30	803	600
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	0.000
Total 15-Minute Volume [veh/h]	7	4	4	141	4	38	54	177	3	8	201	0
Total Analysis Volume [veh/h]	26	15	14	565	14	151	217	706	13	30	803	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	296	718	77	54	748	119	225	28	334	101	16	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	718	77	54	748	119	225	28	334	101	16	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	74	180	15	14	187	24	56	7	67	25	4	8
Total Analysis Volume [veh/h]	296	718	62	54	748	95	225	28	267	101	16	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	90	620	20	10	510	220	420	110	200	30	80	10
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	620	20	10	510	220	420	110	200	30	80	10
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	23	155	5	3	128	44	105	28	40	8	20	2
Total Analysis Volume [veh/h]	90	620	20	10	510	176	420	110	160	30	80	8
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	150	460	180	30	510	140	50	100	210	140	360	30
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	460	180	30	510	140	50	100	210	140	360	30
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	38	115	45	8	128	35	13	25	0	35	90	6
Total Analysis Volume [veh/h]	150	460	180	30	510	140	50	100	0	140	360	24
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	20	10	10	210	10	160	190	780	10	20	1170	440
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	10	10	210	10	160	190	780	10	20	1170	440
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	1.000
Total 15-Minute Volume [veh/h]	5	3	3	53	3	32	48	195	3	5	293	110
Total Analysis Volume [veh/h]	20	10	10	210	10	128	190	780	10	20	1170	440
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 5: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

Intersection Setup

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	200.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Base Volume Input [veh/h]	50	220	60	50	350	100	110	160	50	140	470	160
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	220	60	50	350	100	110	160	50	140	470	160
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	13	55	15	13	88	25	28	40	10	35	118	32
Total Analysis Volume [veh/h]	50	220	60	50	350	100	110	160	40	140	470	128
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.853

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	420	1030	180	90	1740	200	100	20	90	180	30	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	420	1030	180	90	1740	200	100	20	90	180	30	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	105	258	45	23	435	40	25	5	18	45	8	8
Total Analysis Volume [veh/h]	420	1030	180	90	1740	160	100	20	72	180	30	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	80	900	20	10	890	430	420	80	140	10	40	10
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	900	20	10	890	430	420	80	140	10	40	10
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	20	225	5	3	223	86	105	20	28	3	10	2
Total Analysis Volume [veh/h]	80	900	20	10	890	344	420	80	112	10	40	8
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	270	930	240	30	760	70	150	220	340	180	200	30
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	930	240	30	760	70	150	220	340	180	200	30
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	68	233	60	8	190	18	38	55	0	45	50	6
Total Analysis Volume [veh/h]	270	930	240	30	760	70	150	220	0	180	200	24
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	30	20	20	610	20	370	380	1290	10	30	1000	550
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	20	20	610	20	370	380	1290	10	30	1000	550
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	1.000
Total 15-Minute Volume [veh/h]	8	5	5	153	5	74	95	323	3	8	250	138
Total Analysis Volume [veh/h]	30	20	20	610	20	296	380	1290	10	30	1000	550
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 5: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.800

Intersection Setup

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	200.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Base Volume Input [veh/h]	60	580	260	150	360	110	120	410	10	160	210	90
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	580	260	150	360	110	120	410	10	160	210	90
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	15	145	65	38	90	28	30	103	2	40	53	18
Total Analysis Volume [veh/h]	60	580	260	150	360	110	120	410	8	160	210	72
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	130	1450	120	50	1490	140	530	40	340	240	30	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	1450	120	50	1490	140	530	40	340	240	30	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	33	363	30	13	373	28	133	10	68	60	8	8
Total Analysis Volume [veh/h]	130	1450	120	50	1490	112	530	40	272	240	30	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	90	620	20	10	520	230	430	110	200	30	80	10
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	620	20	10	520	230	430	110	200	30	80	10
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	23	155	5	3	130	46	108	28	40	8	20	2
Total Analysis Volume [veh/h]	90	620	20	10	520	184	430	110	160	30	80	8
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	150	460	190	30	510	140	50	100	210	170	360	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	460	190	30	510	140	50	100	210	170	360	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	38	115	48	8	128	35	13	25	0	43	90	8
Total Analysis Volume [veh/h]	150	460	190	30	510	140	50	100	0	170	360	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	20	10	10	230	10	160	190	780	10	20	1180	440
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	10	10	230	10	160	190	780	10	20	1180	440
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	1.000
Total 15-Minute Volume [veh/h]	5	3	3	58	3	32	48	195	3	5	295	110
Total Analysis Volume [veh/h]	20	10	10	230	10	128	190	780	10	20	1180	440
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 5: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	200.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Base Volume Input [veh/h]	60	220	60	50	350	100	110	190	80	140	480	150
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	220	60	50	350	100	110	190	80	140	480	150
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	15	55	15	13	88	25	28	48	16	35	120	30
Total Analysis Volume [veh/h]	60	220	60	50	350	100	110	190	64	140	480	120
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	430	1020	180	90	1740	200	100	30	90	180	30	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	430	1020	180	90	1740	200	100	30	90	180	30	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	108	255	45	23	435	40	25	8	18	45	8	8
Total Analysis Volume [veh/h]	430	1020	180	90	1740	160	100	30	72	180	30	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	240.0	100.0	100.0	75.00	100.0	165.0	115.0	100.0	115.0	50.00	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Midas Ave			Midas Ave		
Base Volume Input [veh/h]	80	910	20	10	890	430	420	80	140	10	40	10
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	910	20	10	890	430	420	80	140	10	40	10
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	20	228	5	3	223	86	105	20	28	3	10	2
Total Analysis Volume [veh/h]	80	910	20	10	890	344	420	80	112	10	40	8
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 3: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.782

Intersection Setup

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	1	1	0	0
Pocket Length [ft]	160.0	100.0	100.0	75.00	100.0	75.00	100.0	100.0	75.00	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Pacific Street			Pacific Street			Del Mar Ave			Dominguez Road		
Base Volume Input [veh/h]	280	920	260	40	760	70	150	230	340	190	190	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	920	260	40	760	70	150	230	340	190	190	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	70	230	65	10	190	18	38	58	0	48	48	8
Total Analysis Volume [veh/h]	280	920	260	40	760	70	150	230	0	190	190	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 4: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	75.00	100.0	100.0	315.0	100.0	100.0	95.00	100.0	100.0	50.00	100.0	120.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Rocklin Road			Rocklin Road		
Base Volume Input [veh/h]	30	20	20	620	20	370	390	1280	10	30	1000	560
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	20	20	620	20	370	390	1280	10	30	1000	560
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	1.000	1.000	1.000	1.000
Total 15-Minute Volume [veh/h]	8	5	5	155	5	74	98	320	3	8	250	140
Total Analysis Volume [veh/h]	30	20	20	620	20	296	390	1280	10	30	1000	560
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 5: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

Intersection Setup

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	200.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Granite Drive			Granite Drive			Dominguez Road			Dominguez Road		
Base Volume Input [veh/h]	80	580	270	150	370	120	130	410	20	150	230	90
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	580	270	150	370	120	130	410	20	150	230	90
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	20	145	68	38	93	30	33	103	4	38	58	18
Total Analysis Volume [veh/h]	80	580	270	150	370	120	130	410	16	150	230	72
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Level Of Service Report
Intersection 6: New Intersection

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	Circular 212 Planning	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

Intersection Setup

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.0	100.0	100.0	285.0	100.0	190.0	190.0	100.0	100.0	100.0	100.0	100.0
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	Sierra College Blvd			Sierra College Blvd			Granite Drive			Granite Drive		
Base Volume Input [veh/h]	140	1450	120	50	1480	140	530	40	330	240	30	40
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	1450	120	50	1480	140	530	40	330	240	30	40
Peak Hour Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.000	0.800	1.000	1.000	0.800	1.000	1.000	0.800
Total 15-Minute Volume [veh/h]	35	363	30	13	370	28	133	10	66	60	8	8
Total Analysis Volume [veh/h]	140	1450	120	50	1480	112	530	40	264	240	30	32
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

APPENDIX B:
EXISTING CONDITIONS TECHNICAL CALCULATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	112	244	27	74	9	73	352	22	2	253	132
Future Volume (veh/h)	275	112	244	27	74	9	73	352	22	2	253	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	286	117	0	28	77	1	76	367	20	2	264	30
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	391	411	349	146	153	129	99	1096	60	4	947	423
Arrive On Green	0.22	0.22	0.00	0.08	0.08	0.08	0.06	0.32	0.32	0.00	0.27	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1845	1558	1757	3381	184	1757	3505	1565
Grp Volume(v), veh/h	286	117	0	28	77	1	76	190	197	2	264	30
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1558	1757	1752	1812	1757	1752	1565
Q Serve(g_s), s	7.8	2.7	0.0	0.8	2.1	0.0	2.2	4.2	4.3	0.1	3.1	0.7
Cycle Q Clear(g_c), s	7.8	2.7	0.0	0.8	2.1	0.0	2.2	4.2	4.3	0.1	3.1	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	391	411	349	146	153	129	99	568	588	4	947	423
V/C Ratio(X)	0.73	0.28	0.00	0.19	0.50	0.01	0.77	0.33	0.34	0.52	0.28	0.07
Avail Cap(c_a), veh/h	1021	1072	911	1021	1072	905	1021	1527	1579	851	3055	1364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	16.7	0.0	22.1	22.7	21.7	24.0	13.2	13.2	25.7	14.9	14.0
Incr Delay (d2), s/veh	2.6	0.4	0.0	0.6	2.5	0.0	11.9	0.7	0.7	79.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.4	0.0	0.4	1.2	0.0	1.4	2.2	2.3	0.1	1.5	0.3
LnGrp Delay(d),s/veh	21.3	17.0	0.0	22.7	25.2	21.7	35.9	14.0	13.9	105.6	15.2	14.2
LnGrp LOS	C	B		C	C	C	D	B	B	F	B	B
Approach Vol, veh/h		403			106			463			296	
Approach Delay, s/veh		20.1			24.5			17.6			15.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	21.7		16.5	6.9	19.0		9.3
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.1	6.3		9.8	4.2	5.1		4.1
Green Ext Time (p_c), s	0.0	8.8		1.5	0.2	8.8		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	20	68	30	58	27	84	345	44	26	281	59
Future Volume (veh/h)	28	20	68	30	58	27	84	345	44	26	281	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	31	22	0	33	64	1	92	379	46	29	309	23
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	55	39	83	47	91	120	129	736	89	59	767	638
Arrive On Green	0.05	0.05	0.00	0.08	0.08	0.08	0.07	0.46	0.46	0.03	0.42	0.42
Sat Flow, veh/h	1048	744	1568	617	1197	1568	1757	1614	196	1757	1845	1534
Grp Volume(v), veh/h	53	0	0	97	0	1	92	0	425	29	309	23
Grp Sat Flow(s),veh/h/ln	1792	0	1568	1814	0	1568	1757	0	1810	1757	1845	1534
Q Serve(g_s), s	1.4	0.0	0.0	2.5	0.0	0.0	2.5	0.0	8.1	0.8	5.7	0.4
Cycle Q Clear(g_c), s	1.4	0.0	0.0	2.5	0.0	0.0	2.5	0.0	8.1	0.8	5.7	0.4
Prop In Lane	0.58		1.00	0.34		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	94	0	83	138	0	120	129	0	825	59	767	638
V/C Ratio(X)	0.56	0.00	0.00	0.70	0.00	0.01	0.71	0.00	0.51	0.50	0.40	0.04
Avail Cap(c_a), veh/h	1109	0	971	1123	0	971	1087	0	1867	1087	1903	1582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	0.0	0.0	21.8	0.0	20.7	22.0	0.0	9.4	23.0	9.9	8.4
Incr Delay (d2), s/veh	6.0	0.0	0.0	7.3	0.0	0.0	8.3	0.0	1.4	7.4	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	1.5	0.0	0.0	1.5	0.0	4.3	0.5	3.0	0.2
LnGrp Delay(d),s/veh	28.4	0.0	0.0	29.1	0.0	20.7	30.3	0.0	10.7	30.4	10.9	8.5
LnGrp LOS	C			C		C	C		B	C	B	A
Approach Vol, veh/h		53			98			517			361	
Approach Delay, s/veh		28.4			29.0			14.2			12.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	27.5		7.1	7.7	25.6		8.2
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	2.8	10.1		3.4	4.5	7.7		4.5
Green Ext Time (p_c), s	0.1	12.0		0.2	0.3	12.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	49	45	5	60	149	231	79
Future Vol, veh/h	49	45	5	60	149	231	79
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	200	-	-	-
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	53	49	5	65	162	251	86

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	516	168	336	337	0	-	0
Stage 1	294	-	-	-	-	-	-
Stage 2	222	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	6.46	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.53	2.23	-	-	-
Pot Cap-1 Maneuver	486	844	874	1212	-	-	-
Stage 1	727	-	-	-	-	-	-
Stage 2	791	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	486	844	1170	1170	-	-	-
Mov Cap-2 Maneuver	486	-	-	-	-	-	-
Stage 1	727	-	-	-	-	-	-
Stage 2	791	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	2.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1170	-	610	-	-
HCM Lane V/C Ratio	0.06	-	0.167	-	-
HCM Control Delay (s)	8.3	-	12.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	15	16	107.9%	28.2	7.2	C
	Through	14	14	100.6%	24.5	10.8	C
	Right Turn	7	8	110.6%	7.1	8.9	A
	Subtotal	36	38	105.6%	22.9	6.6	C
SB	Left Turn	198	202	102.2%	17.9	2.5	B
	Through	8	11	136.4%	14.9	4.8	B
	Right Turn	69	69	100.0%	5.3	1.1	A
	Subtotal	275	282	102.7%	14.6	1.6	B
EB	Left Turn	94	93	99.2%	24.7	4.8	C
	Through	698	692	99.1%	9.9	1.8	A
	Right Turn	14	13	95.5%	4.7	1.7	A
	Subtotal	806	799	99.1%	11.5	1.8	B
WB	Left Turn	18	17	95.8%	31.9	7.7	C
	Through	503	482	95.7%	15.0	1.3	B
	Right Turn	495	481	97.1%	6.4	0.5	A
	Subtotal	1,016	980	96.4%	11.1	0.8	B
Total		2,133	2,099	98.4%	12.0	1.1	B

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	253	247	97.6%	30.3	3.3	C
	Through	462	449	97.2%	13.0	1.8	B
	Right Turn	86	85	98.4%	6.4	1.5	A
	Subtotal	801	781	97.5%	17.7	2.0	B
SB	Left Turn	80	73	91.6%	35.2	4.2	D
	Through	726	704	96.9%	21.6	1.2	C
	Right Turn	64	54	83.9%	5.7	1.0	A
	Subtotal	870	831	95.5%	21.8	1.0	C
EB	Left Turn	65	61	93.7%	33.7	9.1	C
	Through	20	21	104.9%	40.8	14.8	D
	Right Turn	103	95	91.8%	7.4	1.7	A
	Subtotal	188	176	93.9%	19.9	3.2	B
WB	Left Turn	143	137	96.0%	30.3	3.4	C
	Through	24	26	110.4%	40.3	8.4	D
	Right Turn	33	41	124.0%	6.8	1.8	A
	Subtotal	200	205	102.3%	26.8	2.7	C
Total		2,059	1,993	96.8%	20.5	1.4	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	28	155	10	61	9	244	435	18	9	448	278
Future Volume (veh/h)	185	28	155	10	61	9	244	435	18	9	448	278
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	203	31	0	11	67	0	268	478	18	10	492	61
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	276	290	247	97	102	86	323	1760	66	18	1182	517
Arrive On Green	0.16	0.16	0.00	0.06	0.06	0.00	0.18	0.51	0.51	0.01	0.34	0.34
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3444	129	1757	3505	1533
Grp Volume(v), veh/h	203	31	0	11	67	0	268	243	253	10	492	61
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1821	1757	1752	1533
Q Serve(g_s), s	7.8	1.0	0.0	0.4	2.5	0.0	10.5	5.6	5.6	0.4	7.7	2.0
Cycle Q Clear(g_c), s	7.8	1.0	0.0	0.4	2.5	0.0	10.5	5.6	5.6	0.4	7.7	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	276	290	247	97	102	86	323	895	931	18	1182	517
V/C Ratio(X)	0.73	0.11	0.00	0.11	0.66	0.00	0.83	0.27	0.27	0.56	0.42	0.12
Avail Cap(c_a), veh/h	739	776	660	739	776	660	739	1106	1149	616	2212	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	25.7	0.0	32.0	33.0	0.0	28.0	9.9	9.9	35.1	18.2	16.3
Incr Delay (d2), s/veh	3.8	0.2	0.0	0.5	7.0	0.0	5.5	0.3	0.3	25.2	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.5	0.0	0.2	1.5	0.0	5.6	2.8	2.9	0.3	3.8	0.9
LnGrp Delay(d),s/veh	32.4	25.9	0.0	32.5	40.1	0.0	33.5	10.2	10.2	60.4	18.7	16.5
LnGrp LOS	C	C		C	D		C	B	B	E	B	B
Approach Vol, veh/h		234			78			764			563	
Approach Delay, s/veh		31.5			39.0			18.4			19.2	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	41.4		16.2	17.1	29.1		8.9
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.4	7.6		9.8	12.5	9.7		4.5
Green Ext Time (p_c), s	0.0	14.7		0.7	0.7	14.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	37	99	58	20	31	39	533	40	27	429	10
Future Volume (veh/h)	47	37	99	58	20	31	39	533	40	27	429	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	48	38	9	60	21	2	40	549	40	28	442	5
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	70	55	107	84	29	100	71	906	66	54	968	818
Arrive On Green	0.07	0.07	0.07	0.06	0.06	0.06	0.04	0.53	0.53	0.03	0.52	0.52
Sat Flow, veh/h	1002	793	1529	1318	461	1568	1757	1696	124	1757	1845	1559
Grp Volume(v), veh/h	86	0	9	81	0	2	40	0	589	28	442	5
Grp Sat Flow(s),veh/h/ln	1795	0	1529	1779	0	1568	1757	0	1820	1757	1845	1559
Q Serve(g_s), s	2.9	0.0	0.3	2.7	0.0	0.1	1.4	0.0	13.7	1.0	9.2	0.1
Cycle Q Clear(g_c), s	2.9	0.0	0.3	2.7	0.0	0.1	1.4	0.0	13.7	1.0	9.2	0.1
Prop In Lane	0.56		1.00	0.74		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	126	0	107	113	0	100	71	0	972	54	968	818
V/C Ratio(X)	0.68	0.00	0.08	0.72	0.00	0.02	0.57	0.00	0.61	0.52	0.46	0.01
Avail Cap(c_a), veh/h	877	0	748	870	0	767	859	0	1483	859	1503	1270
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	26.7	28.2	0.0	26.9	28.9	0.0	9.9	29.3	9.1	7.0
Incr Delay (d2), s/veh	7.5	0.0	0.4	9.4	0.0	0.1	8.0	0.0	1.7	8.5	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.2	1.6	0.0	0.0	0.8	0.0	7.2	0.6	4.9	0.0
LnGrp Delay(d),s/veh	35.3	0.0	27.1	37.5	0.0	27.0	36.9	0.0	11.5	37.8	10.1	7.0
LnGrp LOS	D		C	D		C	D		B	D	B	A
Approach Vol, veh/h		95			83			629			475	
Approach Delay, s/veh		34.5			37.3			13.2			11.7	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	38.2		8.8	6.6	37.6		8.4
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	3.0	15.7		4.9	3.4	11.2		4.7
Green Ext Time (p_c), s	0.1	17.1		0.5	0.1	18.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	65	52	19	32	340	253	49
Future Vol, veh/h	65	52	19	32	340	253	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	200	-	-	-
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	75	60	22	37	391	291	56

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	632	174	346	347	0	-	0
Stage 1	319	-	-	-	-	-	-
Stage 2	313	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	6.46	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.53	2.23	-	-	-
Pot Cap-1 Maneuver	410	836	862	1201	-	-	-
Stage 1	707	-	-	-	-	-	-
Stage 2	712	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	410	836	1017	1017	-	-	-
Mov Cap-2 Maneuver	410	-	-	-	-	-	-
Stage 1	707	-	-	-	-	-	-
Stage 2	712	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1017	-	530	-	-
HCM Lane V/C Ratio	0.058	-	0.254	-	-
HCM Control Delay (s)	8.8	-	14.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	26	24	93.5%	32.1	8.6	C
	Through	15	13	88.7%	36.8	17.4	D
	Right Turn	14	18	130.3%	17.0	8.4	B
	Subtotal	55	56	101.6%	29.8	7.1	C
SB	Left Turn	522	534	102.2%	27.7	3.9	C
	Through	14	13	95.0%	29.1	19.3	C
	Right Turn	180	185	102.6%	9.2	2.4	A
	Subtotal	716	732	102.2%	23.1	3.2	C
EB	Left Turn	154	151	98.0%	42.3	4.4	D
	Through	656	665	101.4%	19.8	2.8	B
	Right Turn	13	12	90.6%	14.4	11.7	B
	Subtotal	823	828	100.6%	23.9	2.9	C
WB	Left Turn	30	27	89.9%	61.6	18.3	E
	Through	724	739	102.1%	28.3	4.4	C
	Right Turn	408	400	98.0%	8.8	1.7	A
	Subtotal	1,162	1,166	100.4%	22.4	3.7	C
Total		2,756	2,781	100.9%	23.2	2.9	C

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	176	187	106.4%	33.9	4.0	C
	Through	781	773	99.0%	14.0	2.3	B
	Right Turn	77	88	114.3%	7.0	1.3	A
	Subtotal	1,034	1,049	101.4%	16.9	2.4	B
SB	Left Turn	54	59	109.3%	37.9	5.6	D
	Through	733	711	97.1%	20.7	2.9	C
	Right Turn	78	78	100.3%	5.5	1.5	A
	Subtotal	865	849	98.1%	20.5	2.7	C
EB	Left Turn	153	147	95.8%	30.4	3.9	C
	Through	27	29	107.2%	27.3	9.7	C
	Right Turn	248	265	106.9%	11.6	1.6	B
	Subtotal	428	441	103.0%	19.0	1.9	B
WB	Left Turn	101	105	103.5%	32.8	5.9	C
	Through	15	16	105.3%	32.6	18.1	C
	Right Turn	40	38	94.0%	9.6	1.6	A
	Subtotal	156	158	101.2%	27.1	2.8	C
Total		2,483	2,496	100.5%	19.1	1.8	B

FEHR PEERS

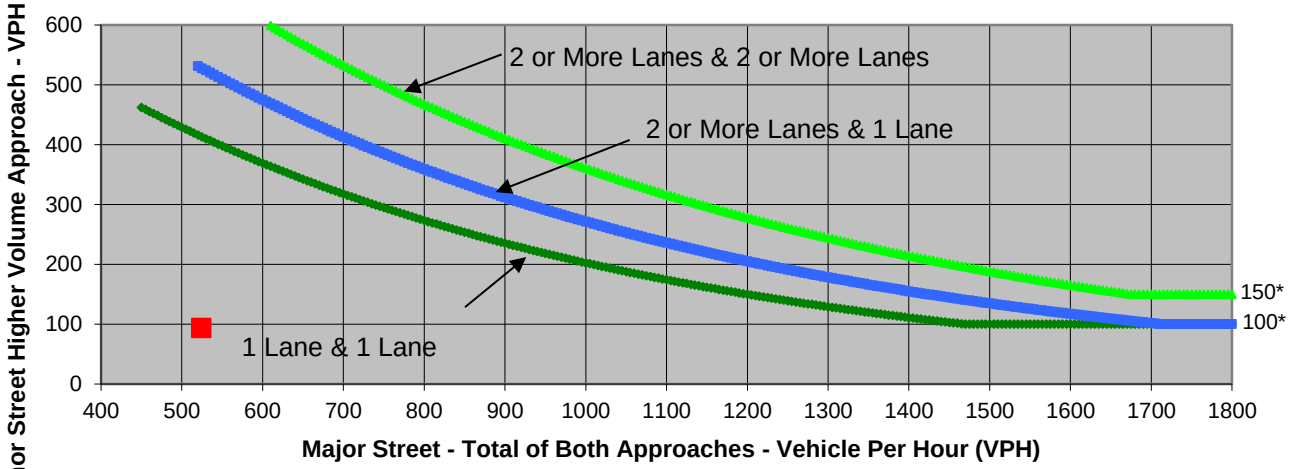
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	Existing Conditions
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	65		49	
Through	149	231		
Right		79	45	
Total	214	310	94	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**524**	**94**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Sierra Pine Subdivision TIS		
Major Street	Granite Drive	Scenario	Existing Conditions
Minor Street	Dominguez Road	Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	65	0	49	0
Through	149	231	0	0
Right	0	79	45	0
Total	214	310	94	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12.1
Approach with Worst Case Delay	EB
Total Vehicles on Approach	94

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing Conditions	**0.3**	**94**	**618**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR PEERS

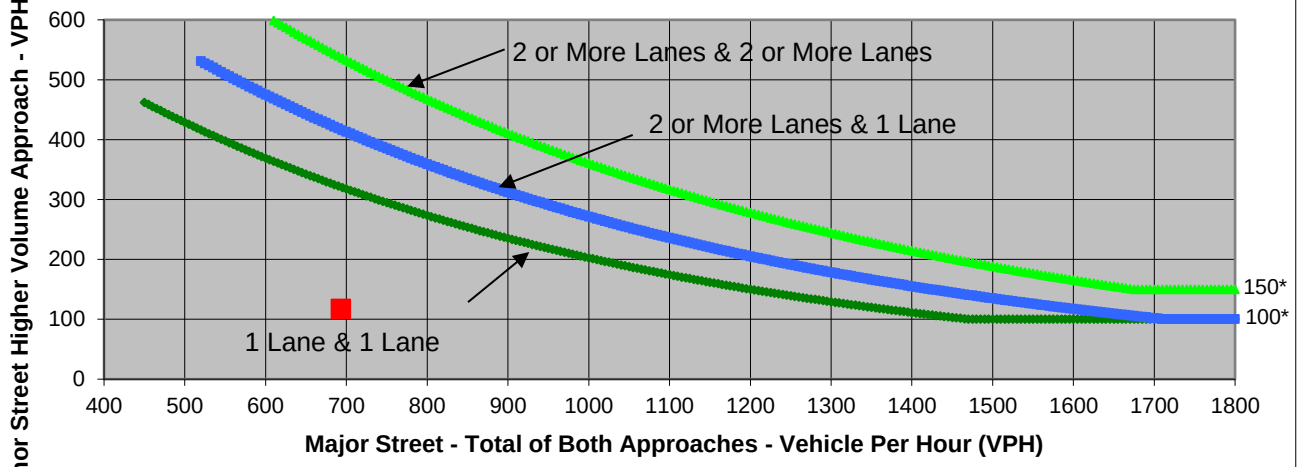
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	Existing Conditions
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	51		65	
Through	340	253		
Right		49	52	
Total	391	302	117	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**693**	**117**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Sierra Pine Subdivision TIS		
Major Street	Granite Drive	Scenario	Existing Conditions
Minor Street	Dominguez Road	Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	51	0	65	0
Through	340	253	0	0
Right	0	49	52	0
Total	391	302	117	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	14.1
Approach with Worst Case Delay	EB
Total Vehicles on Approach	117

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing Conditions	**0.5**	**117**	**810**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

APPENDIX C:
EXISTING PLUS PROJECT CONDITIONS TECHNICAL CALCULATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	112	244	27	74	9	73	358	22	2	271	138
Future Volume (veh/h)	277	112	244	27	74	9	73	358	22	2	271	138
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	289	117	0	28	77	1	76	373	20	2	282	32
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	392	412	350	144	152	128	99	1122	60	4	972	434
Arrive On Green	0.22	0.22	0.00	0.08	0.08	0.08	0.06	0.33	0.33	0.00	0.28	0.28
Sat Flow, veh/h	1757	1845	1568	1757	1845	1558	1757	3384	181	1757	3505	1565
Grp Volume(v), veh/h	289	117	0	28	77	1	76	193	200	2	282	32
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1558	1757	1752	1813	1757	1752	1565
Q Serve(g_s), s	8.0	2.8	0.0	0.8	2.1	0.0	2.2	4.3	4.4	0.1	3.3	0.8
Cycle Q Clear(g_c), s	8.0	2.8	0.0	0.8	2.1	0.0	2.2	4.3	4.4	0.1	3.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	392	412	350	144	152	128	99	581	601	4	972	434
V/C Ratio(X)	0.74	0.28	0.00	0.19	0.51	0.01	0.77	0.33	0.33	0.52	0.29	0.07
Avail Cap(c_a), veh/h	1001	1051	894	1001	1051	888	1001	1498	1550	834	2996	1338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	17.0	0.0	22.5	23.1	22.2	24.5	13.2	13.2	26.2	14.9	14.0
Incr Delay (d2), s/veh	2.7	0.4	0.0	0.6	2.6	0.0	11.8	0.7	0.7	79.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	1.4	0.0	0.4	1.2	0.0	1.4	2.2	2.3	0.1	1.7	0.4
LnGrp Delay(d),s/veh	21.7	17.3	0.0	23.2	25.8	22.2	36.3	13.9	13.9	106.1	15.3	14.2
LnGrp LOS	C	B		C	C	C	D	B	B	F	B	B
Approach Vol, veh/h		406			106			469			316	
Approach Delay, s/veh		20.5			25.0			17.6			15.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	22.4		16.8	7.0	19.6		9.3
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.1	6.4		10.0	4.2	5.3		4.1
Green Ext Time (p_c), s	0.0	9.2		1.5	0.2	9.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	21	68	57	60	36	84	345	53	29	281	59
Future Volume (veh/h)	28	21	68	57	60	36	84	345	53	29	281	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	31	23	0	63	66	4	92	379	55	32	309	20
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	54	40	82	92	96	163	125	707	103	63	762	633
Arrive On Green	0.05	0.05	0.00	0.10	0.10	0.10	0.07	0.45	0.45	0.04	0.41	0.41
Sat Flow, veh/h	1029	764	1568	879	921	1568	1757	1576	229	1757	1845	1534
Grp Volume(v), veh/h	54	0	0	129	0	4	92	0	434	32	309	20
Grp Sat Flow(s),veh/h/ln	1793	0	1568	1801	0	1568	1757	0	1804	1757	1845	1534
Q Serve(g_s), s	1.5	0.0	0.0	3.6	0.0	0.1	2.6	0.0	9.0	0.9	6.1	0.4
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.6	0.0	0.1	2.6	0.0	9.0	0.9	6.1	0.4
Prop In Lane	0.57		1.00	0.49		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	94	0	82	188	0	163	125	0	809	63	762	633
V/C Ratio(X)	0.58	0.00	0.00	0.69	0.00	0.02	0.74	0.00	0.54	0.51	0.41	0.03
Avail Cap(c_a), veh/h	1045	0	914	1050	0	914	1024	0	1753	1024	1792	1490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	22.2	0.0	20.7	23.4	0.0	10.3	24.4	10.7	9.0
Incr Delay (d2), s/veh	6.4	0.0	0.0	5.1	0.0	0.1	9.4	0.0	1.5	7.3	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.0	0.0	0.1	1.6	0.0	4.8	0.6	3.3	0.2
LnGrp Delay(d),s/veh	30.2	0.0	0.0	27.4	0.0	20.8	32.9	0.0	11.8	31.7	11.6	9.0
LnGrp LOS	C			C		C	C		B	C	B	A
Approach Vol, veh/h		54			133			526			361	
Approach Delay, s/veh		30.2			27.2			15.5			13.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	28.5		7.2	7.8	26.7		9.9
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	2.9	11.0		3.5	4.6	8.1		5.6
Green Ext Time (p_c), s	0.1	12.1		0.2	0.3	12.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	80	88	5	74	149	231	89
Future Vol, veh/h	80	88	5	74	149	231	89
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	200	-	-	-
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	87	96	5	80	162	251	97

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	552	174	347	348	0	-	0
Stage 1	299	-	-	-	-	-	-
Stage 2	253	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	6.46	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.53	2.23	-	-	-
Pot Cap-1 Maneuver	461	836	860	1200	-	-	-
Stage 1	723	-	-	-	-	-	-
Stage 2	763	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	461	836	1159	1159	-	-	-
Mov Cap-2 Maneuver	461	-	-	-	-	-	-
Stage 1	723	-	-	-	-	-	-
Stage 2	763	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	2.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1159	-	603	-	-
HCM Lane V/C Ratio	0.074	-	0.303	-	-
HCM Control Delay (s)	8.4	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.3	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	15	13	89.2%	25.6	12.4	C
	Through	14	17	123.2%	28.3	6.0	C
	Right Turn	7	7	100.6%	8.0	4.4	A
	Subtotal	36	38	104.6%	26.1	5.1	C
SB	Left Turn	232	224	96.3%	18.4	2.4	B
	Through	8	7	83.6%	13.2	9.9	B
	Right Turn	77	69	89.6%	5.1	1.3	A
	Subtotal	317	299	94.4%	15.2	2.0	B
EB	Left Turn	96	99	102.7%	26.3	5.7	C
	Through	698	696	99.7%	10.0	1.9	A
	Right Turn	14	14	100.6%	7.5	7.1	A
	Subtotal	808	809	100.1%	11.9	2.2	B
WB	Left Turn	18	14	78.2%	32.2	11.7	C
	Through	503	485	96.5%	16.4	2.9	B
	Right Turn	506	481	95.1%	6.4	0.6	A
	Subtotal	1,027	981	95.5%	11.7	1.8	B
Total		2,188	2,126	97.2%	12.5	1.8	B

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	262	253	96.6%	30.0	4.7	C
	Through	462	432	93.6%	13.5	2.6	B
	Right Turn	86	83	96.0%	6.3	1.6	A
	Subtotal	810	768	94.8%	18.2	3.1	B
SB	Left Turn	80	76	95.5%	42.3	9.3	D
	Through	726	727	100.2%	22.1	3.3	C
	Right Turn	64	62	97.3%	5.8	0.9	A
	Subtotal	870	866	99.5%	22.7	3.4	C
EB	Left Turn	66	70	106.3%	35.3	8.6	D
	Through	21	21	98.3%	41.4	14.6	D
	Right Turn	129	138	107.2%	8.3	2.4	A
	Subtotal	216	229	106.1%	19.0	4.0	B
WB	Left Turn	143	128	89.5%	34.3	5.8	C
	Through	24	26	107.5%	43.7	8.8	D
	Right Turn	33	34	104.2%	7.3	2.1	A
	Subtotal	200	188	94.1%	30.6	4.9	C
Total		2,096	2,051	97.9%	21.3	3.2	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	28	155	10	61	9	244	456	18	9	460	282
Future Volume (veh/h)	191	28	155	10	61	9	244	456	18	9	460	282
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	210	31	0	11	67	0	268	501	18	10	505	69
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	282	296	252	95	100	85	321	1778	64	18	1200	525
Arrive On Green	0.16	0.16	0.00	0.05	0.05	0.00	0.18	0.52	0.52	0.01	0.34	0.34
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3451	124	1757	3505	1533
Grp Volume(v), veh/h	210	31	0	11	67	0	268	254	265	10	505	69
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1822	1757	1752	1533
Q Serve(g_s), s	8.3	1.0	0.0	0.4	2.6	0.0	10.8	6.0	6.0	0.4	8.1	2.3
Cycle Q Clear(g_c), s	8.3	1.0	0.0	0.4	2.6	0.0	10.8	6.0	6.0	0.4	8.1	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	282	296	252	95	100	85	321	903	939	18	1200	525
V/C Ratio(X)	0.74	0.10	0.00	0.12	0.67	0.00	0.83	0.28	0.28	0.57	0.42	0.13
Avail Cap(c_a), veh/h	720	757	643	720	757	643	720	1078	1121	600	2156	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	26.2	0.0	32.9	33.9	0.0	28.8	10.0	10.1	36.0	18.5	16.6
Incr Delay (d2), s/veh	3.9	0.2	0.0	0.5	7.4	0.0	5.6	0.4	0.3	25.4	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.5	0.0	0.2	1.5	0.0	5.7	3.0	3.1	0.3	4.0	1.0
LnGrp Delay(d),s/veh	33.2	26.4	0.0	33.4	41.4	0.0	34.5	10.4	10.4	61.5	19.0	16.8
LnGrp LOS	C	C		C	D		C	B	B	E	B	B
Approach Vol, veh/h		241			78			787			584	
Approach Delay, s/veh		32.3			40.3			18.6			19.4	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	42.7		16.7	17.4	30.1		9.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.4	8.0		10.3	12.8	10.1		4.6
Green Ext Time (p_c), s	0.0	15.3		0.7	0.7	15.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	40	99	76	21	37	39	533	70	37	429	10
Future Volume (veh/h)	47	40	99	76	21	37	39	533	70	37	429	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	48	41	8	78	22	4	40	549	70	38	442	5
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	69	59	109	110	31	125	69	850	108	67	978	827
Arrive On Green	0.07	0.07	0.07	0.08	0.08	0.08	0.04	0.53	0.53	0.04	0.53	0.53
Sat Flow, veh/h	969	827	1529	1385	391	1568	1757	1599	204	1757	1845	1559
Grp Volume(v), veh/h	89	0	8	100	0	4	40	0	619	38	442	5
Grp Sat Flow(s),veh/h/ln	1796	0	1529	1775	0	1568	1757	0	1803	1757	1845	1559
Q Serve(g_s), s	3.2	0.0	0.3	3.6	0.0	0.2	1.5	0.0	16.2	1.4	9.8	0.1
Cycle Q Clear(g_c), s	3.2	0.0	0.3	3.6	0.0	0.2	1.5	0.0	16.2	1.4	9.8	0.1
Prop In Lane	0.54		1.00	0.78		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	129	0	109	141	0	125	69	0	959	67	978	827
V/C Ratio(X)	0.69	0.00	0.07	0.71	0.00	0.03	0.58	0.00	0.65	0.57	0.45	0.01
Avail Cap(c_a), veh/h	813	0	692	804	0	710	795	0	1361	795	1392	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	28.7	29.7	0.0	28.1	31.3	0.0	11.1	31.3	9.6	7.3
Incr Delay (d2), s/veh	7.5	0.0	0.3	7.3	0.0	0.1	8.6	0.0	2.0	8.6	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.1	2.1	0.0	0.1	0.9	0.0	8.4	0.8	5.2	0.0
LnGrp Delay(d),s/veh	37.6	0.0	29.0	37.1	0.0	28.3	39.9	0.0	13.1	40.0	10.5	7.3
LnGrp LOS	D		C	D		C	D		B	D	B	A
Approach Vol, veh/h		97			104			659			485	
Approach Delay, s/veh		36.9			36.7			14.7			12.8	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	40.6		9.2	6.7	40.5		9.8
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	3.4	18.2		5.2	3.5	11.8		5.6
Green Ext Time (p_c), s	0.1	17.0		0.5	0.1	18.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	86	80	19	79	340	253	84
Future Vol, veh/h	86	80	19	79	340	253	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	200	-	-	-
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	99	92	22	91	391	291	97

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	760	194	386	387	0	-	0
Stage 1	339	-	-	-	-	-	-
Stage 2	421	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	6.46	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.53	2.23	-	-	-
Pot Cap-1 Maneuver	340	812	813	1161	-	-	-
Stage 1	690	-	-	-	-	-	-
Stage 2	627	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	340	812	1043	1043	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-	-
Stage 1	690	-	-	-	-	-	-
Stage 2	627	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1043	-	472	-	-
HCM Lane V/C Ratio	0.108	-	0.404	-	-
HCM Control Delay (s)	8.9	-	17.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.9	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	26	24	90.6%	45.5	14.7	D
	Through	15	17	111.5%	50.2	16.9	D
	Right Turn	14	15	105.9%	19.0	10.1	B
	Subtotal	55	55	100.2%	40.5	10.0	D
SB	Left Turn	543	539	99.2%	30.0	7.5	C
	Through	14	11	78.7%	29.7	21.4	C
	Right Turn	186	185	99.3%	8.7	2.1	A
	Subtotal	743	735	98.9%	24.8	6.3	C
EB	Left Turn	163	170	104.2%	46.9	11.5	D
	Through	656	668	101.8%	20.7	5.1	C
	Right Turn	13	10	76.0%	8.5	6.7	A
	Subtotal	832	848	101.9%	25.8	6.0	C
WB	Left Turn	30	31	103.9%	60.8	16.7	E
	Through	724	704	97.3%	30.2	5.5	C
	Right Turn	444	435	98.1%	9.3	2.9	A
	Subtotal	1,198	1,171	97.7%	23.2	4.9	C
Total		2,828	2,808	99.3%	24.8	5.3	C

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	205	196	95.4%	31.5	3.0	C
	Through	781	786	100.6%	14.6	1.8	B
	Right Turn	77	83	107.9%	6.7	0.9	A
	Subtotal	1,063	1,064	100.1%	17.1	1.7	B
SB	Left Turn	54	52	95.4%	36.6	7.6	D
	Through	733	734	100.1%	21.2	2.5	C
	Right Turn	79	76	96.1%	5.1	1.2	A
	Subtotal	866	861	99.4%	20.7	2.4	C
EB	Left Turn	154	141	91.6%	31.0	3.1	C
	Through	28	30	108.8%	33.5	7.9	C
	Right Turn	265	267	100.7%	11.2	1.5	B
	Subtotal	447	438	98.1%	19.1	1.4	B
WB	Left Turn	101	105	104.2%	29.6	1.4	C
	Through	16	15	91.7%	29.7	15.5	C
	Right Turn	40	44	109.0%	9.8	2.8	A
	Subtotal	157	164	104.2%	24.8	1.7	C
Total		2,533	2,527	99.8%	19.1	1.4	B

FEHR PEERS

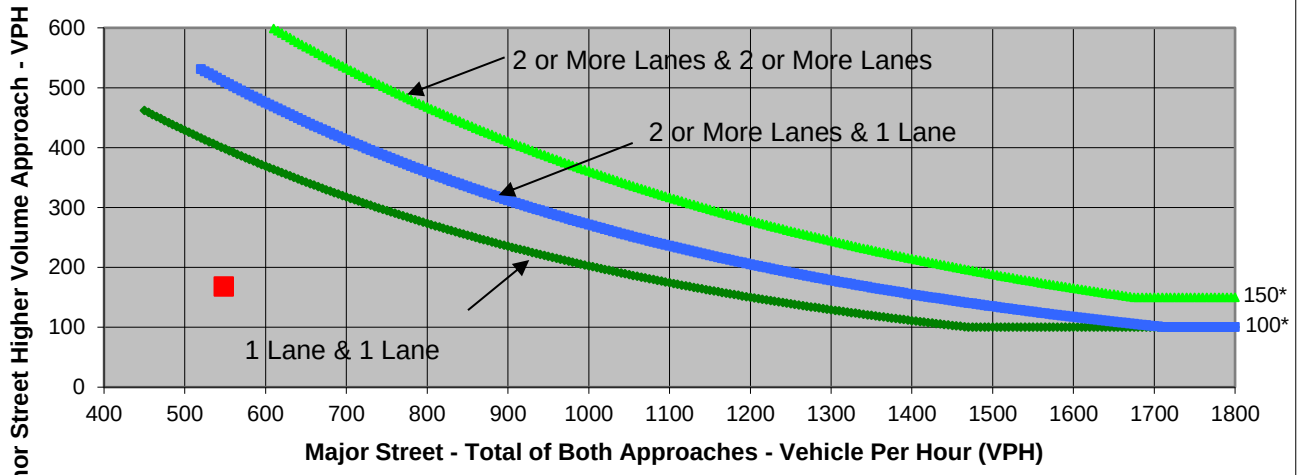
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	Existing Plus Project Conditions
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	79		80	
Through	149	231		
Right		89	88	
Total	228	320	168	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**548**	**168**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	Existing Plus Project Conditions
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	79	0	80	0
Through	149	231	0	0
Right	0	89	88	0
Total	228	320	168	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13.5
Approach with Worst Case Delay	EB
Total Vehicles on Approach	168

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing Plus Project Conditions	**0.6**	**168**	**716**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

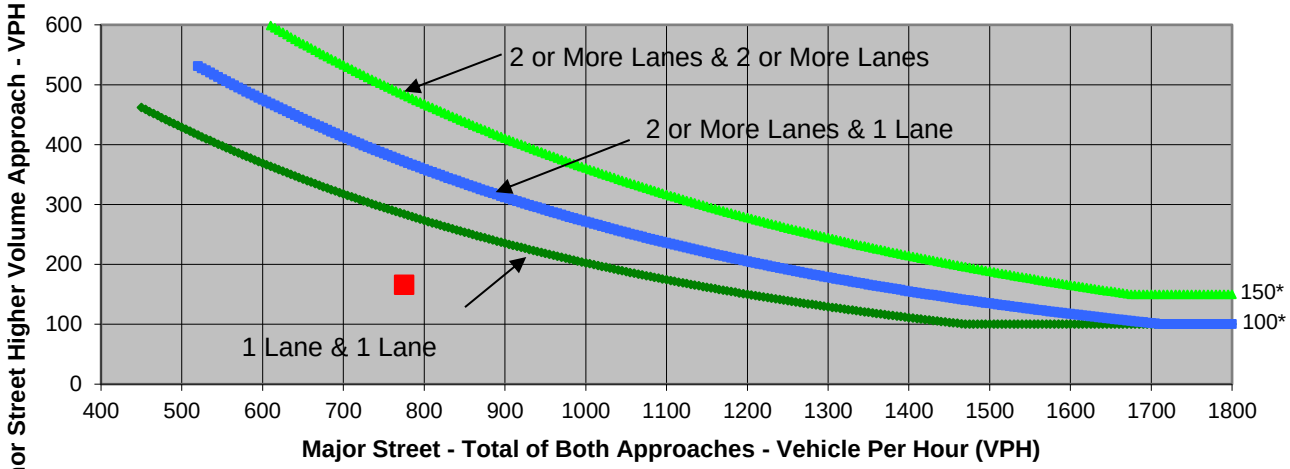
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	Existing Plus Project Conditions
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	98		86	
Through	340	253		
Right		84	80	
Total	438	337	166	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**775**	**166**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	Existing Plus Project Conditions
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	98	0	86	0
Through	340	253	0	0
Right	0	84	80	0
Total	438	337	166	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	17.7
Approach with Worst Case Delay	EB
Total Vehicles on Approach	166

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing Plus Project Conditions	**0.8**	**166**	**941**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

Sierra Pine Subdivision TIS
Existing Plus Project
Daily Project VMT

Speed Bin	Speed (MPH)		Project VMT
1	>0	<=5	7
2	>5	<=10	113
3	>10	<=15	154
4	>15	<=20	627
5	>20	<=25	458
6	>25	<=30	1,638
7	>30	<=35	1,617
8	>35	<=40	3,419
9	>40	<=45	1,682
10	>45	<=50	1,578
11	>50	<=55	1,229
12	>55	<=60	337
13	>60	<=65	40
14	>65	<=70	16
15	>70	<=75	0
16	>75		0
		Model Daily Project VMT	12,915


Dominguez Rd
Granite Dr

APPENDIX D:
EXISTING PLUS APPROVED PROJECTS CONDITIONS TECHNICAL CALCULATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	112	311	27	75	9	91	383	22	2	358	152
Future Volume (veh/h)	287	112	311	27	75	9	91	383	22	2	358	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	299	117	0	28	78	1	95	399	20	2	373	36
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	391	411	349	136	143	121	126	1274	64	4	1071	478
Arrive On Green	0.22	0.22	0.00	0.08	0.08	0.08	0.07	0.37	0.37	0.00	0.31	0.31
Sat Flow, veh/h	1757	1845	1568	1757	1845	1557	1757	3397	170	1757	3505	1565
Grp Volume(v), veh/h	299	117	0	28	78	1	95	205	214	2	373	36
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1557	1757	1752	1815	1757	1752	1565
Q Serve(g_s), s	9.4	3.1	0.0	0.9	2.4	0.0	3.1	4.9	4.9	0.1	4.9	1.0
Cycle Q Clear(g_c), s	9.4	3.1	0.0	0.9	2.4	0.0	3.1	4.9	4.9	0.1	4.9	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	391	411	349	136	143	121	126	657	680	4	1071	478
V/C Ratio(X)	0.76	0.28	0.00	0.21	0.55	0.01	0.76	0.31	0.31	0.52	0.35	0.08
Avail Cap(c_a), veh/h	895	940	799	895	940	793	895	1339	1387	746	2678	1196
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	19.0	0.0	25.5	26.2	25.1	26.8	13.0	13.0	29.4	15.9	14.5
Incr Delay (d2), s/veh	3.1	0.4	0.0	0.7	3.2	0.0	8.9	0.6	0.6	80.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	1.6	0.0	0.5	1.3	0.0	1.8	2.4	2.5	0.1	2.4	0.4
LnGrp Delay(d),s/veh	24.6	19.4	0.0	26.2	29.4	25.1	35.7	13.6	13.6	109.5	16.3	14.7
LnGrp LOS	C	B		C	C	C	D	B	B	F	B	B
Approach Vol, veh/h		416			107			514			411	
Approach Delay, s/veh		23.1			28.5			17.7			16.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	27.1		18.1	8.2	23.0		9.6
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.1	6.9		11.4	5.1	6.9		4.4
Green Ext Time (p_c), s	0.0	11.1		1.5	0.2	11.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	38	70	67	71	27	84	345	61	26	290	76
Future Volume (veh/h)	57	38	70	67	71	27	84	345	61	26	290	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	63	42	4	74	78	4	92	379	63	29	319	32
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	60	132	106	112	189	123	675	112	57	738	613
Arrive On Green	0.08	0.08	0.08	0.12	0.12	0.12	0.07	0.44	0.44	0.03	0.40	0.40
Sat Flow, veh/h	1075	716	1568	877	924	1568	1757	1543	256	1757	1845	1534
Grp Volume(v), veh/h	105	0	4	152	0	4	92	0	442	29	319	32
Grp Sat Flow(s),veh/h/ln	1791	0	1568	1801	0	1568	1757	0	1799	1757	1845	1534
Q Serve(g_s), s	3.2	0.0	0.1	4.6	0.0	0.1	2.9	0.0	10.4	0.9	7.1	0.7
Cycle Q Clear(g_c), s	3.2	0.0	0.1	4.6	0.0	0.1	2.9	0.0	10.4	0.9	7.1	0.7
Prop In Lane	0.60		1.00	0.49		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	151	0	132	217	0	189	123	0	787	57	738	613
V/C Ratio(X)	0.70	0.00	0.03	0.70	0.00	0.02	0.75	0.00	0.56	0.51	0.43	0.05
Avail Cap(c_a), veh/h	945	0	827	950	0	827	927	0	1582	927	1622	1349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	23.9	24.0	0.0	22.0	26.0	0.0	11.9	27.1	12.4	10.5
Incr Delay (d2), s/veh	6.6	0.0	0.1	4.7	0.0	0.1	10.2	0.0	1.7	8.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.1	2.6	0.0	0.1	1.8	0.0	5.5	0.6	3.9	0.3
LnGrp Delay(d),s/veh	31.9	0.0	24.0	28.7	0.0	22.1	36.1	0.0	13.7	35.1	13.5	10.6
LnGrp LOS	C		C	C		C	D		B	D	B	B
Approach Vol, veh/h		109			156			534			380	
Approach Delay, s/veh		31.6			28.5			17.5			14.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	30.3		9.3	8.1	28.1		11.4
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	2.9	12.4		5.2	4.9	9.1		6.6
Green Ext Time (p_c), s	0.1	12.5		0.6	0.3	12.8		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	53	69	166	367	130
Future Vol, veh/h	75	53	69	166	367	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	82	58	75	180	399	141

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	710	270	540	0	-	0
Stage 1	470	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	366	725	1018	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	339	725	1018	-	-	-
Mov Cap-2 Maneuver	339	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	717	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.1	2.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1018	-	435	-	-
HCM Lane V/C Ratio	0.074	-	0.32	-	-
HCM Control Delay (s)	8.8	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	15	13	84.5%	37.5	14.4	D
	Through	14	11	75.4%	38.1	23.2	D
	Right Turn	7	5	75.4%	14.3	10.7	B
	Subtotal	36	29	79.2%	35.6	10.3	D
SB	Left Turn	480	474	98.7%	21.6	3.0	C
	Through	8	5	66.0%	18.4	15.3	B
	Right Turn	89	85	95.3%	5.7	1.9	A
	Subtotal	577	564	97.7%	19.3	2.9	B
EB	Left Turn	97	97	100.2%	40.9	6.7	D
	Through	809	795	98.3%	16.9	3.1	B
	Right Turn	14	16	113.1%	13.6	10.5	B
	Subtotal	920	908	98.7%	19.4	2.9	B
WB	Left Turn	18	15	84.1%	40.7	18.6	D
	Through	531	504	94.9%	22.3	3.0	C
	Right Turn	495	467	94.4%	6.7	1.3	A
	Subtotal	1,044	986	94.5%	15.4	2.5	B
Total		2,577	2,487	96.5%	17.9	2.4	B

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	294	273	92.9%	29.9	2.3	C
	Through	431	431	99.9%	14.8	1.9	B
	Right Turn	86	85	98.4%	6.7	1.1	A
	Subtotal	811	788	97.2%	19.1	2.0	B
SB	Left Turn	80	67	83.9%	43.1	9.6	D
	Through	693	697	100.5%	24.6	2.7	C
	Right Turn	104	113	108.5%	6.2	0.7	A
	Subtotal	877	877	99.9%	23.7	2.5	C
EB	Left Turn	101	105	104.2%	34.1	4.3	C
	Through	20	19	92.9%	35.3	13.1	D
	Right Turn	182	172	94.5%	10.2	1.5	B
	Subtotal	303	296	97.6%	20.4	3.0	C
WB	Left Turn	143	142	99.1%	34.3	4.9	C
	Through	24	30	126.1%	35.6	10.0	D
	Right Turn	33	29	88.6%	6.0	2.1	A
	Subtotal	200	201	100.6%	30.3	4.5	C
Total		2,191	2,162	98.7%	22.2	1.9	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	31	187	10	62	9	285	583	18	9	495	304
Future Volume (veh/h)	216	31	187	10	62	9	285	583	18	9	495	304
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	237	34	0	11	68	0	313	641	19	10	544	94
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	300	315	268	94	99	84	360	1878	56	17	1210	529
Arrive On Green	0.17	0.17	0.00	0.05	0.05	0.00	0.20	0.54	0.54	0.01	0.35	0.35
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3475	103	1757	3505	1533
Grp Volume(v), veh/h	237	34	0	11	68	0	313	323	337	10	544	94
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1826	1757	1752	1533
Q Serve(g_s), s	10.9	1.3	0.0	0.5	3.1	0.0	14.5	8.8	8.8	0.5	10.2	3.6
Cycle Q Clear(g_c), s	10.9	1.3	0.0	0.5	3.1	0.0	14.5	8.8	8.8	0.5	10.2	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	300	315	268	94	99	84	360	947	986	17	1210	529
V/C Ratio(X)	0.79	0.11	0.00	0.12	0.69	0.00	0.87	0.34	0.34	0.57	0.45	0.18
Avail Cap(c_a), veh/h	624	656	557	624	656	557	624	947	986	520	1869	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	29.5	0.0	38.0	39.2	0.0	32.5	10.9	10.9	41.6	21.4	19.3
Incr Delay (d2), s/veh	4.6	0.1	0.0	0.5	8.1	0.0	6.5	0.5	0.4	26.5	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.7	0.0	0.3	1.8	0.0	7.7	4.3	4.5	0.4	5.0	1.6
LnGrp Delay(d),s/veh	38.1	29.7	0.0	38.6	47.3	0.0	39.0	11.4	11.4	68.1	22.0	19.6
LnGrp LOS	D	C		D	D		D	B	B	E	C	B
Approach Vol, veh/h		271			79			973			648	
Approach Delay, s/veh		37.1			46.1			20.3			22.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	50.6		19.4	21.3	34.1		9.5
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.5	10.8		12.9	16.5	12.2		5.1
Green Ext Time (p_c), s	0.0	18.0		0.8	0.8	17.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	61	99	90	45	31	39	545	65	27	439	54
Future Volume (veh/h)	71	61	99	90	45	31	39	545	65	27	439	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	73	63	27	93	46	4	40	562	65	28	453	27
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	104	90	165	128	63	168	66	823	95	52	922	779
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.04	0.51	0.51	0.03	0.50	0.50
Sat Flow, veh/h	964	832	1531	1194	591	1568	1757	1619	187	1757	1845	1559
Grp Volume(v), veh/h	136	0	27	139	0	4	40	0	627	28	453	27
Grp Sat Flow(s),veh/h/ln	1796	0	1531	1785	0	1568	1757	0	1807	1757	1845	1559
Q Serve(g_s), s	5.5	0.0	1.2	5.6	0.0	0.2	1.7	0.0	19.5	1.2	12.2	0.7
Cycle Q Clear(g_c), s	5.5	0.0	1.2	5.6	0.0	0.2	1.7	0.0	19.5	1.2	12.2	0.7
Prop In Lane	0.54		1.00	0.67		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	194	0	165	191	0	168	66	0	918	52	922	779
V/C Ratio(X)	0.70	0.00	0.16	0.73	0.00	0.02	0.60	0.00	0.68	0.54	0.49	0.03
Avail Cap(c_a), veh/h	721	0	615	717	0	630	705	0	1209	705	1235	1043
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	30.3	32.3	0.0	29.9	35.4	0.0	13.8	35.8	12.4	9.5
Incr Delay (d2), s/veh	5.3	0.0	0.5	6.1	0.0	0.1	9.9	0.0	2.5	9.8	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.5	3.1	0.0	0.1	1.0	0.0	10.2	0.7	6.5	0.3
LnGrp Delay(d),s/veh	37.5	0.0	30.8	38.4	0.0	29.9	45.3	0.0	16.4	45.6	13.5	9.6
LnGrp LOS	D		C	D		C	D		B	D	B	A
Approach Vol, veh/h		163			143			667			508	
Approach Delay, s/veh		36.4			38.1			18.1			15.1	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	43.4		12.5	6.9	42.7		12.5
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	3.2	21.5		7.5	3.7	14.2		7.6
Green Ext Time (p_c), s	0.1	16.4		0.9	0.1	18.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	112	77	51	521	278	103
Future Vol, veh/h	112	77	51	521	278	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	129	89	59	599	320	118

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	796	219	438	0	-	0
Stage 1	379	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	322	782	1111	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	305	782	1111	-	-	-
Mov Cap-2 Maneuver	305	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	597	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.6	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1111	-	406	-	-
HCM Lane V/C Ratio	0.053	-	0.535	-	-
HCM Control Delay (s)	8.4	-	23.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	3.1	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	26	28	106.7%	51.9	24.7	D
	Through	15	16	103.9%	42.1	15.4	D
	Right Turn	14	11	81.4%	15.2	11.5	B
	Subtotal	55	55	99.5%	39.8	9.5	D
SB	Left Turn	544	562	103.3%	33.1	3.1	C
	Through	14	15	105.9%	40.2	18.8	D
	Right Turn	183	174	95.1%	9.3	2.0	A
	Subtotal	741	751	101.3%	27.8	3.0	C
EB	Left Turn	208	210	100.8%	63.9	18.0	E
	Through	706	699	99.0%	25.6	5.6	C
	Right Turn	13	13	102.3%	11.4	6.4	B
	Subtotal	927	922	99.4%	34.2	8.4	C
WB	Left Turn	30	32	106.4%	74.6	10.6	E
	Through	803	760	94.6%	35.3	3.5	D
	Right Turn	564	533	94.5%	12.6	2.9	B
	Subtotal	1,397	1,325	94.9%	27.0	3.4	C
Total		3,120	3,053	97.8%	29.6	3.9	C

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	267	262	98.2%	35.3	2.2	D
	Through	718	719	100.1%	16.7	3.3	B
	Right Turn	77	73	94.2%	7.8	1.4	A
	Subtotal	1,062	1,053	99.2%	20.7	2.6	C
SB	Left Turn	54	51	94.0%	43.9	9.4	D
	Through	748	715	95.6%	27.9	3.8	C
	Right Turn	118	120	102.0%	7.6	1.7	A
	Subtotal	920	886	96.3%	26.1	3.2	C
EB	Left Turn	224	214	95.5%	34.7	4.9	C
	Through	27	23	83.6%	31.5	14.1	C
	Right Turn	317	320	100.8%	15.2	3.0	B
	Subtotal	568	556	97.9%	23.2	2.8	C
WB	Left Turn	101	105	103.5%	38.6	5.1	D
	Through	15	16	105.3%	48.0	24.1	D
	Right Turn	40	37	93.1%	10.2	3.0	B
	Subtotal	156	158	101.0%	33.1	5.7	C
Total		2,706	2,653	98.0%	23.8	2.1	C

FEHR PEERS

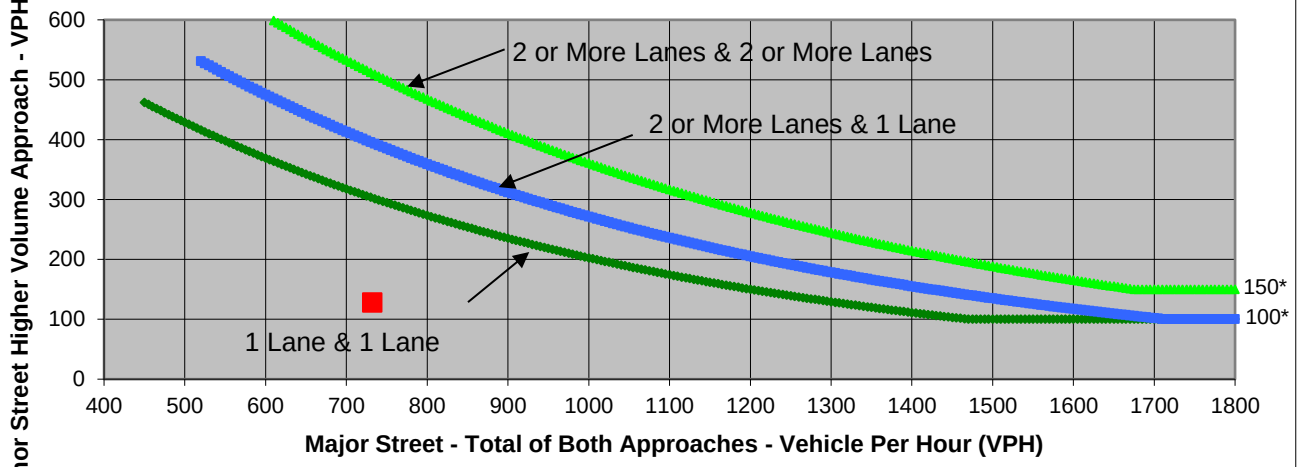
Project	Sierra Pine Subdivision TIS
Major Street	Granite Drive
Minor Street	Dominguez Road
Scenario	ExistingPlusApprovedProjects No Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	69		75	
Through	166	367		
Right		130	53	
Total	235	497	128	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**732**	**128**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	ExistingPlusApprovedProjects No Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	69	0	75	0
Through	166	367	0	0
Right	0	130	53	0
Total	235	497	128	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	17.1
Approach with Worst Case Delay	EB
Total Vehicles on Approach	128

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
stingPlusApprovedProjects No Pro	**0.6**	**128**	**860**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

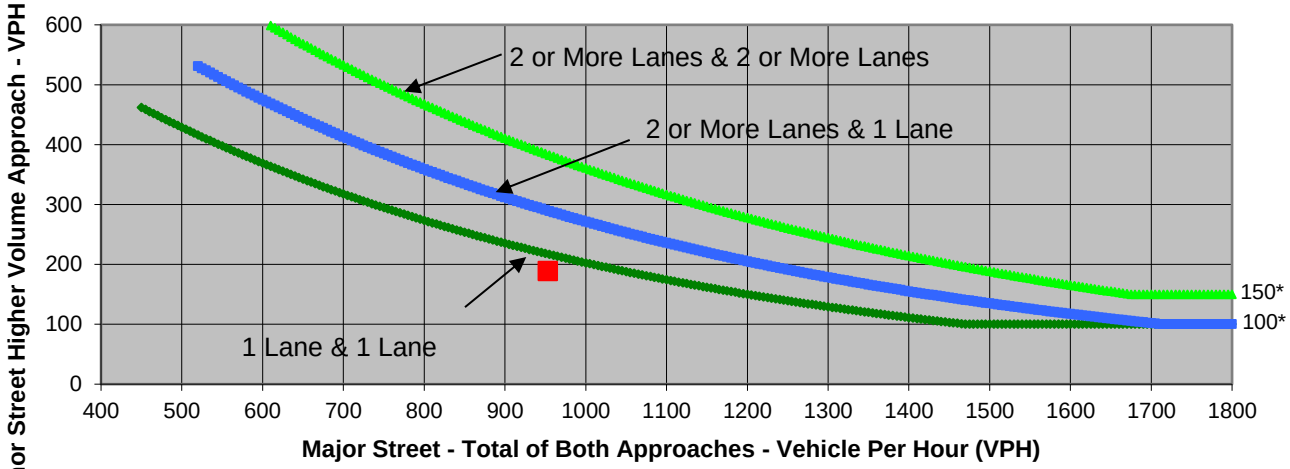
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	ExistingPlusApprovedProjects No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	51		112	
Through	521	278		
Right		103	77	
Total	572	381	189	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**953**	**189**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	ExistingPlusApprovedProjects No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	51	0	112	0
Through	521	278	0	0
Right	0	103	77	0
Total	572	381	189	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	23.6
Approach with Worst Case Delay	EB
Total Vehicles on Approach	189

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
stingPlusApprovedProjects No Pro	**1.2**	**189**	**1,142**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	112	311	27	75	9	91	389	22	2	376	158
Future Volume (veh/h)	289	112	311	27	75	9	91	389	22	2	376	158
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	301	117	0	28	78	1	95	405	20	2	392	41
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	417	438	346	165	173	146	126	1355	67	4	1154	515
Arrive On Green	0.24	0.24	0.00	0.09	0.09	0.09	0.07	0.40	0.38	0.00	0.33	0.33
Sat Flow, veh/h	1757	1845	1568	1757	1845	1558	1757	3400	167	1757	3505	1566
Grp Volume(v), veh/h	301	117	0	28	78	1	95	208	217	2	392	41
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1558	1757	1752	1815	1757	1752	1566
Q Serve(g_s), s	9.4	3.1	0.0	0.9	2.4	0.0	3.2	4.8	4.9	0.1	5.0	1.1
Cycle Q Clear(g_c), s	9.4	3.1	0.0	0.9	2.4	0.0	3.2	4.8	4.9	0.1	5.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	417	438	346	165	173	146	126	698	723	4	1154	515
V/C Ratio(X)	0.72	0.27	0.00	0.17	0.45	0.01	0.76	0.30	0.30	0.52	0.34	0.08
Avail Cap(c_a), veh/h	913	959	789	913	959	810	884	1352	1400	737	2704	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	18.5	0.0	24.9	25.6	24.5	27.2	12.2	12.3	29.7	15.1	13.8
Incr Delay (d2), s/veh	2.4	0.3	0.0	0.5	1.8	0.0	8.9	0.5	0.5	80.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	1.6	0.0	0.4	1.3	0.0	1.8	2.4	2.5	0.1	2.5	0.5
LnGrp Delay(d),s/veh	23.3	18.8	0.0	25.4	27.4	24.5	36.0	12.7	12.8	109.9	15.5	13.9
LnGrp LOS	C	B		C	C	C	D	B	B	F	B	B
Approach Vol, veh/h		418			107			520			435	
Approach Delay, s/veh		22.1			26.8			17.0			15.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	27.8		18.1	8.3	23.6		9.6
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.1	6.9		11.4	5.2	7.0		4.4
Green Ext Time (p_c), s	0.0	11.6		1.5	0.2	11.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	39	70	94	73	36	84	345	70	29	290	76
Future Volume (veh/h)	57	39	70	94	73	36	84	345	70	29	290	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	63	43	6	103	80	5	92	379	73	32	319	35
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	68	146	152	118	236	125	681	131	63	771	641
Arrive On Green	0.09	0.09	0.09	0.15	0.15	0.15	0.07	0.45	0.43	0.04	0.42	0.42
Sat Flow, veh/h	1065	727	1568	1010	784	1568	1757	1504	290	1757	1845	1534
Grp Volume(v), veh/h	106	0	6	183	0	5	92	0	452	32	319	35
Grp Sat Flow(s),veh/h/ln	1791	0	1568	1794	0	1568	1757	0	1794	1757	1845	1534
Q Serve(g_s), s	3.4	0.0	0.2	5.8	0.0	0.2	3.1	0.0	11.1	1.1	7.3	0.8
Cycle Q Clear(g_c), s	3.4	0.0	0.2	5.8	0.0	0.2	3.1	0.0	11.1	1.1	7.3	0.8
Prop In Lane	0.59		1.00	0.56		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	167	0	146	270	0	236	125	0	813	63	771	641
V/C Ratio(X)	0.63	0.00	0.04	0.68	0.00	0.02	0.73	0.00	0.56	0.50	0.41	0.05
Avail Cap(c_a), veh/h	913	0	799	914	0	799	884	0	1540	884	1584	1317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	24.7	24.1	0.0	21.7	27.2	0.0	12.1	28.3	12.3	10.4
Incr Delay (d2), s/veh	4.6	0.0	0.1	3.5	0.0	0.0	9.2	0.0	1.6	7.0	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.1	3.1	0.0	0.1	1.8	0.0	5.8	0.6	3.8	0.4
LnGrp Delay(d),s/veh	30.7	0.0	24.8	27.5	0.0	21.7	36.5	0.0	13.7	35.4	13.2	10.5
LnGrp LOS	C		C	C		C	D		B	D	B	B
Approach Vol, veh/h		112			188			544			386	
Approach Delay, s/veh		30.4			27.4			17.6			14.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	31.1		9.6	8.3	29.0		13.0
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	3.1	13.1		5.4	5.1	9.3		7.8
Green Ext Time (p_c), s	0.1	12.6		0.6	0.3	13.1		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	96	83	166	367	140
Future Vol, veh/h	106	96	83	166	367	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	115	104	90	180	399	152

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	746	276	551	0	-	0
Stage 1	475	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	347	718	1008	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	316	718	1008	-	-	-
Mov Cap-2 Maneuver	316	-	-	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	680	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.7	3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1008	-	431	-	-
HCM Lane V/C Ratio	0.09	-	0.509	-	-
HCM Control Delay (s)	8.9	-	21.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.8	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	15	14	96.2%	41.4	24.1	D
	Through	14	14	98.1%	39.3	6.0	D
	Right Turn	7	9	125.7%	21.1	13.3	C
	Subtotal	36	37	102.7%	34.7	8.6	C
SB	Left Turn	514	512	99.6%	25.3	4.1	C
	Through	8	11	140.8%	27.2	20.1	C
	Right Turn	97	92	94.7%	4.8	1.1	A
	Subtotal	619	615	99.4%	22.3	3.6	C
EB	Left Turn	99	92	93.2%	48.6	8.2	D
	Through	809	823	101.8%	20.9	2.1	C
	Right Turn	14	18	128.2%	12.7	7.2	B
	Subtotal	922	934	101.2%	23.5	2.4	C
WB	Left Turn	18	16	90.0%	56.9	10.7	E
	Through	531	507	95.5%	26.0	2.5	C
	Right Turn	506	497	98.3%	9.0	1.3	A
	Subtotal	1,055	1,020	96.7%	18.2	2.2	B
Total		2,632	2,606	99.0%	21.4	2.2	C

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	303	282	93.1%	31.2	5.2	C
	Through	431	437	101.3%	18.2	4.0	B
	Right Turn	86	89	103.6%	8.1	1.5	A
	Subtotal	820	808	98.5%	21.7	4.2	C
SB	Left Turn	80	79	98.9%	41.7	8.0	D
	Through	693	668	96.4%	27.0	4.3	C
	Right Turn	104	89	85.3%	7.6	2.9	A
	Subtotal	877	836	95.3%	26.3	4.6	C
EB	Left Turn	102	98	96.1%	37.2	8.0	D
	Through	21	18	86.8%	32.5	13.9	C
	Right Turn	208	213	102.4%	11.3	2.6	B
	Subtotal	331	329	99.5%	20.5	3.5	C
WB	Left Turn	143	143	99.8%	36.6	9.4	D
	Through	24	25	103.2%	51.2	15.8	D
	Right Turn	33	25	77.1%	8.5	3.3	A
	Subtotal	200	193	96.5%	34.4	7.9	C
Total		2,228	2,166	97.2%	24.4	4.3	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	31	187	10	62	9	285	604	18	9	507	308
Future Volume (veh/h)	222	31	187	10	62	9	285	604	18	9	507	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	244	34	0	11	68	0	313	664	19	10	557	104
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	325	341	271	114	120	102	360	1922	55	17	1254	548
Arrive On Green	0.18	0.18	0.00	0.07	0.07	0.00	0.20	0.55	0.54	0.01	0.36	0.36
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3479	100	1757	3505	1533
Grp Volume(v), veh/h	244	34	0	11	68	0	313	334	349	10	557	104
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1827	1757	1752	1533
Q Serve(g_s), s	11.2	1.3	0.0	0.5	3.0	0.0	14.7	9.0	9.0	0.5	10.3	4.0
Cycle Q Clear(g_c), s	11.2	1.3	0.0	0.5	3.0	0.0	14.7	9.0	9.0	0.5	10.3	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	325	341	271	114	120	102	360	968	1009	17	1254	548
V/C Ratio(X)	0.75	0.10	0.00	0.10	0.57	0.00	0.87	0.35	0.35	0.58	0.44	0.19
Avail Cap(c_a), veh/h	640	672	552	640	672	571	619	968	1009	516	1893	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	28.8	0.0	37.4	38.6	0.0	32.8	10.5	10.6	42.0	20.9	18.8
Incr Delay (d2), s/veh	3.5	0.1	0.0	0.4	4.1	0.0	6.8	0.5	0.4	26.6	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.7	0.0	0.3	1.7	0.0	7.8	4.4	4.6	0.4	5.0	1.7
LnGrp Delay(d),s/veh	36.4	29.0	0.0	37.8	42.8	0.0	39.6	11.0	11.0	68.6	21.4	19.2
LnGrp LOS	D	C		D	D		D	B	B	E	C	B
Approach Vol, veh/h		278			79			996			671	
Approach Delay, s/veh		35.5			42.1			20.0			21.8	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	51.0		19.7	21.4	34.5		9.5
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	45.0		30.0	30.0	45.0		30.0
Max Q Clear Time (g_c+I1), s	2.5	11.0		13.2	16.7	12.3		5.0
Green Ext Time (p_c), s	0.0	18.6		0.8	0.8	17.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	64	99	108	46	37	39	545	95	37	439	54
Future Volume (veh/h)	71	64	99	108	46	37	39	545	95	37	439	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	73	66	29	111	47	5	40	562	95	38	453	27
Adj No. of Lanes	0	1	1	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	108	98	175	156	66	196	67	800	135	65	961	812
Arrive On Green	0.11	0.11	0.11	0.12	0.12	0.12	0.04	0.52	0.50	0.04	0.52	0.52
Sat Flow, veh/h	944	853	1532	1252	530	1568	1757	1533	259	1757	1845	1559
Grp Volume(v), veh/h	139	0	29	158	0	5	40	0	657	38	453	27
Grp Sat Flow(s),veh/h/ln	1797	0	1532	1782	0	1568	1757	0	1792	1757	1845	1559
Q Serve(g_s), s	5.9	0.0	1.4	6.8	0.0	0.2	1.8	0.0	22.0	1.7	12.4	0.7
Cycle Q Clear(g_c), s	5.9	0.0	1.4	6.8	0.0	0.2	1.8	0.0	22.0	1.7	12.4	0.7
Prop In Lane	0.53		1.00	0.70		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	205	0	175	222	0	196	67	0	936	65	961	812
V/C Ratio(X)	0.68	0.00	0.17	0.71	0.00	0.03	0.60	0.00	0.70	0.58	0.47	0.03
Avail Cap(c_a), veh/h	691	0	589	685	0	603	667	0	1162	667	1196	1011
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	31.7	33.3	0.0	30.5	37.5	0.0	14.4	37.6	12.1	9.3
Incr Delay (d2), s/veh	4.5	0.0	0.5	4.8	0.0	0.1	9.5	0.0	2.9	9.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.6	3.6	0.0	0.1	1.0	0.0	11.5	1.0	6.6	0.3
LnGrp Delay(d),s/veh	38.2	0.0	32.2	38.1	0.0	30.5	47.0	0.0	17.3	46.9	13.1	9.3
LnGrp LOS	D		C	D		C	D		B	D	B	A
Approach Vol, veh/h		168			163			697			518	
Approach Delay, s/veh		37.2			37.9			19.0			15.3	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	45.4		13.1	7.0	45.3		13.9
Change Period (Y+Rc), s	4.1	5.4		4.5	4.1	5.4		4.5
Max Green Setting (Gmax), s	30.0	50.0		30.0	30.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	3.7	24.0		7.9	3.8	14.4		8.8
Green Ext Time (p_c), s	0.1	16.0		0.9	0.1	19.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	9.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	133	105	98	521	278	138
Future Vol, veh/h	133	105	98	521	278	138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	153	121	113	599	320	159

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	924	239	478	0	-	0
Stage 1	399	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	267	759	1074	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	239	759	1074	-	-	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	497	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	46.4	1.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1074	-	343	-	-
HCM Lane V/C Ratio	0.105	-	0.798	-	-
HCM Control Delay (s)	8.7	-	46.4	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.3	-	6.7	-	-

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	26	25	95.0%	48.1	14.3	D
	Through	15	19	126.7%	53.4	21.8	D
	Right Turn	14	17	124.9%	23.7	13.9	C
	Subtotal	55	61	111.2%	42.7	10.9	D
SB	Left Turn	565	541	95.8%	39.1	4.3	D
	Through	14	14	100.4%	48.8	17.9	D
	Right Turn	189	193	101.9%	10.2	1.9	B
	Subtotal	768	748	97.4%	31.7	3.4	C
EB	Left Turn	217	203	93.7%	63.2	12.4	E
	Through	706	662	93.7%	21.5	3.1	C
	Right Turn	13	10	78.9%	14.4	13.7	B
	Subtotal	936	875	93.5%	31.2	5.6	C
WB	Left Turn	30	23	77.3%	82.5	32.6	F
	Through	803	792	98.6%	42.9	8.7	D
	Right Turn	600	583	97.2%	23.1	6.6	C
	Subtotal	1,433	1,398	97.6%	35.4	8.2	D
Total		3,192	3,082	96.6%	33.5	5.5	C

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	296	286	96.7%	34.2	4.6	C
	Through	718	746	103.9%	16.7	2.9	B
	Right Turn	77	66	85.9%	7.5	1.7	A
	Subtotal	1,091	1,098	100.7%	20.6	3.1	C
SB	Left Turn	54	47	87.7%	41.8	4.8	D
	Through	748	748	100.0%	29.6	2.8	C
	Right Turn	119	118	99.2%	10.2	2.8	B
	Subtotal	921	914	99.2%	27.7	2.8	C
EB	Left Turn	225	214	95.3%	32.8	3.5	C
	Through	28	25	90.0%	33.5	11.7	C
	Right Turn	334	323	96.7%	15.5	3.2	B
	Subtotal	587	562	95.8%	23.2	2.0	C
WB	Left Turn	101	97	96.0%	41.5	6.6	D
	Through	16	12	77.6%	49.3	22.5	D
	Right Turn	40	41	102.5%	10.3	4.0	B
	Subtotal	157	150	95.8%	33.6	6.3	C
Total		2,756	2,725	98.9%	24.2	2.3	C

FEHR PEERS

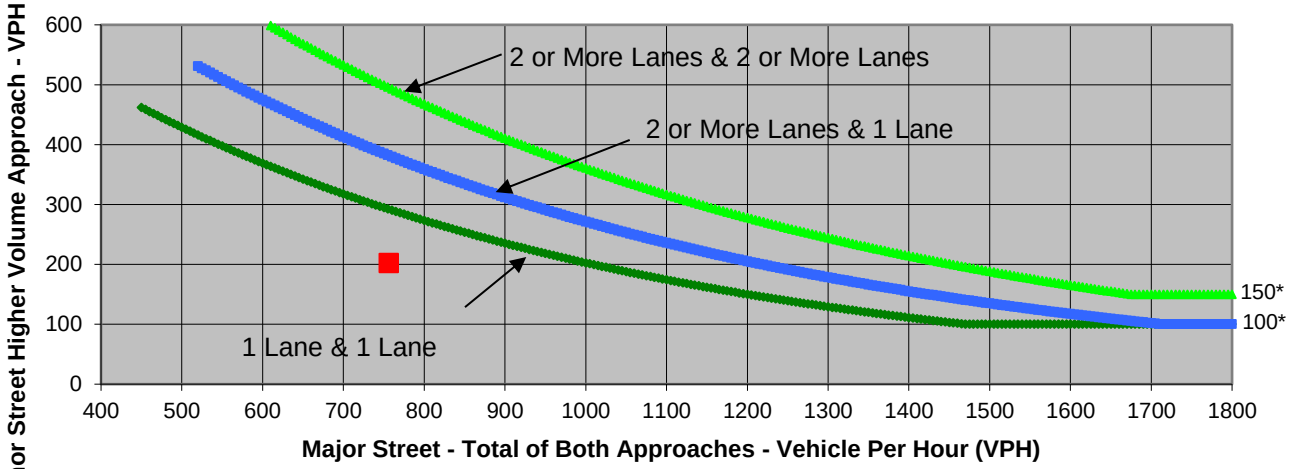
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	ExistingPlusApprovedProjects Plus Proje
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	83		106	
Through	166	367		
Right		140	96	
Total	249	507	202	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**756**	**202**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	ExistingPlusApprovedProjects Plus Proje
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	83	0	106	0
Through	166	367	0	0
Right	0	140	96	0
Total	249	507	202	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	21.7
Approach with Worst Case Delay	EB
Total Vehicles on Approach	202

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
tingPlusApprovedProjects Plus Pro	**1.2**	**202**	**958**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

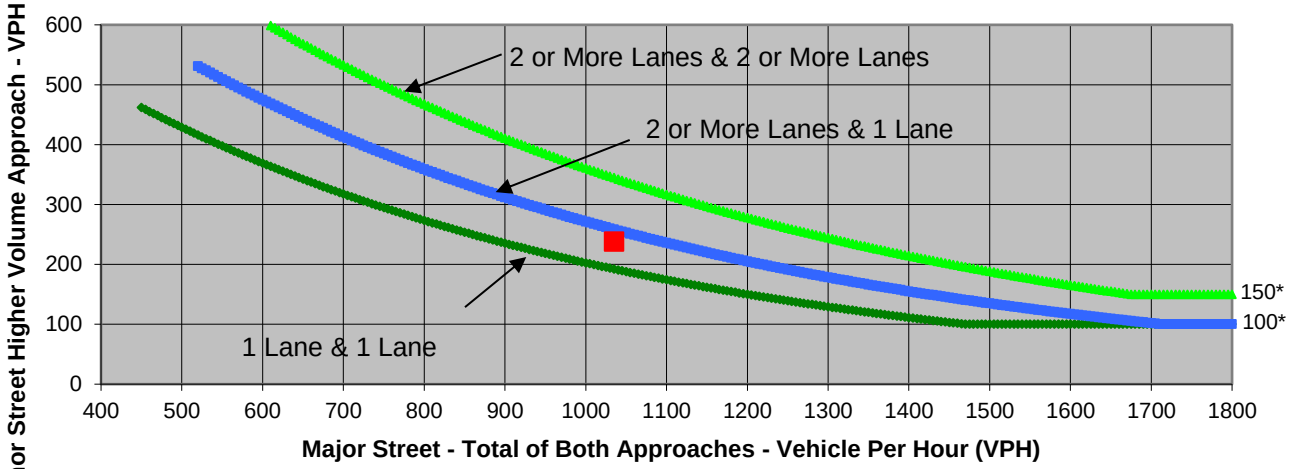
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	ExistingPlusApprovedProjects Plus Proje
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	98		133	
Through	521	278		
Right		138	105	
Total	619	416	238	0

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,035**	**238**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Sierra Pine Subdivision TIS		
Major Street	Granite Drive	Scenario	ExistingPlusApprovedProjects Plus Proje
Minor Street	Dominguez Road	Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	98	0	133	0
Through	521	278	0	0
Right	0	138	105	0
Total	619	416	238	0

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	46.4
Approach with Worst Case Delay	EB
Total Vehicles on Approach	238

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
tingPlusApprovedProjects Plus Pro	**3.1**	**238**	**1,273**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

APPENDIX E:
CUMULATIVE CONDITIONS TECHNICAL CALCULATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	110	200	30	80	10	90	620	20	10	510	220
Future Volume (veh/h)	420	110	200	30	80	10	90	620	20	10	510	220
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	438	115	0	31	83	1	94	646	19	10	531	54
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	508	533	453	151	159	129	121	1269	37	18	1074	464
Arrive On Green	0.29	0.29	0.00	0.09	0.09	0.09	0.07	0.37	0.37	0.01	0.31	0.31
Sat Flow, veh/h	1757	1845	1568	1757	1845	1503	1757	3473	102	1757	3505	1515
Grp Volume(v), veh/h	438	115	0	31	83	1	94	326	339	10	531	54
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1503	1757	1752	1823	1757	1752	1515
Q Serve(g_s), s	18.0	3.6	0.0	1.2	3.3	0.0	4.0	11.0	11.0	0.4	9.4	2.0
Cycle Q Clear(g_c), s	18.0	3.6	0.0	1.2	3.3	0.0	4.0	11.0	11.0	0.4	9.4	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	508	533	453	151	159	129	121	640	666	18	1074	464
V/C Ratio(X)	0.86	0.22	0.00	0.21	0.52	0.01	0.78	0.51	0.51	0.57	0.49	0.12
Avail Cap(c_a), veh/h	693	727	618	693	727	593	254	691	719	254	1382	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	20.5	0.0	32.3	33.3	31.8	34.8	18.8	18.8	37.5	21.6	19.0
Incr Delay (d2), s/veh	8.3	0.2	0.0	0.7	2.7	0.0	10.1	1.3	1.3	25.7	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	1.9	0.0	0.6	1.8	0.0	2.3	5.6	5.8	0.3	4.7	0.8
LnGrp Delay(d),s/veh	34.0	20.7	0.0	33.0	35.9	31.8	45.0	20.2	20.1	63.2	22.3	19.2
LnGrp LOS	C	C		C	D	C	D	C	C	E	C	B
Approach Vol, veh/h		553			115			759			595	
Approach Delay, s/veh		31.2			35.1			23.2			22.7	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	32.8		27.0	9.2	28.3		11.5
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	11.0	30.0		30.0	11.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	2.4	13.0		20.0	6.0	11.4		5.3
Green Ext Time (p_c), s	0.0	11.1		1.6	0.1	11.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	100	210	140	360	30	150	460	180	30	510	140
Future Volume (veh/h)	50	100	210	140	360	30	150	460	180	30	510	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	53	105	38	147	379	8	158	484	154	32	537	124
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	121	409	342	197	489	407	200	983	310	58	835	192
Arrive On Green	0.07	0.22	0.22	0.11	0.27	0.27	0.11	0.38	0.38	0.03	0.30	0.30
Sat Flow, veh/h	1757	1845	1541	1757	1845	1534	1757	2600	821	1757	2810	646
Grp Volume(v), veh/h	53	105	38	147	379	8	158	325	313	32	334	327
Grp Sat Flow(s),veh/h/ln	1757	1845	1541	1757	1845	1534	1757	1752	1669	1757	1752	1704
Q Serve(g_s), s	2.1	3.4	1.4	5.9	13.8	0.3	6.4	10.3	10.4	1.3	12.0	12.1
Cycle Q Clear(g_c), s	2.1	3.4	1.4	5.9	13.8	0.3	6.4	10.3	10.4	1.3	12.0	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.38
Lane Grp Cap(c), veh/h	121	409	342	197	489	407	200	663	631	58	521	506
V/C Ratio(X)	0.44	0.26	0.11	0.75	0.77	0.02	0.79	0.49	0.50	0.56	0.64	0.65
Avail Cap(c_a), veh/h	327	775	648	375	826	687	385	663	631	337	594	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	23.3	22.5	31.2	24.7	19.7	31.3	17.2	17.3	34.6	22.1	22.2
Incr Delay (d2), s/veh	2.9	0.4	0.2	6.4	3.1	0.0	7.8	1.5	1.7	9.4	3.9	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.8	0.6	3.2	7.4	0.1	3.5	5.3	5.1	0.8	6.3	6.3
LnGrp Delay(d),s/veh	35.3	23.7	22.7	37.6	27.7	19.7	39.1	18.8	18.9	44.0	26.0	26.3
LnGrp LOS	D	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		196			534			796			693	
Approach Delay, s/veh		26.6			30.3			22.9			27.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	32.8	12.6	20.6	12.4	27.0	9.5	23.7
Change Period (Y+Rc), s	4.1	5.4	4.5	4.5	4.1	5.4	4.5	4.5
Max Green Setting (Gmax), s	13.9	26.6	15.5	30.5	15.9	24.6	13.5	32.5
Max Q Clear Time (g_c+I1), s	3.3	12.4	7.9	5.4	8.4	14.1	4.1	15.8
Green Ext Time (p_c), s	0.0	10.7	0.2	3.6	0.3	7.4	0.1	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	160	50	140	470	160	50	220	60	50	350	100
Future Volume (veh/h)	110	160	50	140	470	160	50	220	60	50	350	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	116	168	13	147	495	83	53	232	35	53	368	74
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	172	589	491	202	636	530	85	660	98	85	628	125
Arrive On Green	0.10	0.32	0.32	0.12	0.34	0.34	0.05	0.22	0.22	0.05	0.22	0.22
Sat Flow, veh/h	1757	1845	1537	1757	1845	1537	1757	3044	452	1757	2893	574
Grp Volume(v), veh/h	116	168	13	147	495	83	53	132	135	53	221	221
Grp Sat Flow(s),veh/h/ln	1757	1845	1537	1757	1845	1537	1757	1752	1743	1757	1752	1715
Q Serve(g_s), s	3.9	4.2	0.4	5.0	14.8	2.3	1.8	3.9	4.1	1.8	7.0	7.1
Cycle Q Clear(g_c), s	3.9	4.2	0.4	5.0	14.8	2.3	1.8	3.9	4.1	1.8	7.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.33
Lane Grp Cap(c), veh/h	172	589	491	202	636	530	85	380	378	85	380	372
V/C Ratio(X)	0.67	0.29	0.03	0.73	0.78	0.16	0.62	0.35	0.36	0.62	0.58	0.59
Avail Cap(c_a), veh/h	314	928	773	299	913	761	311	699	696	311	699	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	15.7	14.4	26.3	18.1	14.0	28.8	20.4	20.5	28.8	21.6	21.7
Incr Delay (d2), s/veh	4.5	0.3	0.0	4.9	2.7	0.1	7.3	0.5	0.6	7.3	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.2	0.2	2.7	7.9	1.0	1.1	2.0	2.0	1.1	3.5	3.5
LnGrp Delay(d),s/veh	31.4	16.0	14.4	31.3	20.8	14.1	36.0	21.0	21.1	36.0	23.0	23.2
LnGrp LOS	C	B	B	C	C	B	D	C	C	D	C	C
Approach Vol, veh/h		297			725			320			495	
Approach Delay, s/veh		21.9			22.2			23.5			24.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	18.8	11.6	24.2	7.1	18.8	10.0	25.7
Change Period (Y+Rc), s	4.1	5.4	4.5	* 4.5	4.1	5.4	4.0	4.5
Max Green Setting (Gmax), s	10.9	24.6	10.5	* 31	10.9	24.6	11.0	30.5
Max Q Clear Time (g_c+I1), s	3.8	6.1	7.0	6.2	3.8	9.1	5.9	16.8
Green Ext Time (p_c), s	0.0	3.8	0.1	4.7	0.0	3.5	0.1	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.0
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	17	87.4%	29.2	8.0	C
	Through	10	12	117.8%	44.1	17.6	D
	Right Turn	10	11	106.4%	13.4	10.3	B
	Subtotal	40	40	99.8%	31.9	11.5	C
SB	Left Turn	210	214	101.7%	26.8	2.1	C
	Through	10	14	136.8%	25.7	16.6	C
	Right Turn	160	150	93.6%	6.2	1.9	A
	Subtotal	380	377	99.2%	18.8	1.5	B
EB	Left Turn	190	202	106.2%	49.3	7.5	D
	Through	780	760	97.4%	9.9	2.4	A
	Right Turn	10	12	121.6%	3.2	2.1	A
	Subtotal	980	974	99.3%	18.1	4.4	B
WB	Left Turn	20	18	91.2%	35.7	13.0	D
	Through	1,170	1,061	90.6%	19.4	4.3	B
	Right Turn	440	422	96.0%	18.0	3.9	B
	Subtotal	1,630	1,501	92.1%	19.2	4.1	B
Total		3,030	2,891	95.4%	19.0	3.3	B

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	420	413	98.4%	57.0	8.4	E
	Through	1,030	938	91.1%	34.2	5.3	C
	Right Turn	180	161	89.5%	31.9	6.6	C
	Subtotal	1,630	1,513	92.8%	40.2	5.6	D
SB	Left Turn	90	81	89.5%	78.3	16.0	E
	Through	1,740	1,465	84.2%	119.8	21.0	F
	Right Turn	200	136	67.8%	184.9	49.4	F
	Subtotal	2,030	1,682	82.8%	123.1	22.8	F
EB	Left Turn	100	90	89.7%	72.6	42.1	E
	Through	20	17	83.6%	54.0	15.8	D
	Right Turn	90	85	94.2%	24.7	4.3	C
	Subtotal	210	191	91.0%	50.8	23.3	D
WB	Left Turn	180	120	66.5%	227.3	69.9	F
	Through	30	21	69.7%	178.5	76.0	F
	Right Turn	40	20	49.4%	119.6	64.5	F
	Subtotal	250	160	64.1%	210.4	67.4	F
Total		4,120	3,546	86.1%	86.1	9.0	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	80	140	10	40	10	80	900	20	10	890	430
Future Volume (veh/h)	420	80	140	10	40	10	80	900	20	10	890	430
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	442	84	0	11	42	0	84	947	20	11	937	262
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	522	548	446	131	137	117	108	1456	31	19	1277	553
Arrive On Green	0.30	0.30	0.00	0.07	0.07	0.00	0.06	0.42	0.40	0.01	0.36	0.36
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3507	74	1757	3505	1518
Grp Volume(v), veh/h	442	84	0	11	42	0	84	473	494	11	937	262
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1829	1757	1752	1518
Q Serve(g_s), s	18.7	2.7	0.0	0.5	1.7	0.0	3.7	17.1	17.1	0.5	18.3	10.5
Cycle Q Clear(g_c), s	18.7	2.7	0.0	0.5	1.7	0.0	3.7	17.1	17.1	0.5	18.3	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	522	548	446	131	137	117	108	728	759	19	1277	553
V/C Ratio(X)	0.85	0.15	0.00	0.08	0.31	0.00	0.78	0.65	0.65	0.58	0.73	0.47
Avail Cap(c_a), veh/h	688	723	595	688	723	614	244	728	759	244	1374	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	20.5	0.0	34.1	34.7	0.0	36.6	18.5	18.5	38.9	21.8	19.3
Incr Delay (d2), s/veh	7.5	0.1	0.0	0.3	1.2	0.0	11.2	2.8	2.7	24.6	2.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	1.4	0.0	0.2	0.9	0.0	2.1	8.9	9.2	0.4	9.3	4.6
LnGrp Delay(d),s/veh	33.6	20.6	0.0	34.4	35.9	0.0	47.7	21.3	21.2	63.5	24.3	20.7
LnGrp LOS	C	C		C	D		D	C	C	E	C	C
Approach Vol, veh/h		526			53			1051			1210	
Approach Delay, s/veh		31.5			35.6			23.4			23.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	36.8		27.5	8.9	32.8		9.9
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	11.0	30.0		30.0	11.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	2.5	19.1		20.7	5.7	20.3		3.7
Green Ext Time (p_c), s	0.0	10.1		1.4	0.1	7.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	220	340	180	200	30	270	930	240	30	760	70
Future Volume (veh/h)	150	220	340	180	200	30	270	930	240	30	760	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	155	227	128	186	206	5	278	959	228	31	784	66
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	204	324	262	235	356	295	321	1336	317	55	1066	90
Arrive On Green	0.12	0.18	0.17	0.13	0.19	0.19	0.18	0.48	0.46	0.03	0.33	0.33
Sat Flow, veh/h	1757	1845	1539	1757	1845	1528	1757	2794	663	1757	3262	275
Grp Volume(v), veh/h	155	227	128	186	206	5	278	601	586	31	421	429
Grp Sat Flow(s),veh/h/ln	1757	1845	1539	1757	1845	1528	1757	1752	1704	1757	1752	1785
Q Serve(g_s), s	7.5	10.2	6.6	9.1	9.0	0.2	13.6	24.0	24.3	1.5	18.8	18.8
Cycle Q Clear(g_c), s	7.5	10.2	6.6	9.1	9.0	0.2	13.6	24.0	24.3	1.5	18.8	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		0.15
Lane Grp Cap(c), veh/h	204	324	262	235	356	295	321	838	815	55	573	583
V/C Ratio(X)	0.76	0.70	0.49	0.79	0.58	0.02	0.87	0.72	0.72	0.56	0.74	0.74
Avail Cap(c_a), veh/h	319	544	445	319	544	450	418	838	815	219	616	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	34.2	33.1	37.0	32.3	28.8	35.0	18.3	18.6	42.1	26.3	26.3
Incr Delay (d2), s/veh	6.6	3.2	1.6	10.0	1.7	0.0	14.7	4.1	4.2	10.1	6.2	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.5	2.9	5.0	4.7	0.1	7.9	12.5	12.2	0.9	10.0	10.2
LnGrp Delay(d),s/veh	44.3	37.4	34.8	47.0	34.1	28.9	49.7	22.4	22.8	52.3	32.5	32.4
LnGrp LOS	D	D	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		510			397			1465			881	
Approach Delay, s/veh		38.8			40.1			27.7			33.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	46.2	15.8	19.5	20.1	32.8	14.3	21.0
Change Period (Y+Rc), s	4.1	5.4	4.5	4.5	4.1	5.4	4.5	4.5
Max Green Setting (Gmax), s	10.9	39.6	15.5	25.5	20.9	29.6	15.5	25.5
Max Q Clear Time (g_c+I1), s	3.5	26.3	11.1	12.2	15.6	20.8	9.5	11.0
Green Ext Time (p_c), s	0.0	12.5	0.2	2.8	0.5	6.6	0.2	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	410	10	160	210	90	60	580	260	150	360	110
Future Volume (veh/h)	120	410	10	160	210	90	60	580	260	150	360	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	126	432	3	168	221	22	63	611	221	158	379	89
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	166	514	428	207	568	473	81	696	251	194	961	223
Arrive On Green	0.09	0.28	0.28	0.12	0.31	0.31	0.05	0.28	0.28	0.11	0.34	0.34
Sat Flow, veh/h	1757	1845	1535	1757	1845	1536	1757	2497	902	1757	2806	651
Grp Volume(v), veh/h	126	432	3	168	221	22	63	428	404	158	235	233
Grp Sat Flow(s),veh/h/ln	1757	1845	1535	1757	1845	1536	1757	1752	1647	1757	1752	1704
Q Serve(g_s), s	6.0	19.0	0.1	8.0	8.1	0.9	3.1	20.1	20.2	7.6	8.8	9.0
Cycle Q Clear(g_c), s	6.0	19.0	0.1	8.0	8.1	0.9	3.1	20.1	20.2	7.6	8.8	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.55	1.00		0.38
Lane Grp Cap(c), veh/h	166	514	428	207	568	473	81	488	459	194	600	584
V/C Ratio(X)	0.76	0.84	0.01	0.81	0.39	0.05	0.78	0.88	0.88	0.82	0.39	0.40
Avail Cap(c_a), veh/h	265	621	516	255	610	508	283	541	508	283	600	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	29.3	22.5	37.1	23.5	21.0	40.7	29.7	29.7	37.5	21.5	21.6
Incr Delay (d2), s/veh	6.9	8.6	0.0	14.9	0.4	0.0	14.4	14.2	15.2	11.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	10.8	0.1	4.8	4.2	0.4	1.8	11.7	11.1	4.3	4.3	4.3
LnGrp Delay(d),s/veh	45.0	37.9	22.5	52.0	23.9	21.0	55.1	43.9	44.9	48.6	21.9	22.0
LnGrp LOS	D	D	C	D	C	C	E	D	D	D	C	C
Approach Vol, veh/h		561			411			895			626	
Approach Delay, s/veh		39.4			35.2			45.1			28.7	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	29.4	14.6	28.5	8.1	34.9	12.1	31.0
Change Period (Y+Rc), s	4.1	5.4	4.5	* 4.5	4.1	5.4	4.0	4.5
Max Green Setting (Gmax), s	13.9	26.6	12.5	* 29	13.9	26.6	13.0	28.5
Max Q Clear Time (g_c+I1), s	9.6	22.2	10.0	21.0	5.1	11.0	8.0	10.1
Green Ext Time (p_c), s	0.1	1.8	0.1	2.5	0.1	7.0	0.1	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	30	30	98.8%	81.6	52.8	F
	Through	20	19	96.9%	86.4	46.9	F
	Right Turn	20	19	95.0%	59.7	39.4	E
	Subtotal	70	68	97.2%	72.9	34.6	E
SB	Left Turn	610	599	98.2%	45.3	7.0	D
	Through	20	13	66.5%	36.7	12.9	D
	Right Turn	370	396	107.1%	9.6	2.4	A
	Subtotal	1,000	1,009	100.9%	31.3	5.0	C
EB	Left Turn	380	371	97.5%	90.8	15.8	F
	Through	1,290	1,281	99.3%	36.7	9.5	D
	Right Turn	10	11	114.0%	38.5	22.9	D
	Subtotal	1,680	1,663	99.0%	48.8	10.4	D
WB	Left Turn	30	20	67.1%	64.6	25.9	E
	Through	1,000	842	84.2%	36.9	3.9	D
	Right Turn	550	480	87.3%	38.8	5.9	D
	Subtotal	1,580	1,343	85.0%	38.1	4.3	D
Total		4,330	4,082	94.3%	41.4	4.6	D

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	130	126	96.8%	97.3	21.5	F
	Through	1,450	1,439	99.2%	41.1	6.1	D
	Right Turn	120	114	95.3%	36.4	9.4	D
	Subtotal	1,700	1,679	98.8%	44.9	6.5	D
SB	Left Turn	50	39	78.3%	83.1	14.7	F
	Through	1,490	1,068	71.7%	179.5	13.4	F
	Right Turn	140	92	65.4%	280.2	22.5	F
	Subtotal	1,680	1,199	71.4%	184.0	13.1	F
EB	Left Turn	530	444	83.8%	133.1	47.5	F
	Through	40	39	96.9%	110.7	41.1	F
	Right Turn	340	302	88.7%	44.8	13.8	D
	Subtotal	910	785	86.2%	98.4	33.0	F
WB	Left Turn	240	230	95.8%	75.4	13.6	E
	Through	30	32	105.1%	53.3	15.8	D
	Right Turn	40	42	104.5%	35.5	10.7	D
	Subtotal	310	303	97.8%	67.8	11.2	E
Total		4,600	3,966	86.2%	98.8	8.1	F

FEHR PEERS

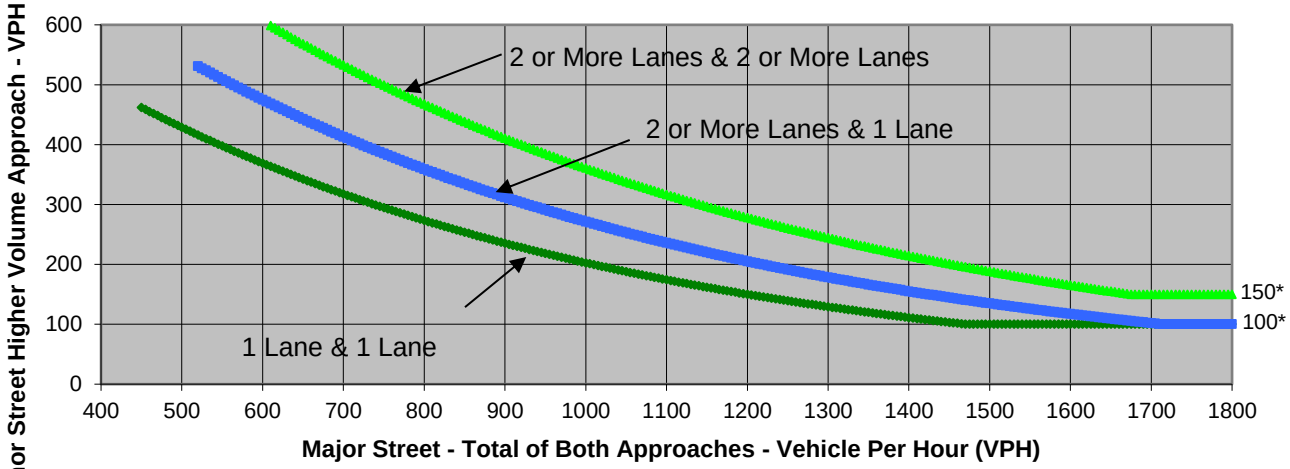
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 No Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	50	110	140
Through	220	350	160	470
Right	60	100	50	160
Total	330	500	320	770

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**830**	**770**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 No Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	50	110	140
Through	220	350	160	470
Right	60	100	50	160
Total	330	500	320	770

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	200
Approach with Worst Case Delay	WB
Total Vehicles on Approach	770

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
2030 No Project	**42.8**	**770**	**1,920**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Granite Drive
Minor Street	Dominguez Road

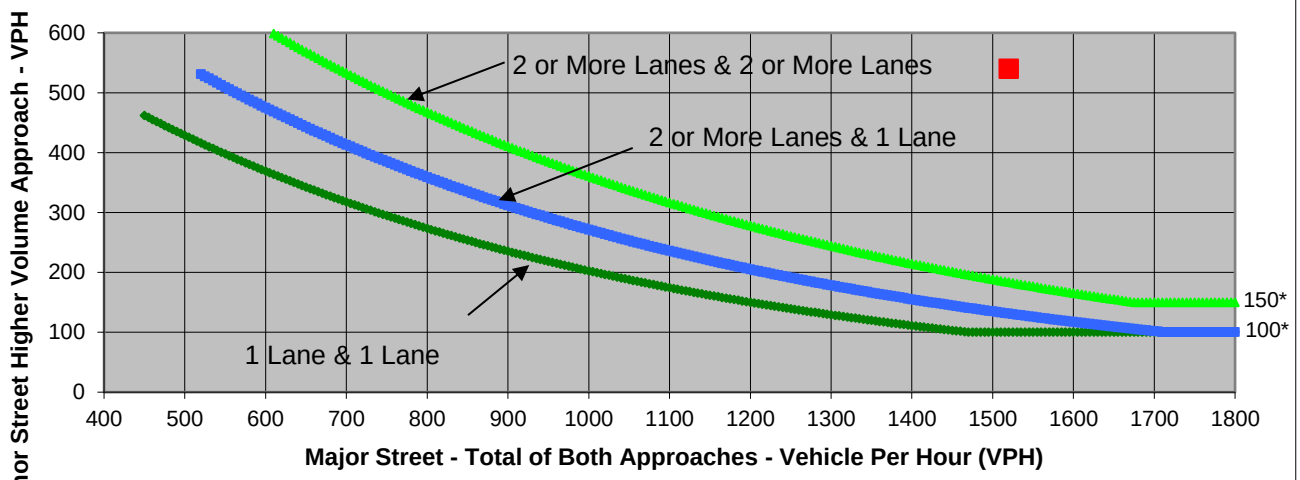
Project	Sierra Pine Subdivision TIS
Scenario	2030 No Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	150	120	160
Through	580	360	410	210
Right	260	110	10	90
Total	900	620	540	460

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,520**	**540**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	150	120	160
Through	580	360	410	210
Right	260	110	10	90
Total	900	620	540	460

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	200
Approach with Worst Case Delay	EB
Total Vehicles on Approach	540

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
2030 No Project	**30**	**540**	**2,520**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	110	200	30	80	10	90	620	20	10	520	230
Future Volume (veh/h)	430	110	200	30	80	10	90	620	20	10	520	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	448	115	0	31	83	1	94	646	19	10	542	56
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	515	541	460	151	158	129	121	1267	37	18	1072	463
Arrive On Green	0.29	0.29	0.00	0.09	0.09	0.09	0.07	0.36	0.36	0.01	0.31	0.31
Sat Flow, veh/h	1757	1845	1568	1757	1845	1503	1757	3473	102	1757	3505	1515
Grp Volume(v), veh/h	448	115	0	31	83	1	94	326	339	10	542	56
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1503	1757	1752	1823	1757	1752	1515
Q Serve(g_s), s	18.7	3.6	0.0	1.3	3.3	0.0	4.1	11.2	11.2	0.4	9.8	2.1
Cycle Q Clear(g_c), s	18.7	3.6	0.0	1.3	3.3	0.0	4.1	11.2	11.2	0.4	9.8	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	515	541	460	151	158	129	121	639	665	18	1072	463
V/C Ratio(X)	0.87	0.21	0.00	0.21	0.52	0.01	0.78	0.51	0.51	0.57	0.51	0.12
Avail Cap(c_a), veh/h	683	717	609	683	717	584	250	681	709	250	1362	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	20.6	0.0	32.8	33.8	32.3	35.3	19.1	19.1	38.0	22.0	19.3
Incr Delay (d2), s/veh	9.3	0.2	0.0	0.7	2.7	0.0	10.1	1.3	1.3	25.8	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	1.9	0.0	0.6	1.8	0.0	2.3	5.7	5.9	0.3	4.9	0.9
LnGrp Delay(d),s/veh	35.2	20.8	0.0	33.5	36.5	32.3	45.5	20.5	20.4	63.8	22.8	19.5
LnGrp LOS	D	C		C	D	C	D	C	C	E	C	B
Approach Vol, veh/h		563			115			759			608	
Approach Delay, s/veh		32.2			35.6			23.5			23.2	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	33.2		27.6	9.3	28.6		11.6
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	11.0	30.0		30.0	11.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	2.4	13.2		20.7	6.1	11.8		5.3
Green Ext Time (p_c), s	0.0	11.1		1.5	0.1	11.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	100	210	170	360	40	150	460	190	30	510	140
Future Volume (veh/h)	50	100	210	170	360	40	150	460	190	30	510	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	53	105	36	179	379	11	158	484	163	32	537	124
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	121	376	314	229	489	407	200	968	323	58	835	192
Arrive On Green	0.07	0.20	0.20	0.13	0.27	0.27	0.11	0.38	0.38	0.03	0.30	0.30
Sat Flow, veh/h	1757	1845	1541	1757	1845	1534	1757	2559	855	1757	2810	646
Grp Volume(v), veh/h	53	105	36	179	379	11	158	330	317	32	334	327
Grp Sat Flow(s),veh/h/ln	1757	1845	1541	1757	1845	1534	1757	1752	1661	1757	1752	1704
Q Serve(g_s), s	2.1	3.5	1.4	7.2	13.8	0.4	6.4	10.5	10.6	1.3	12.0	12.1
Cycle Q Clear(g_c), s	2.1	3.5	1.4	7.2	13.8	0.4	6.4	10.5	10.6	1.3	12.0	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.38
Lane Grp Cap(c), veh/h	121	376	314	229	489	407	200	663	628	58	521	506
V/C Ratio(X)	0.44	0.28	0.11	0.78	0.77	0.03	0.79	0.50	0.50	0.56	0.64	0.65
Avail Cap(c_a), veh/h	327	775	647	375	826	687	385	663	628	336	594	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	24.4	23.6	30.6	24.7	19.7	31.3	17.3	17.3	34.6	22.1	22.2
Incr Delay (d2), s/veh	2.9	0.5	0.2	6.7	3.1	0.0	7.8	1.6	1.7	9.4	3.9	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.8	0.6	3.9	7.4	0.2	3.5	5.3	5.1	0.8	6.3	6.3
LnGrp Delay(d),s/veh	35.3	24.9	23.7	37.2	27.8	19.8	39.2	18.9	19.1	44.0	26.1	26.3
LnGrp LOS	D	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		194			569			805			693	
Approach Delay, s/veh		27.5			30.6			22.9			27.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	32.9	13.9	19.3	12.4	27.0	9.5	23.7
Change Period (Y+Rc), s	4.1	5.4	4.5	4.5	4.1	5.4	4.5	4.5
Max Green Setting (Gmax), s	13.9	26.6	15.5	30.5	15.9	24.6	13.5	32.5
Max Q Clear Time (g_c+I1), s	3.3	12.6	9.2	5.5	8.4	14.1	4.1	15.8
Green Ext Time (p_c), s	0.0	10.6	0.3	3.6	0.3	7.4	0.1	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	190	80	140	480	150	60	220	60	50	350	100
Future Volume (veh/h)	110	190	80	140	480	150	60	220	60	50	350	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	116	200	24	147	505	74	63	232	35	53	368	74
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	171	598	498	201	644	537	93	669	99	84	622	123
Arrive On Green	0.10	0.32	0.32	0.11	0.35	0.35	0.05	0.22	0.22	0.05	0.21	0.21
Sat Flow, veh/h	1757	1845	1537	1757	1845	1538	1757	3044	452	1757	2893	574
Grp Volume(v), veh/h	116	200	24	147	505	74	63	132	135	53	221	221
Grp Sat Flow(s),veh/h/ln	1757	1845	1537	1757	1845	1538	1757	1752	1743	1757	1752	1715
Q Serve(g_s), s	4.0	5.2	0.7	5.1	15.5	2.1	2.2	4.0	4.1	1.9	7.1	7.3
Cycle Q Clear(g_c), s	4.0	5.2	0.7	5.1	15.5	2.1	2.2	4.0	4.1	1.9	7.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.33
Lane Grp Cap(c), veh/h	171	598	498	201	644	537	93	385	383	84	377	369
V/C Ratio(X)	0.68	0.33	0.05	0.73	0.78	0.14	0.68	0.34	0.35	0.63	0.59	0.60
Avail Cap(c_a), veh/h	307	908	757	293	894	745	304	685	681	304	685	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	16.1	14.6	26.9	18.4	14.0	29.3	20.7	20.8	29.4	22.2	22.3
Incr Delay (d2), s/veh	4.7	0.3	0.0	5.1	3.1	0.1	8.3	0.5	0.6	7.5	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.7	0.3	2.7	8.4	0.9	1.3	2.0	2.0	1.1	3.6	3.6
LnGrp Delay(d),s/veh	32.1	16.5	14.7	32.1	21.5	14.1	37.5	21.2	21.3	36.9	23.7	23.8
LnGrp LOS	C	B	B	C	C	B	D	C	C	D	C	C
Approach Vol, veh/h		340			726			330			495	
Approach Delay, s/veh		21.7			22.9			24.4			25.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	19.2	11.7	24.9	7.4	18.9	10.1	26.5
Change Period (Y+Rc), s	4.1	5.4	4.5	* 4.5	4.1	5.4	4.0	4.5
Max Green Setting (Gmax), s	10.9	24.6	10.5	* 31	10.9	24.6	11.0	30.5
Max Q Clear Time (g_c+I1), s	3.9	6.1	7.1	7.2	4.2	9.3	6.0	17.5
Green Ext Time (p_c), s	0.0	3.8	0.1	5.0	0.1	3.5	0.1	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.3%	39.6	19.7	D
	Through	10	12	121.6%	45.4	13.6	D
	Right Turn	10	11	106.4%	6.1	4.3	A
	Subtotal	40	44	111.2%	32.7	8.2	C
SB	Left Turn	230	239	104.1%	28.3	4.1	C
	Through	10	15	148.2%	24.2	14.4	C
	Right Turn	160	160	100.0%	5.3	1.3	A
	Subtotal	400	414	103.6%	19.2	2.8	B
EB	Left Turn	190	175	92.2%	42.7	4.7	D
	Through	780	807	103.4%	9.9	1.9	A
	Right Turn	10	11	110.2%	4.7	4.7	A
	Subtotal	980	993	101.3%	15.6	2.1	B
WB	Left Turn	20	13	62.7%	40.6	12.2	D
	Through	1,180	1,061	89.9%	21.4	2.5	C
	Right Turn	440	414	94.1%	19.9	3.1	B
	Subtotal	1,640	1,487	90.7%	21.1	2.6	C
Total		3,060	2,939	96.0%	19.1	1.8	B

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	430	398	92.6%	54.6	7.1	D
	Through	1,020	948	92.9%	32.4	4.5	C
	Right Turn	180	162	89.7%	27.8	4.2	C
	Subtotal	1,630	1,507	92.5%	37.8	5.1	D
SB	Left Turn	90	89	98.4%	89.6	29.1	F
	Through	1,740	1,480	85.1%	119.9	27.8	F
	Right Turn	200	156	77.9%	163.1	55.4	F
	Subtotal	2,030	1,724	84.9%	122.3	29.1	F
EB	Left Turn	100	105	104.9%	70.6	26.7	E
	Through	30	31	103.9%	65.0	37.5	E
	Right Turn	90	78	86.6%	25.6	6.0	C
	Subtotal	220	214	97.2%	54.0	17.7	D
WB	Left Turn	180	130	72.4%	217.5	77.2	F
	Through	30	22	73.5%	142.6	54.9	F
	Right Turn	40	33	83.6%	85.1	47.8	F
	Subtotal	250	186	74.3%	183.1	63.2	F
Total		4,130	3,632	87.9%	85.4	16.3	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	80	140	10	40	10	80	910	20	10	890	430
Future Volume (veh/h)	420	80	140	10	40	10	80	910	20	10	890	430
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	442	84	0	11	42	0	84	958	20	11	937	262
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	522	548	446	131	137	117	108	1457	30	19	1277	553
Arrive On Green	0.30	0.30	0.00	0.07	0.07	0.00	0.06	0.42	0.40	0.01	0.36	0.36
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3508	73	1757	3505	1518
Grp Volume(v), veh/h	442	84	0	11	42	0	84	479	499	11	937	262
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1829	1757	1752	1518
Q Serve(g_s), s	18.7	2.7	0.0	0.5	1.7	0.0	3.7	17.4	17.4	0.5	18.3	10.5
Cycle Q Clear(g_c), s	18.7	2.7	0.0	0.5	1.7	0.0	3.7	17.4	17.4	0.5	18.3	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	522	548	446	131	137	117	108	728	759	19	1277	553
V/C Ratio(X)	0.85	0.15	0.00	0.08	0.31	0.00	0.78	0.66	0.66	0.58	0.73	0.47
Avail Cap(c_a), veh/h	689	723	595	689	723	615	244	728	759	244	1374	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	20.5	0.0	34.1	34.7	0.0	36.6	18.6	18.6	38.9	21.8	19.3
Incr Delay (d2), s/veh	7.5	0.1	0.0	0.3	1.2	0.0	11.2	2.9	2.8	24.6	2.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	1.4	0.0	0.2	0.9	0.0	2.1	9.0	9.3	0.4	9.3	4.6
LnGrp Delay(d),s/veh	33.6	20.6	0.0	34.4	35.9	0.0	47.7	21.5	21.4	63.5	24.3	20.7
LnGrp LOS	C	C		C	D		D	C	C	E	C	C
Approach Vol, veh/h		526			53			1062			1210	
Approach Delay, s/veh		31.5			35.6			23.6			23.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	36.8		27.5	8.9	32.8		9.9
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	11.0	30.0		30.0	11.0	30.0		30.0
Max Q Clear Time (g_c+I1), s	2.5	19.4		20.7	5.7	20.3		3.7
Green Ext Time (p_c), s	0.0	9.9		1.4	0.1	7.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	230	340	190	190	40	280	920	260	40	760	70
Future Volume (veh/h)	150	230	340	190	190	40	280	920	260	40	760	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	155	237	139	196	196	7	289	948	246	41	784	66
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	331	268	243	373	309	330	1283	332	64	1036	87
Arrive On Green	0.12	0.18	0.17	0.14	0.20	0.20	0.19	0.47	0.45	0.04	0.32	0.32
Sat Flow, veh/h	1757	1845	1539	1757	1845	1529	1757	2738	709	1757	3262	275
Grp Volume(v), veh/h	155	237	139	196	196	7	289	606	588	41	421	429
Grp Sat Flow(s),veh/h/ln	1757	1845	1539	1757	1845	1529	1757	1752	1694	1757	1752	1784
Q Serve(g_s), s	7.7	10.9	7.4	9.8	8.6	0.3	14.4	25.4	25.7	2.1	19.5	19.5
Cycle Q Clear(g_c), s	7.7	10.9	7.4	9.8	8.6	0.3	14.4	25.4	25.7	2.1	19.5	19.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.15
Lane Grp Cap(c), veh/h	203	331	268	243	373	309	330	821	794	64	556	567
V/C Ratio(X)	0.76	0.72	0.52	0.81	0.53	0.02	0.88	0.74	0.74	0.64	0.76	0.76
Avail Cap(c_a), veh/h	311	531	435	311	531	440	408	821	794	214	601	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	34.9	33.9	37.7	32.2	28.9	35.7	19.5	19.8	42.9	27.7	27.7
Incr Delay (d2), s/veh	6.8	3.4	1.8	12.1	1.3	0.0	16.7	4.7	4.9	11.5	7.2	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	5.8	3.3	5.6	4.5	0.1	8.5	13.2	13.1	1.2	10.5	10.6
LnGrp Delay(d),s/veh	45.5	38.3	35.7	49.9	33.5	28.9	52.4	24.2	24.7	54.4	34.9	34.8
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		531			399			1483			891	
Approach Delay, s/veh		39.7			41.5			29.9			35.7	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	46.3	16.5	20.2	21.0	32.7	14.4	22.2
Change Period (Y+Rc), s	4.1	5.4	4.5	4.5	4.1	5.4	4.5	4.5
Max Green Setting (Gmax), s	10.9	39.6	15.5	25.5	20.9	29.6	15.5	25.5
Max Q Clear Time (g_c+I1), s	4.1	27.7	11.8	12.9	16.4	21.5	9.7	10.6
Green Ext Time (p_c), s	0.0	11.2	0.2	2.8	0.4	5.8	0.2	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	410	20	150	230	90	80	580	270	150	370	120
Future Volume (veh/h)	130	410	20	150	230	90	80	580	270	150	370	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	137	432	5	158	242	22	84	611	228	158	389	95
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	177	517	430	197	549	457	109	696	259	194	918	221
Arrive On Green	0.10	0.28	0.28	0.11	0.30	0.30	0.06	0.28	0.28	0.11	0.33	0.33
Sat Flow, veh/h	1757	1845	1535	1757	1845	1536	1757	2473	922	1757	2781	671
Grp Volume(v), veh/h	137	432	5	158	242	22	84	433	406	158	243	241
Grp Sat Flow(s),veh/h/ln	1757	1845	1535	1757	1845	1536	1757	1752	1642	1757	1752	1699
Q Serve(g_s), s	6.5	18.9	0.2	7.5	9.1	0.9	4.0	20.2	20.3	7.5	9.3	9.5
Cycle Q Clear(g_c), s	6.5	18.9	0.2	7.5	9.1	0.9	4.0	20.2	20.3	7.5	9.3	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.39
Lane Grp Cap(c), veh/h	177	517	430	197	549	457	109	493	462	194	578	561
V/C Ratio(X)	0.77	0.84	0.01	0.80	0.44	0.05	0.77	0.88	0.88	0.82	0.42	0.43
Avail Cap(c_a), veh/h	266	624	519	256	613	510	285	544	510	285	578	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	29.0	22.3	37.1	24.4	21.5	39.6	29.4	29.4	37.3	22.3	22.4
Incr Delay (d2), s/veh	7.7	8.3	0.0	12.8	0.6	0.0	11.0	14.1	15.1	10.9	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	10.8	0.1	4.3	4.7	0.4	2.3	11.7	11.1	4.2	4.5	4.5
LnGrp Delay(d),s/veh	45.3	37.3	22.3	49.9	24.9	21.5	50.7	43.5	44.5	48.2	22.8	22.9
LnGrp LOS	D	D	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		574			422			923			642	
Approach Delay, s/veh		39.1			34.1			44.6			29.1	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	29.5	14.1	28.5	9.4	33.7	12.6	30.0
Change Period (Y+Rc), s	4.1	5.4	4.5	* 4.5	4.1	5.4	4.0	4.5
Max Green Setting (Gmax), s	13.9	26.6	12.5	* 29	13.9	26.6	13.0	28.5
Max Q Clear Time (g_c+I1), s	9.5	22.3	9.5	20.9	6.0	11.5	8.5	11.1
Green Ext Time (p_c), s	0.1	1.9	0.1	2.6	0.1	7.0	0.1	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.7
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

Intersection 4 **Granite Dr/Rocklin Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	30	21	70.9%	48.4	23.4	D
	Through	20	17	87.4%	49.3	13.5	D
	Right Turn	20	19	95.0%	32.2	23.8	C
	Subtotal	70	58	82.5%	43.1	17.9	D
SB	Left Turn	620	611	98.6%	52.1	21.9	D
	Through	20	20	100.7%	52.0	18.2	D
	Right Turn	370	387	104.7%	10.4	4.0	B
	Subtotal	1,010	1,018	100.8%	36.2	13.8	D
EB	Left Turn	390	356	91.2%	86.9	27.3	F
	Through	1,280	1,224	95.7%	41.0	20.5	D
	Right Turn	10	12	121.6%	34.0	26.9	C
	Subtotal	1,680	1,592	94.8%	51.1	20.3	D
WB	Left Turn	30	24	78.5%	72.1	11.2	E
	Through	1,000	893	89.3%	35.4	4.6	D
	Right Turn	560	478	85.4%	36.3	5.7	D
	Subtotal	1,590	1,395	87.7%	36.3	5.0	D
Total		4,350	4,063	93.4%	42.0	10.1	D

Intersection 6 **Sierra College Blvd/Granite Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	140	140	100.2%	92.5	19.3	F
	Through	1,450	1,395	96.2%	41.7	6.2	D
	Right Turn	120	115	96.0%	37.6	9.7	D
	Subtotal	1,710	1,651	96.5%	45.8	7.0	D
SB	Left Turn	50	48	95.0%	84.7	17.5	F
	Through	1,480	1,071	72.4%	173.5	13.6	F
	Right Turn	140	106	76.0%	256.5	33.4	F
	Subtotal	1,670	1,225	73.4%	177.8	13.4	F
EB	Left Turn	530	481	90.7%	136.0	39.9	F
	Through	40	35	86.5%	122.8	41.1	F
	Right Turn	330	297	89.9%	41.0	7.3	D
	Subtotal	900	812	90.2%	101.3	27.8	F
WB	Left Turn	240	239	99.8%	78.8	18.3	E
	Through	30	28	93.7%	61.5	17.8	E
	Right Turn	40	49	122.6%	41.4	14.3	D
	Subtotal	310	317	102.1%	70.9	15.3	E
Total		4,590	4,004	87.2%	99.1	8.4	F

FEHR PEERS

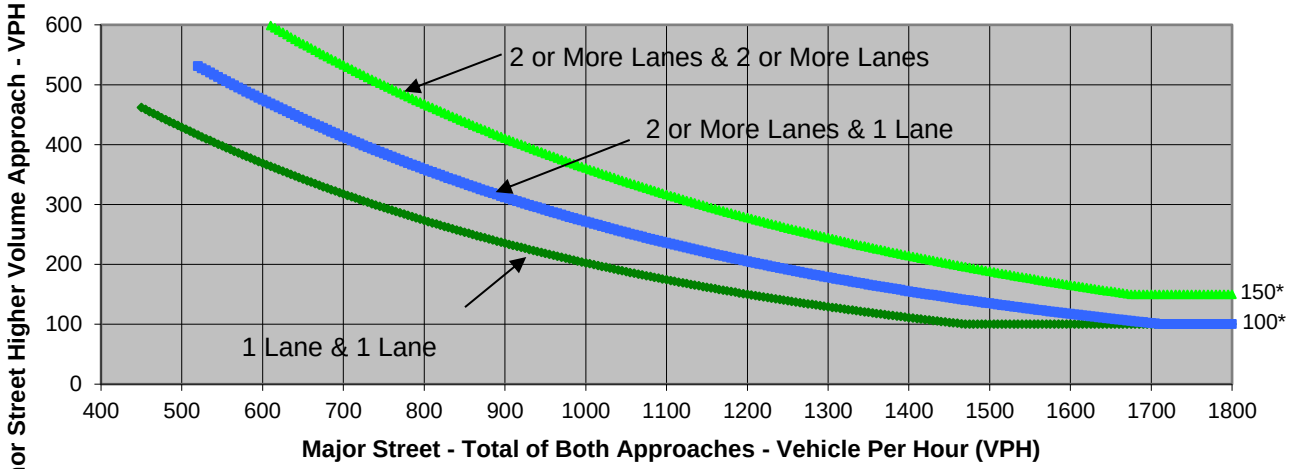
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 Plus Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	50	110	140
Through	220	350	190	480
Right	60	100	80	150
Total	340	500	380	770

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**840**	**770**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 Plus Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	50	110	140
Through	220	350	190	480
Right	60	100	80	150
Total	340	500	380	770

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	200
Approach with Worst Case Delay	WB
Total Vehicles on Approach	770

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
2030 Plus Project	**42.8**	**770**	**1,990**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

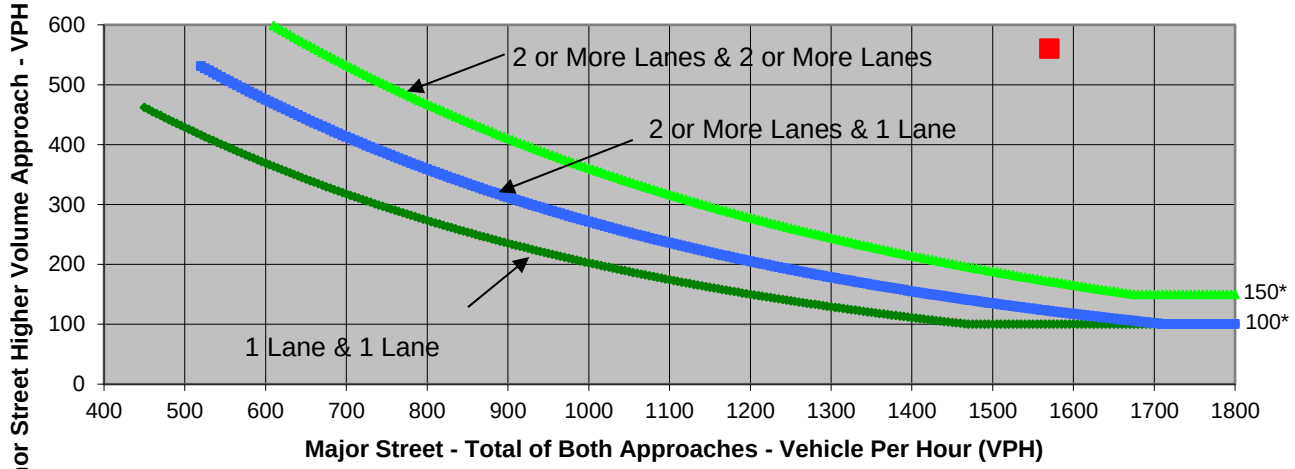
Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	150	130	150
Through	580	370	410	230
Right	270	120	20	90
Total	930	640	560	470

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Granite Drive	Dominguez Road	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,570**	**560**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Granite Drive	Project	Sierra Pine Subdivision TIS
Minor Street	Dominguez Road	Scenario	2030 Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	150	130	150
Through	580	370	410	230
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Major Street Direction

x	North/South
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Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	200
Approach with Worst Case Delay	EB
Total Vehicles on Approach	560

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
2030 Plus Project	**31.1**	**560**	**2,600**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

Sierra Pine Subdivision TIS
Cumulative Plus Project
Daily Project VMT

Speed Bin	Speed (MPH)		Project VMT
1	>0	<=5	4
2	>5	<=10	42
3	>10	<=15	109
4	>15	<=20	427
5	>20	<=25	662
6	>25	<=30	869
7	>30	<=35	2,166
8	>35	<=40	1,909
9	>40	<=45	1,489
10	>45	<=50	560
11	>50	<=55	533
12	>55	<=60	173
13	>60	<=65	74
14	>65	<=70	1
15	>70	<=75	0
16	>75		0
		Model Daily Project VMT	9,018