
APPENDIX D

TRAFFIC IMPACT STUDY

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TROY HIGH SCHOOL

FIELD IMPROVEMENTS PROJECT

TRAFFIC IMPACT STUDY

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Appendix F – Synchro Reports [2028 With Project – PM Peak Hour]

1. Project Description

The Fullerton Joint Union High School District is proposing improvements to Troy High School in Fullerton, California. More specifically, the District is proposing to install field lighting to allow for outdoor athletic activities to occur in the late afternoon and evening time periods. The improvements would also include upgrades to the track and field, such as the construction of permanent bleachers, a new field building, a synthetic turf field and track, a new scoreboard, and more. Lastly, the proposed project will include seismic retrofitting and modernization of five existing classroom buildings on the campus to make them more resistant to earthquake damage.

The sport field lighting improvements would include 19 additional lighting structures along the perimeter of the baseball/softball fields, the multi-use field, and the track field. The lighting improvements would expand access for community baseball practices, boys and girls soccer practices, softball practices, girls flag football practices, youth practices, and football OC elite practices. The proposed project is not anticipated to result in any changes to the overall number of practices or games, or to the number of participants or spectators. Rather, the proposed project would expand access for existing uses and activities to athletic fields into the afternoon and evening hours. It's anticipated that the month of October would accommodate the highest number of late afternoon and evening field users with the new field lighting improvements, with an anticipated 375 players participating in sports after school during the peak PM hour.

The primary purpose of this study is to analyze the potential impacts of the proposed project on transportation conditions during the peak PM hour in the surrounding area of Troy High School to support the California Environmental Quality Act (CEQA) analysis. Figure 1 illustrates the project area.



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- ▭ Troy High School Boundary
- ▭ Project Boundary

Figure 1: Troy High School project area

2. Traffic Analysis: Approach and Methodology

This study analyzes traffic conditions for a range of scenarios. In more detail, traffic operations for study area roadway segments and intersections were evaluated for each of the following scenarios:

- Existing Conditions (2025) without Project
- Opening Year (2028) without Project
- Existing Conditions (2025) with Project
- Opening Year (2028) with Project

For the purpose of this analysis, the project opening year for traffic conditions is 2028. This is because the proposed project's construction period is scheduled to be completed during the 2028 calendar year. An ambient growth rate of 1% per year was used to forecast the future volumes.

2.1 Average Daily Traffic

Average daily traffic (ADT) data was collected on four roadway segments in or near the study area for a full 24-hour period on Wednesday, November 12, 2025. The roadway segment locations are depicted in Figure 2 and listed below:

- A. Dorothy Ln, between State College Blvd and Victoria Dr
- B. Victoria Dr, between Dorothy Ln and N Acacia Ave
- C. State College Blvd, between Dorothy Ln and Nutwood Ave
- D. State College Blvd, between Dorothy Ln and Yorba Linda Blvd



LEGEND

- A) Dorothy Ln, between State College Blvd and Victoria Dr
- B) Victoria Dr, between Dorothy Ln and N Acacia Ave
- C) State College Blvd, between Dorothy Ln and Nutwood Ave
- D) State College Blvd, between Dorothy Ln and Yorba Linda Blvd

■ Roadway Segment Locations

Figure 2: Roadway Segment Locations

2.1.1 Roadway descriptions

The study area roadways are described below with respect to existing geometry, pedestrian and bicycle facilities, speed limit, parking facilities, and adjacent land uses.

Dorothy Ln

Dorothy Ln runs west and east and is located north of the project site. It's a three-lane roadway with one lane in each direction and a middle lane that serves as a turning lane. The surrounding land use is made up of residential homes and institutional uses (e.g., the high school). Turnoffs on the street provide access to Troy High School's northeastern and northwestern parking lots (i.e., Driveway 2 and Driveway 3), and access onto these driveways is only allowed for school drop-offs or for permit-based parking. The road's speed limit is 35 miles per hour. Dorothy Ln has sidewalks and dedicated bike lanes on both sides of the road. Roadside parking is not permitted on either side of the street.

State College Blvd

State College Blvd is a six lane arterial roadway that runs north and south and is located east of the project site. The posted speed limit is 40 miles per hour. Sidewalks are located on both sides of the road, and there are no bike lanes. Parking is not permitted on the roadway shoulder. The surrounding land use is residential, commercial, and institutional.

Victoria Dr

Victoria Dr is a two-lane roadway that runs northeast and southwest and is located northwest of the project site. The surrounding land use is made up of residential homes. The road's speed limit is 25 miles per hour. Victoria Dr has sidewalks on both sides of the road, and there are no bikes lanes. Roadside parallel parking is permitted, but on weekdays during daylight hours, there is a one-hour parking limit.

N Hale Ave

N Hale Ave is a two-lane roadway that runs north and south and is located west of the project site. The surrounding land use is made up of residential homes and institutional uses (e.g., the high school). A turnoff on the street (i.e., Driveway 1) provides access to Troy High School's northwestern and southwestern parking lots, and access onto this driveway is only allowed with a permit. The road's speed limit is 25 miles per hour. N Hale Ave has sidewalks on both sides of the road, and there are no bikes lanes. Roadside parking is not permitted on either side of the street during school hours to allow for increased capacity for student loading and unloading. More specifically, roadside parking is not allowed on the east side of the street between 7 a.m. to 4 p.m. on weekdays. On the west side of the street, roadside parking is not allowed between 7 a.m. and 3 p.m. on weekdays.

N Acacia Ave

N Acacia Ave is a two-lane roadway that runs north and south and is located west of the project site. The surrounding land use is made up of residential homes. The road's speed limit is 25 miles per hour. N Acacia Ave has sidewalks on both sides of the road, and sharrows to indicate that the road should be shared between bicyclists and drivers. Roadside parking is permitted on both sides of the street, and both sides of the road feature a dedicated roadside parking lane.



Nutwood Ave

Nutwood Ave is a two-lane roadway that runs east and west and is located south of the project site. The surrounding land use is made up of residential homes. The road’s speed limit is 25 miles per hour. Nutwood Ave has sidewalks on both sides of the road, and there are no bike lanes. Roadside parking is permitted on both sides of the street with a parking permit.

2.2 Intersection and Driveway Levels of Service Analysis

The performance criteria used for evaluating traffic volumes and capacities within the study area are based on PM peak hour intersection turning movement volumes and intersection lane geometries. The PM peak hour is defined as the highest one hour of traffic occurring during the PM peak period (i.e., 4:00 p.m. – 6:00 p.m.). For this study, the PM peak hour was the 5:00 p.m. hour. The traffic analysis examines the PM peak hour since this is the time period where the majority of reallocated vehicle trips are anticipated to occur due to the proposed project. No changes to AM peak trip generation are anticipated.

Turning movement data was collected on Wednesday, November 12, 2025, during the PM peak period (4:00 p.m. – 6:00 p.m.) at eight intersections, four of which were school access driveways. The study intersections and driveways are depicted in Figure 3 and listed below.

Intersections:

1. State College Blvd and Dorothy Ln
2. Victoria Dr and Dorothy Ln
3. N Acacia Ave and Dorothy Ln
4. State College Blvd and Nutwood Ave

Driveways:

- A. N Hale Ave and Driveway 1
- B. Driveway 2 and Dorothy Ln
- C. Driveway 3 and Dorothy Ln
- D. Driveway 4 and Dorothy Ln



Figure 3: Intersection and Driveway Locations

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- | | |
|---------------------------------------|------------------------------|
| 1) State College Blvd and Dorothy Ln | A) N Hale Ave and Driveway 1 |
| 2) Victoria Dr and Dorothy Ln | B) Driveway 2 and Dorothy Ln |
| 3) N Acacia Ave and Dorothy Ln | C) Driveway 3 and Dorothy Ln |
| 4) State College Blvd and Nutwood Ave | D) Driveway 4 and Dorothy Ln |
| ■ Intersection Locations | ● Driveway Locations |

ICU (Intersection Capacity Utilization) and HCM (Highway Capacity Manual) both present methods for analyzing intersection performance. ICU uses a volume-to-capacity (V/C) ratio to show whether an intersection is overcapacity or has reserve capacity. HCM leverages an average vehicle delay metric (i.e., control delay, measured in seconds per vehicle). In this study, the ICU method was applied to study the performance of signalized intersections, and the HCM method was applied to study the performance of unsignalized intersections. This approach is consistent with City of Fullerton guidelines. Furthermore, for intersections with four-way stoplights or stop signs, the V/C ratio or delay for the intersection as a whole is reported. For two-way stop-controlled intersections, the vehicle delay for the approach lane(s) with the stop sign(s) is reported. For intersections with no stop signs, the vehicle delay for the lane with the conflicting movement (e.g., a left turn) is reported.

Traffic level of service (LOS) is used to measure and contextualize intersection performance. LOS values are designated A through F, with LOS A representing free flow traffic conditions and LOS F representing severe traffic congestion. Each intersection’s LOS was determined by the volume-to-capacity ratio or the control delay during the PM peak hour. Any intersection with an LOS E or F is considered to have an unacceptable level traffic congestion. Project intersections with an LOS A through D are considered to have an acceptable amount of traffic for the given scenario. Table 1 summarizes the criteria for the intersection LOS calculations and the relationship between V/C and LOS, and between control delay and LOS.

Table 1 Level of Service Rating.

Level of Service (LOS)	Signalized intersections	Unsignalized intersections
	ICU (V/C)	HCM (Delay in seconds)
A	0.00-0.60	≤ 10
B	0.61-0.70	> 10 to ≤ 15
C	0.71-0.80	> 15 to ≤ 25
D	0.81-0.90	> 25 to ≤ 35
E	0.91-1.00	> 35 to ≤ 50
F	Above 1.00	> 50

3. Traffic Analysis: Without Project

This section of the report summarizes the traffic analysis results for the no project scenarios:

- Existing Conditions (2025) without Project
- Opening Year (2028) without Project

3.1 Existing Conditions

This section presents the Existing Conditions (2025) in the project study area. This scenario will serve as the base against which all subsequent scenarios are assessed. Descriptions of the existing roadway network and intersection level of service analysis results for the Existing Year (2025) No Project scenario are included in this section.

3.1.1 Average Daily Traffic

The average daily traffic (ADT) volumes for the study area roadway segments under Existing Conditions are summarized in Table 2. Existing roadway segment volumes are summarized from 24-hour counts which can be found in Appendix A.

Table 2 Roadway Average Daily Traffic (ADT).

Roadway	Source	Date	Existing ATD
Dorothy Ln, between State College Blvd and Victoria Dr	AimTD LLC	11/12/25	7,682
Victoria Dr, between Dorothy Ln and N Acacia Ave	AimTD LLC	11/12/25	2,883
State College Blvd, between Dorothy Ln and Nutwood Ave	AimTD LLC	11/12/25	29,647
State College Blvd, between Dorothy Ln and Yorba Linda Blvd	AimTD LLC	11/12/25	29,353

3.1.2 Intersection Levels of Service

Existing study intersection geometries are shown in Figure 4. Table 3 summarizes the existing levels of service at the study intersections during the PM peak hour. The complete Synchro analysis output summaries for the PM peak hour are reported in Appendix C. All study intersections currently operate at an acceptable level of service during the PM peak hour. Additionally, Existing Year (2025) No Project PM peak hour turning movement volumes are shown in Figure 5.

Table 3 Existing Intersection Levels of Service for the PM peak hour

Intersection	Existing		Existing	
	V/C	LOS	HCM Delay	LOS
State College Blvd and Dorothy Ln	0.618	B		
Victoria Dr and Dorothy Ln			10.7	B
N Acacia Ave and Dorothy Ln			12.1	B
State College Blvd and Nutwood Ave	0.775	C		
N Hale Ave and Driveway 1			9.1	A
Driveway 2 and Dorothy Ln			11.8	B
Driveway 3 and Dorothy Ln			8.4	A
Driveway 4 and Dorothy Ln			10.7	B



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- Study Intersection
- Study Intersection (Driveway)
- Troy High School Boundary
- Project Boundary
- ◆ Stop Sign
- Traffic Light

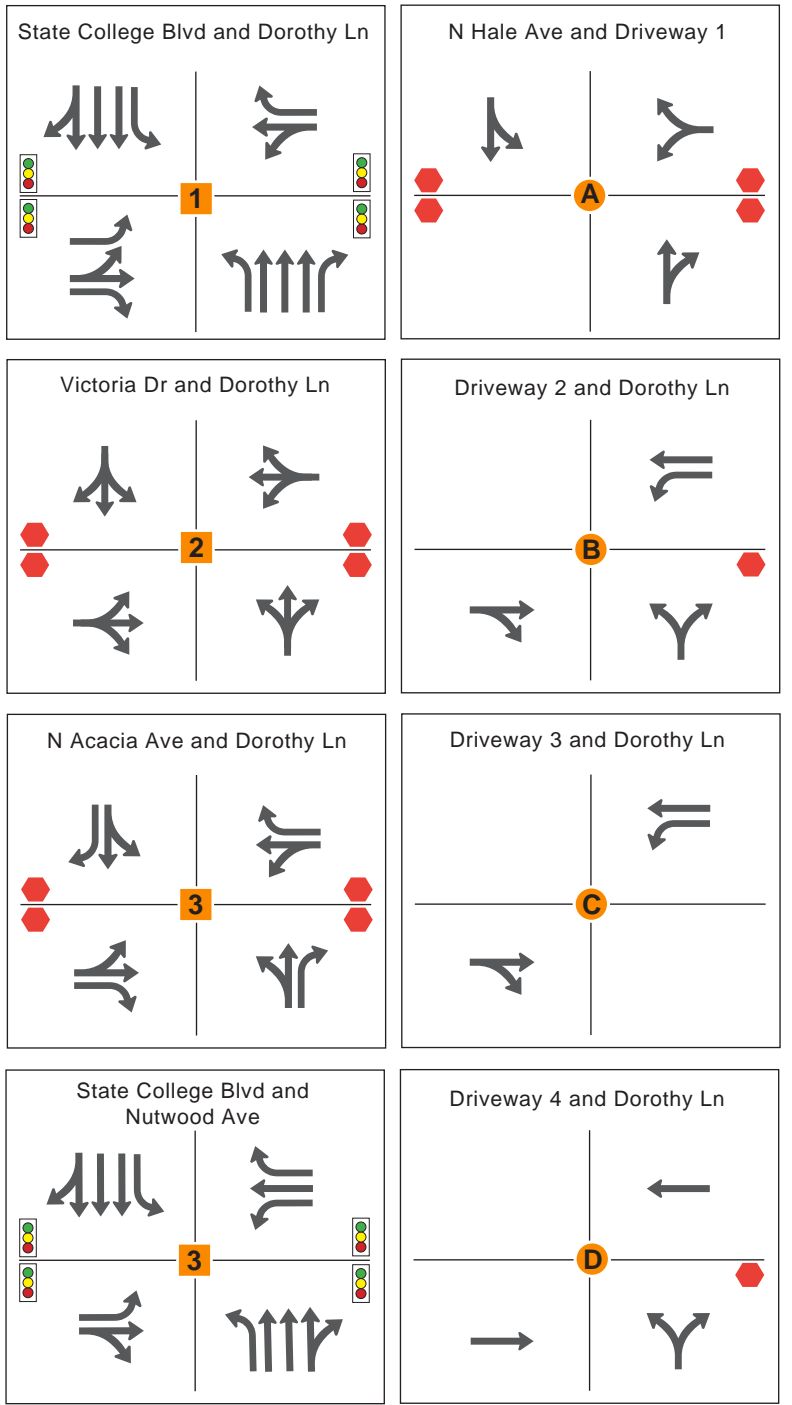


Figure 4: Existing Intersection Geometry



LEGEND

- Study Intersection
- Study Intersection (Driveway)
- Troy High School Boundary
- Project Boundary

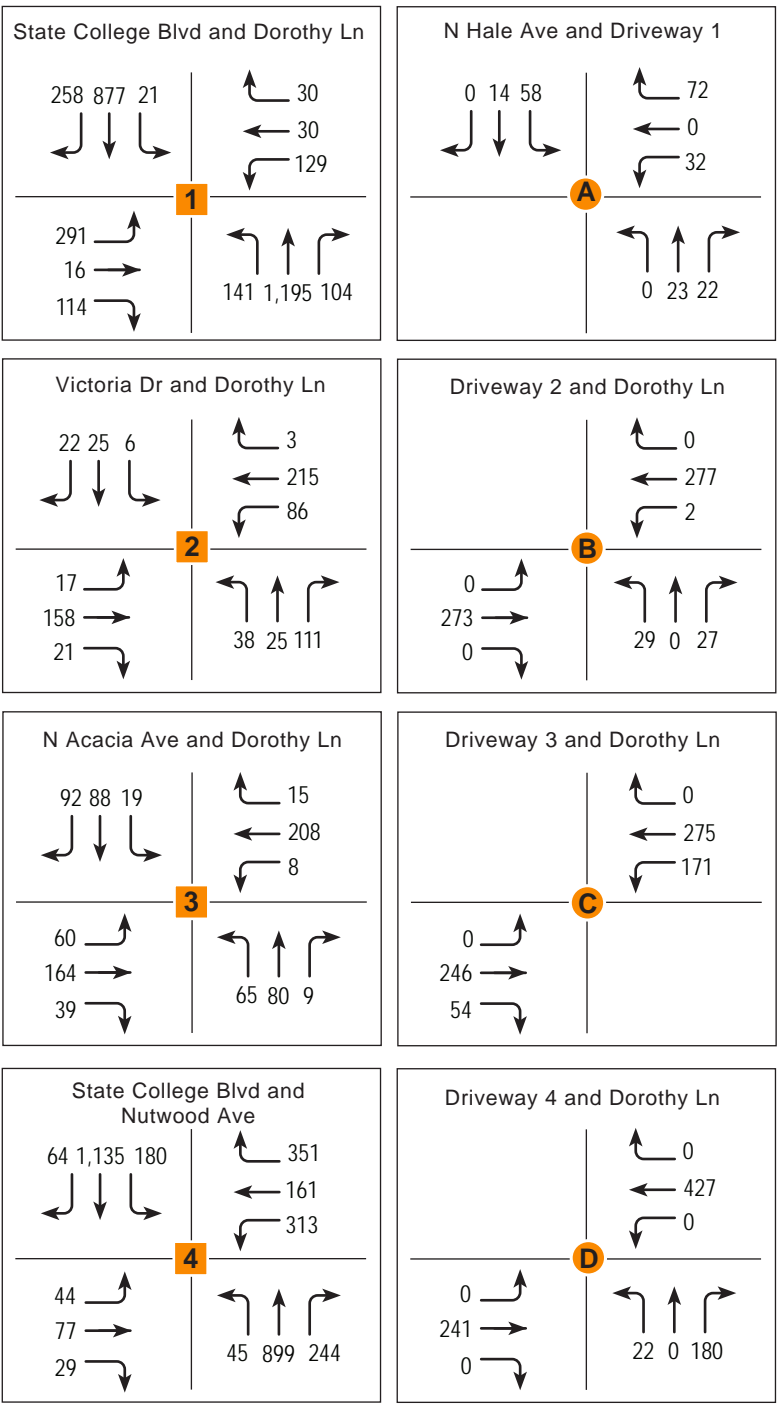


Figure 5: Existing Year (2025) Intersection No Project Volumes PM

3.2 Opening Year (2028) No Project

Results for the average daily traffic and intersection level of service analyses for the Opening Year (2028) No Project scenario are presented in this section.

3.2.1 Average Daily Traffic

The average daily traffic for the study area roadway segment in the Opening Year (2028) No Project scenario is presented in Table 4. Year 2028 traffic volumes were developed by applying an assumed 1% annual growth rate to Existing Year (2025) counts.

Table 4 Estimated ADT Opening Year with No Project.

Roadway	Existing ADT	2028 No Project
Dorothy Ln, between State College Blvd and Victoria Dr	7,682	7,915
Victoria Dr, between Dorothy Ln and N Acacia Ave	2,883	2,970
State College Blvd, between Dorothy Ln and Nutwood Ave	29,647	30,545
State College Blvd, between Dorothy Ln and Yorba Linda Blvd	29,353	30,242

3.2.2 Intersection Levels of Service

A summary of the PM peak hour intersection level of service analysis results for the Opening Year (2028) No Project scenario is presented in Table 5. All study intersections are forecasted to operate at acceptable levels of service during the Opening Year No Project conditions. The complete Synchro analysis output summaries for the PM peak hour are reported in Appendix D. Opening Year (2028) No Project PM peak hour turning movement volumes are shown in Figure 6.

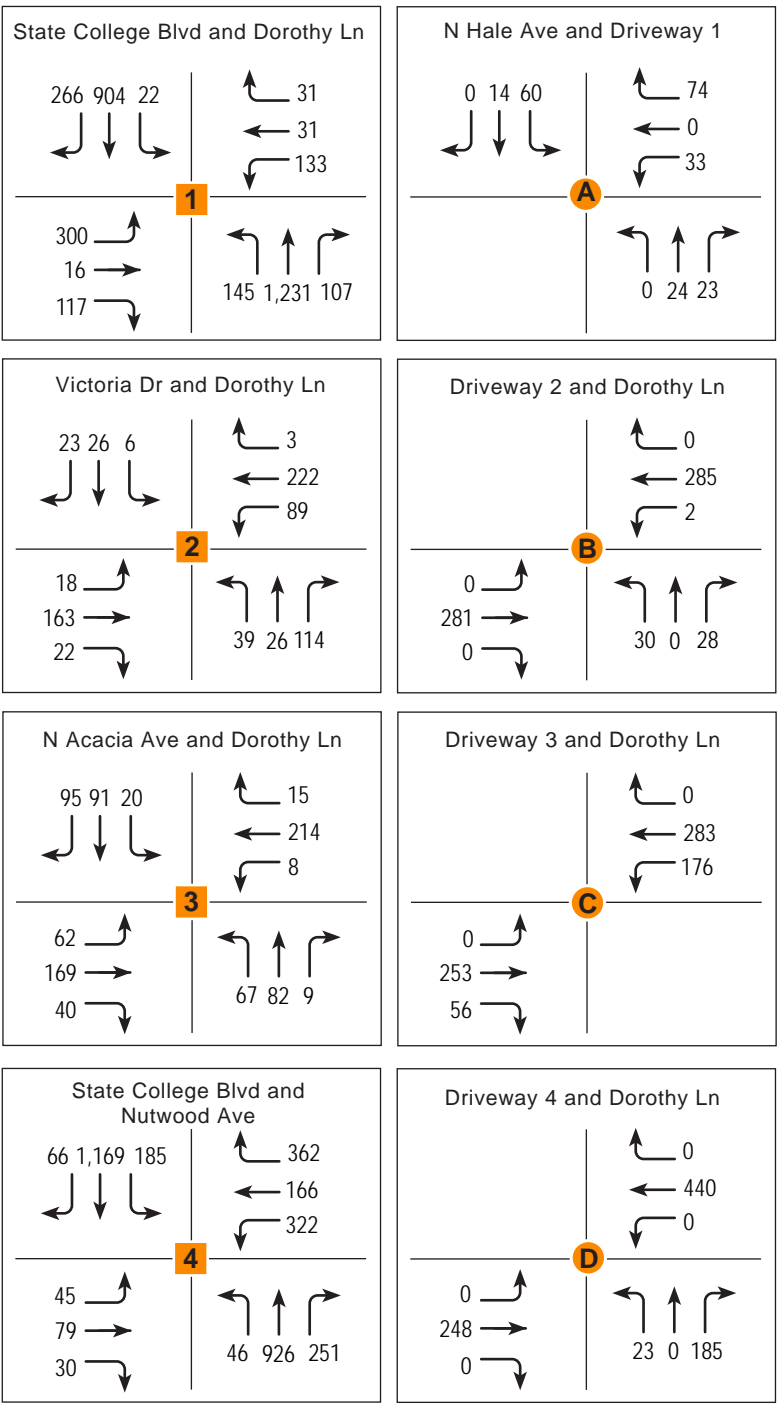
Table 5 Opening Year (2028) No Project Intersection LOS.

Intersection	Existing		2028 No Project		Δ V/C	Existing		2028 No Project		Δ HCM Delay
	V/C	LOS	V/C	LOS		HCM Delay	LOS	HCM Delay	LOS	
State College Blvd and Dorothy Ln	0.618	B	0.631	B	0.013					
Victoria Dr and Dorothy Ln						10.7	B	11.2	B	0.5
N Acacia Ave and Dorothy Ln						12.1	B	12.4	B	0.3
State College Blvd and Nutwood Ave	0.775	C	0.793	C	0.018					
N Hale Ave and Driveway 1						9.1	A	9.1	A	0.0
Driveway 2 and Dorothy Ln						11.8	B	13.6	B	1.8
Driveway 3 and Dorothy Ln						8.4	A	8.5	A	0.1
Driveway 4 and Dorothy Ln						10.7	B	10.8	B	0.1



LEGEND

- Study Intersection
- Study Intersection (Driveway)
- Troy High School Boundary
- Project Boundary



**Figure 6: Opening Year (2028)
Intersection No Project Volumes PM**

4. Traffic Analysis: With Project

4.1 Trip Generation and Distribution

The trip generation for Troy High School after school activities is estimated using rates published in the ITE Trip Generation Manual 11th Edition. The trips are based on rates for a high school (ITE Code 525). As previously mentioned, the proposed project would include additional lighting structures along the perimeters of the school’s existing athletic fields, which would expand field access for community sports practices during the afternoons and evenings on weekdays. Trip generation forecasts are developed for the PM peak hour as this time period would see the greatest change in activity and trips as a result of the project. Trip generation forecasts are based on the projected total number of players that would use the lighted sport fields during the peak PM hour during the busiest season, which is anticipated to be 375 players. The proposed new bleachers are not considered in the trip generation forecasts, as the bleachers are intended to accommodate existing visitation, spectator activity, and school assemblies and would not generate new vehicle trips.

Table 6 presents the trip generation and distribution forecast for the project weekday PM peak time period. The project is expected to generate 53 trips during the peak PM hour, with 48% (25 vehicles) entering the site and 52% (28 vehicles) exiting the site. The trip generation and distribution forecast was used in this study to allocate project-generated traffic volumes for the PM peak hour to the adjacent intersections and street networks.

Table 6 Trip Generation for After-School Sports

Land Use and Time Period	Students	Trip Generation Rate	Distribution		Trips		Total
			Inbound	Outbound	Inbound	Outbound	
High School – PM Peak	375	.14 trips / student	48%	52%	25	28	53

4.2 Existing Year (2025) With Project

Results for ADT and intersection level of service analyses for the Existing Year (2025) With Project scenario are presented in this section.

4.2.1 Average Daily Traffic

Since the proposed project is not anticipated to result in any changes to the daily number of practices or games, or to the number of participants or spectators, the average daily traffic (ADT) volumes for the study area roadway segments under Existing Year (2025) With Project conditions are not anticipated to change from the existing conditions roadway segment volumes. For reference, the existing roadway segment volumes are summarized from 24-hour counts which can be found in Appendix A.

4.2.2 Intersection Levels of Service

A summary of the PM peak hour intersection LOS results for the Existing Year (2025) With Project scenario are presented in Table 7. All study intersections are forecasted to operate at acceptable levels of service during the Existing Year (2025) With Project conditions. The complete Synchro analysis output summaries for the PM peak hour are reported in Appendix E.

Existing Year (2025) With Project PM peak hour turning movement volumes are shown in Figure 7. The project trip generation and distribution forecast presented in Section 4.1 was used to allocate project-generated traffic volumes to the adjacent intersections and street networks.

Table 7 Existing Year (2025) With Project Intersection LOS

Intersection	Existing		2025 With Project		Δ V/C	Existing		2025 With Project		Δ HCM Delay
	V/C	LOS	V/C	LOS		HCM Delay	LOS	HCM Delay	LOS	
State College Blvd and Dorothy Ln	0.618	B	0.624	B	0.006					
Victoria Dr and Dorothy Ln						10.7	B	10.9	B	0.2
N Acacia Ave and Dorothy Ln						12.1	B	12.2	B	0.1
State College Blvd and Nutwood Ave	0.775	C	0.777	C	0.002					
N Hale Ave and Driveway 1						9.1	A	9.1	A	0.0
Driveway 2 and Dorothy Ln						11.8	B	11.8	B	0.0
Driveway 3 and Dorothy Ln						8.4	A	8.5	A	0.1
Driveway 4 and Dorothy Ln						10.7	B	10.9	B	0.2



LEGEND

- Study Intersection
- Study Intersection (Driveway)
- Troy High School Boundary
- Project Boundary

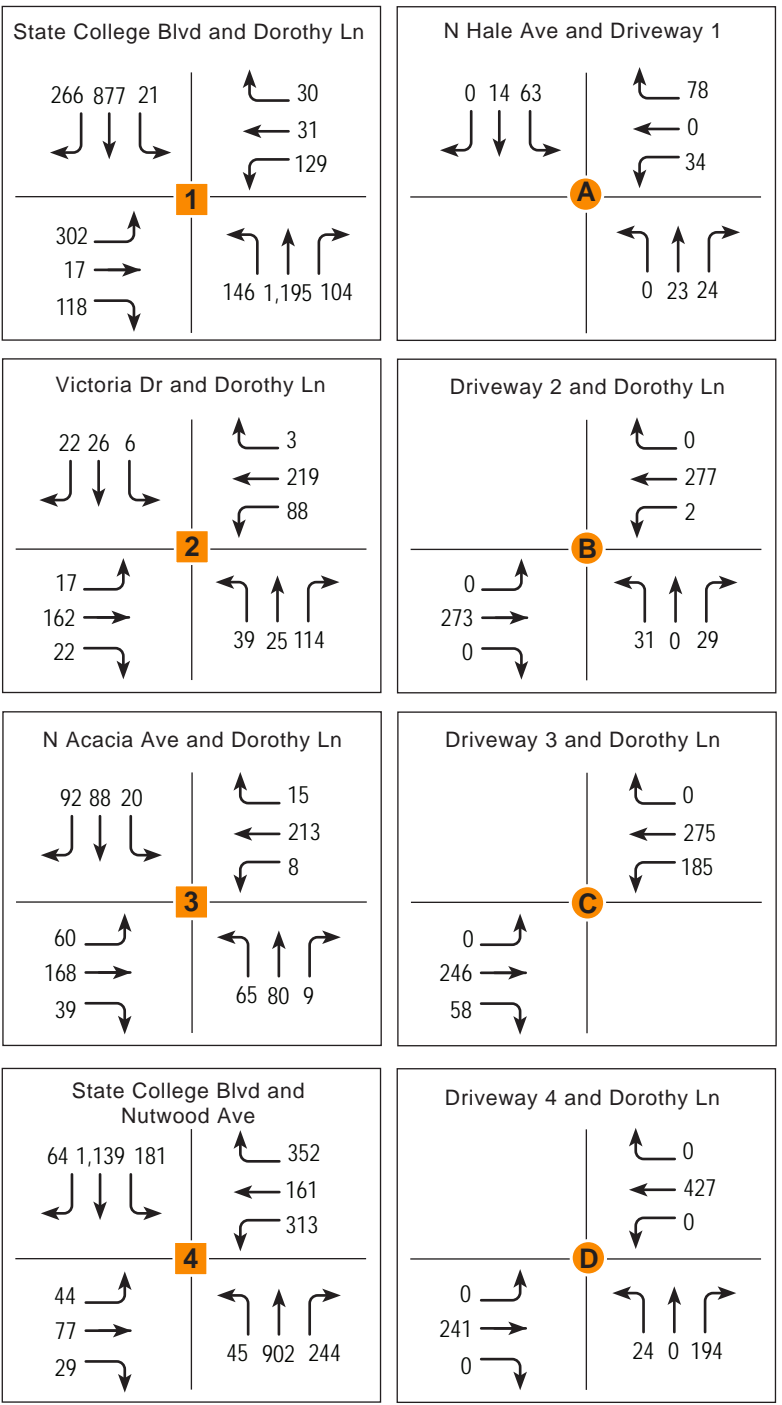


Figure 7: Existing Year (2025) Intersection With Project Volumes PM

4.3 Opening Year (2028) With Project

Results for ADT and intersection level of service analyses for the Opening Year (2028) With Project scenario are presented in this section.

4.3.1 Average Daily Traffic

Table 8 below shows the estimated additional ADT volumes for each roadway segment, by scenario. The last column of Table 8 shows ADT estimates for the Opening Year (2028) With Project scenario. Since the proposed project is not anticipated to result in any changes to the daily number of practices or games, or to the number of participants or spectators, the average daily traffic (ADT) volumes for the study area roadway segments under Opening Year (2028) With Project conditions are not anticipated to change due to project conditions. However, the ADT is assumed to grow at a 1% rate per year from 2025.

Table 8 Estimated Project ADT Impacts

Roadway	Existing ADT	2028 No project	2025 With Project	2028 With Project
Dorothy Ln, between State College Blvd and Victoria Dr	7,682	7,915	7,682	7,915
Victoria Dr, between Dorothy Ln and N Acacia Ave	2,883	2,970	2,883	2,970
State College Blvd, between Dorothy Ln and Nutwood Ave	29,647	30,545	29,647	30,545
State College Blvd, between Dorothy Ln and Yorba Linda Blvd	29,353	30,242	29,353	30,242

4.3.2 Intersection Levels of Service

A summary of the PM peak hour intersection level of service analysis results for the Opening Year (2028) With Project scenario is presented in Table 9. All study intersections are forecasted to operate at acceptable levels of service during the Opening Year With Project conditions. The complete Synchro analysis output summaries for the PM peak hour are reported in Appendix F.

Opening Year (2028) With Project PM peak hour turning movement volumes are shown in Figure 8. The project trip generation and distribution forecast presented in Section 4.1 was used to allocate project-generated traffic volumes to the adjacent intersections and street networks. Additionally, the estimated PM peak hour intersection trip distributions assuming the additional traffic volumes projected due to the proposed project are shown in Figure 9 and Figure 10.

Table 9 Opening Year (2028) With Project Intersection LOS

Intersection	Existing		2028 With Project		Δ V/C	Existing		2028 With Project		Δ HCM Delay
	V/C	LOS	V/C	LOS		HCM Delay	LOS	HCM Delay	LOS	
State College Blvd and Dorothy Ln	0.618	B	0.637	B	0.019					
Victoria Dr and Dorothy Ln						10.7	B	11.2	B	0.5
N Acacia Ave and Dorothy Ln						12.1	B	12.6	B	0.5
State College Blvd and Nutwood Ave	0.775	C	0.795	C	0.02					
N Hale Ave and Driveway 1						9.1	A	9.2	A	0.1
Driveway 2 and Dorothy Ln						11.8	B	11.9	B	0.1
Driveway 3 and Dorothy Ln						8.4	A	8.6	A	0.2
Driveway 4 and Dorothy Ln						10.7	B	10.9	B	0.2



LEGEND

- Study Intersection
- Study Intersection (Driveway)
- Troy High School Boundary
- Project Boundary

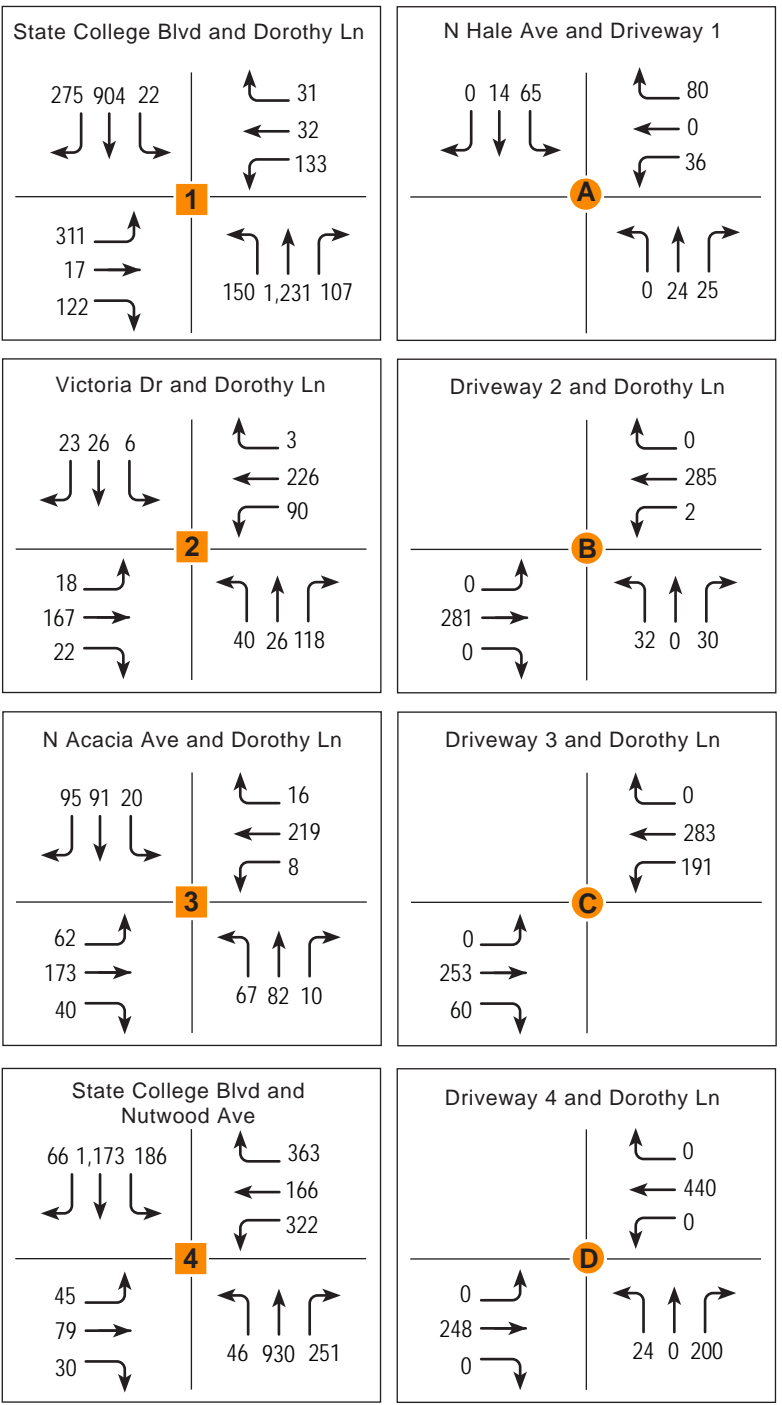
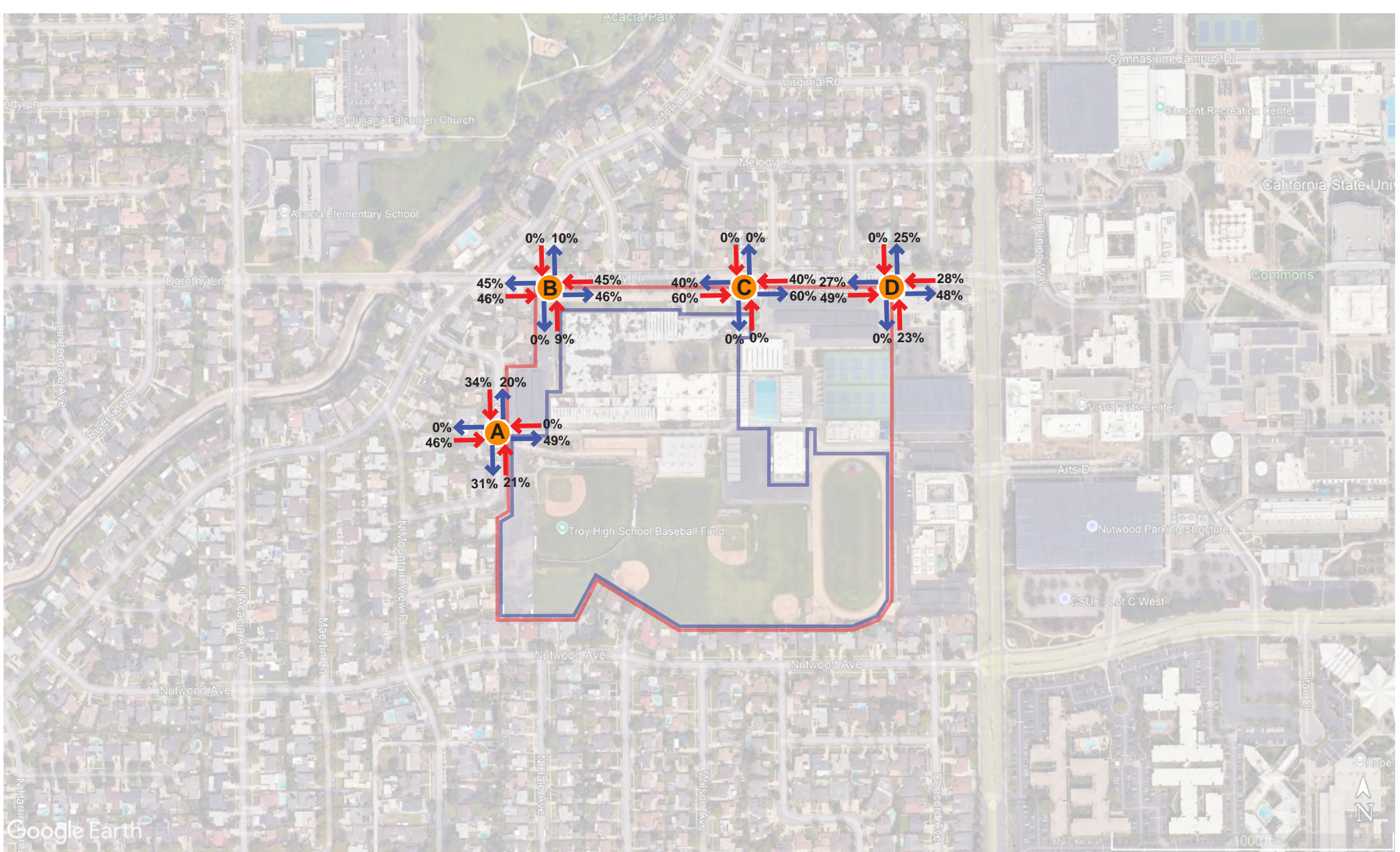


Figure 8: Opening Year (2028) Intersection With Project Volumes PM

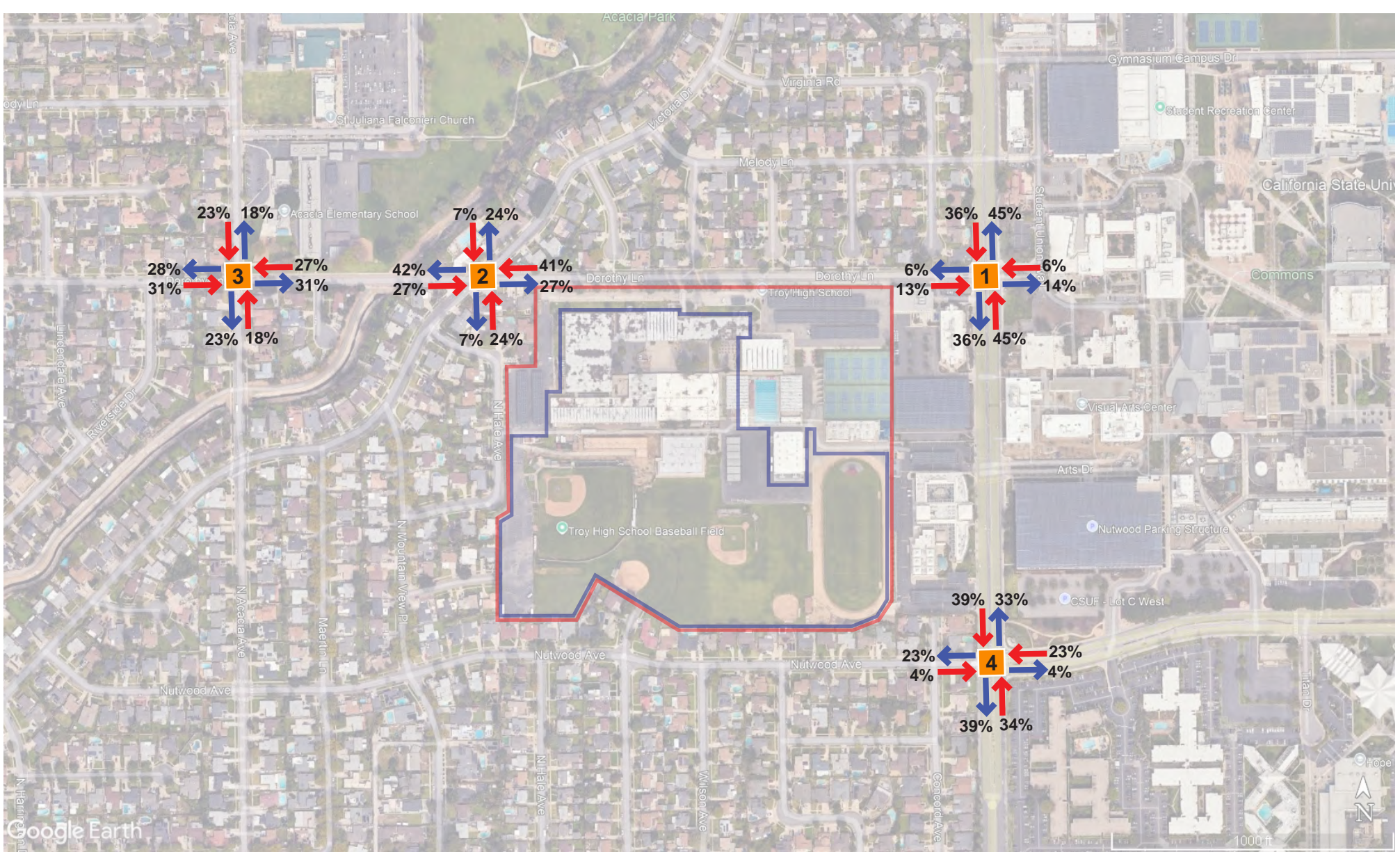


LEGEND

- A** N Hale Ave and Driveway 1 **B** Driveway 2 and Dorothy Ln
- C** Driveway 3 and Dorothy Ln **D** Driveway 4 and Dorothy Ln

- █ Peak hour - Entering
- █ Peak hour - Exiting

Figure 9: Estimated Trip Distribution (Driveway)



LEGEND

- 1** State College Blvd and Dorothy Ln
- 2** Victoria Dr and Dorothy Ln
- 3** N Acacia Ave and Dorothy Ln
- 4** State College Blvd and Nutwood Ave

- █ Peak hour - Entering
- █ Peak hour - Exiting

Figure 10: Estimated Trip Distribution (Intersection)

5. Additional analyses

5.1 VMT Screening Analysis

The proposed project is evaluated for potential impacts related to Vehicle Miles Traveled (VMT) consistent with the requirements contained in the City of Fullerton Transportation Assessment Policies and Procedures document. The guidelines establish that proposed projects with one or more of the following attributes may be exempt from a full VMT Analysis:

- **Criteria 1: Project is located in a Transit Priority Area (TPA).** The project is within 0.5 miles of a TPA, which includes a major transit stop or an existing stop along a high-quality transit corridor.
- **Criteria 2: Project is located in a Low VMT Area.** A low VMT area is defined as an individual traffic analysis zone where total daily Origin/ Destination VMT per service population is 15% or more less than the City average total daily Origin/Destination VMT per service population.
- **Criteria 3: Project Type Screening.** Projects for the following land uses can be presumed to have a less than significant impact:
 - Local-serving K-12 public schools
 - Local-serving parks Day care centers
 - Local-serving retail uses less than 50,000 square feet
 - Local-serving hotels (e.g. non -destination hotels)
 - Local-serving student housing projects Local -serving assembly uses (places of worship, community organizations)
 - Community institutions (public libraries, fire stations, local government)
 - Affordable, supportive or transitional housing
 - Assisted living facilities
 - Senior housing (as defined by HUD)
 - Projects generating less than 836 daily VMT

The proposed project for Troy High School would be eligible to be screened out from the need for a full project level VMT analysis under the Criteria 3 screening attribute because the project is proposing development of local-serving K-12 public school. No additional VMT analysis is required for the project.

5.2 Pedestrian and Site Circulation

This section summarizes the results of several focused analyses related to pedestrian and site circulation for the proposed project. This review is completed at a high level based on the project description provided by the District.

Troy High School is located adjacent to La Vista High School and California State University Titan Hall. Residential housing surrounds the school to the south, north, and west. Primary access to Troy High School is located off Dorothy Lane to the north, and there are three existing driveways located along Dorothy Lane serving access to the school. The western driveway permits bi-directional movement and provides access to the student parking lot along the west boundary of the school site. This driveway also serves egress movements from the student drop-off area on the north side of the school. The central driveway is an entry-only driveway, providing access to the student drop-off area and staff parking on the north side of the school. The eastern driveway is the exit driveway for staff parking. In addition to the three driveways on Dorothy Lane, driveway access is also provided along Hale Avenue on the west side of the school.

5.2.1 Driveway Location and Turning Movements

The existing driveways are designed to serve the typical school day traffic volumes and turning movements. The proposed project after-school activities would generate a substantially lower number of vehicle trips compared to a typical school day. As such, no substantial impacts to site access and circulation are anticipated.

With regards to turning movements, it should be noted that the project proposes using the southwestern parking lot to accommodate 20 portable classrooms and 2 restrooms as construction for seismic retrofitting and modernization is carried out, making the lot temporarily unavailable for vehicle parking. As such, during the construction phase, vehicles accessing Troy High School using the driveway access along North Hale Avenue on the west side of the school will only be able to turn left towards the northwestern parking lot upon entry.

5.2.2 Driveway Length

No changes to existing driveway lengths and pick-up/drop-off areas are proposed as part of the project. With after-school activities occurring in the late afternoon and evening, the proposed project is not anticipated to generate impacts to pick-up and drop-off areas compared to the existing condition. No modifications to driveway lengths are recommended as part of this analysis. No impact is anticipated.

5.2.3 Driveway Proximity and Corner Clearance

No changes are proposed to the location or proximity of existing site access driveways. No impact is anticipated.

5.2.4 Right-Turn Lanes at Driveways

All project driveways are expected to operate at an acceptable level of service with project conditions. No modifications to right turn lanes at the driveways are recommended. No impact is anticipated.

5.2.5 Pedestrian and Bicycle Access

Existing site access points along N Hale Ave and Dorothy Ln would be maintained. Marked crosswalks are provided on Dorothy Ln at Victoria Dr to the west and State College Blvd to the east. There is also an existing mid-block crosswalk between the west and central site access driveways. No additional pedestrian or bicycle crossing locations are recommended.

As previously mentioned, the project proposes using the southwestern parking lot to accommodate 20 portable classrooms and 2 restrooms as seismic retrofitting and modernization construction is carried out. During this period, the District would provide alternative parking at the District-owned La Vista High School, adjacent to TRHS on the western side. To enhance safety and minimize travel times, it is recommended that the District clearly delineates with temporary signage or markings their preferred pedestrian and/or bicycle paths used to provide access from La Vista High School to Troy

High School. Furthermore, it's important to note that students will be walking from the main campus to the southwestern parking lots to access the temporary classrooms, and similarly, the District should clearly delineate preferred walking paths for students to enhance safety and travel times.

6. Conclusions

This traffic impact study has analyzed how transportation conditions are expected to change with the implementation of the proposed project for Troy High School. A summary is provided below documenting the conclusions for each analysis component.

6.1 Traffic Analysis

Below are the summary tables for the ICU volume-to-capacity (V/C) ratio or the HCM delay and corresponding LOS, separated by intersection.

Table 10 State College Blvd and Dorothy Ln Peak PM Hour ICU Summary

State College Blvd and Dorothy Ln				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
V/C	0.618	0.624	0.631	0.637
LOS	B	B	B	B

Table 11 Victoria Dr and Dorothy Ln Peak PM Hour HCM Summary

Victoria Dr and Dorothy Ln				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
HCM Delay (sec)	10.7	10.9	11.2	11.2
LOS	B	B	B	B

Table 12 N Acacia Ave and Dorothy Ln Peak PM Hour HCM Summary

N Acacia Ave and Dorothy Ln				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
HCM Delay (sec)	12.1	12.2	12.4	12.6
LOS	B	B	B	B

Table 13 State College Blvd and Nutwood Ave Peak PM Hour ICU Summary

State College Blvd and Nutwood Ave				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
V/C	0.775	0.777	0.793	0.795
LOS	C	C	C	C

Table 14 N Hale Ave and Driveway 1 Peak PM Hour HCM Summary

N Hale Ave and Driveway 1				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
HCM Delay (sec)	9.1	9.1	9.1	9.2
LOS	A	A	A	A

Table 15 Driveway 2 and Dorothy Ln Peak PM Hour HCM Summary

Driveway 2 and Dorothy Ln				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
HCM Delay (sec)	11.8	11.8	13.6	11.9
LOS	B	B	B	B

Table 16 Driveway 3 and Dorothy Ln Peak PM Hour HCM Summary

Driveway 3 and Dorothy Ln				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
HCM Delay (sec)	8.4	8.5	8.5	8.6
LOS	A	A	A	A

Table 17 Driveway 4 and Dorothy Ln Peak PM Hour HCM Summary

Driveway 4 and Dorothy Ln				
	2025 No Project	2025 With Project	2028 No Project	2028 With Project
HCM Delay (sec)	10.7	10.9	10.8	10.9
LOS	B	B	B	B

Based on the results of the level of service analysis, the proposed project for Troy High School can be implemented without significantly impacting any of the study intersections or roadway segments. All study intersections are forecasted to operate at an acceptable level of service under both Existing Year (2025) and Opening Year (2028) With Project scenarios.

6.2 VMT Screening Analysis

The proposed project for Troy High School would be eligible to be screened out from the need for a full project level VMT analysis under the Small Project and Public Facilities screening attributes. No additional VMT analysis is required for the project.

6.3 Pedestrian and Site Circulation

This study analyzed the existing site access driveways for Troy High School. All project driveways and on-site circulation are designed to serve peak school traffic volumes. The proposed after-school activities would generate substantially fewer trips compared to a typical school day. As such, no impacts related to site access and on-site circulation are anticipated, and no permanent changes or improvements to site access are recommended based on this analysis.

During the construction phase when portable classrooms are installed in the southwestern parking lot, it will be important to include signage for both vehicles and pedestrians to alert them of the



temporarily new circulation patterns. Furthermore, designating a preferred pedestrian and/or bicycle travel path for students traveling from the main campus to the portable classrooms, or from the temporary La Vista High School parking area to the main campus is recommended to enhance safety and travel times.

References

ITE (Institute of Transportation Engineers). *Trip Generation Manual*. 11th ed. 2021

City of Fullerton. (2020, June 16). *Transortation Assessment Policies and Procedures*.

<https://www.cityoffullerton.com/home/showpublisheddocument/1536/637449005647300000>



Appendix A— Turning Movement and Roadway Segment Counts

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Wed, Nov 12, 25

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Fullerton
State College Blvd
Dorothy Ln

PROJECT #:
LOCATION #:
CONTROL:

SC5754
1
SIGNAL

NOTES:	AM		▲	N	
	PM				
	MD	◀ W			E ▶
	OTHER			S	
	OTHER			▼	

	NORTHBOUND State College Blvd			SOUTHBOUND State College Blvd			EASTBOUND Dorothy Ln			WESTBOUND Dorothy Ln			TOTAL
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	1	1	3	0	1	1	1	0	1	1	

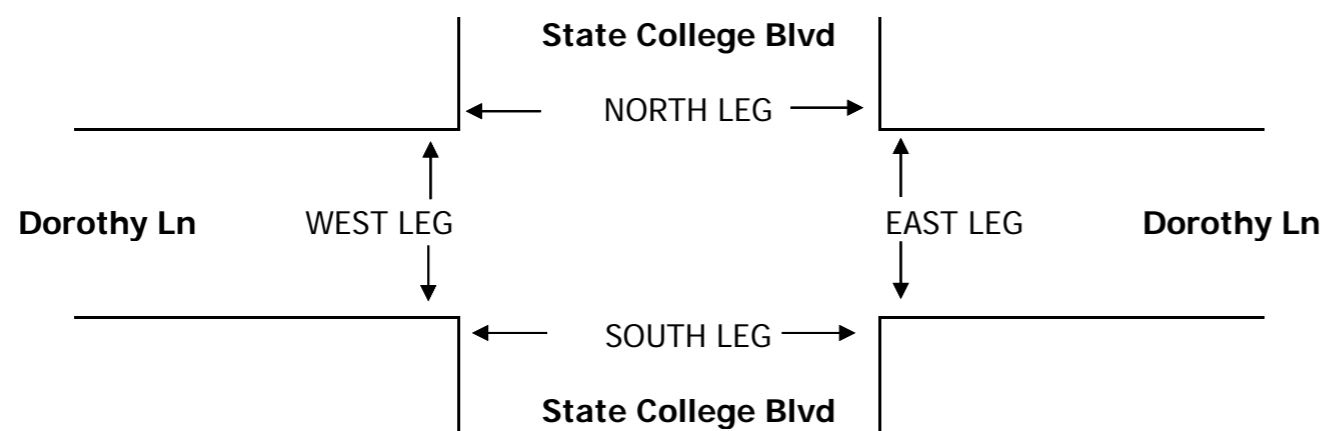
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

Lane symbol < ^^^ > < ^^(>) < (<^)^ > (<^)^ >
 Turn type left turn protected permiss right turn pe left turn protected permissive right turn pe left turn protected permitt Permitted ov left turn protected permitt right turn permitted

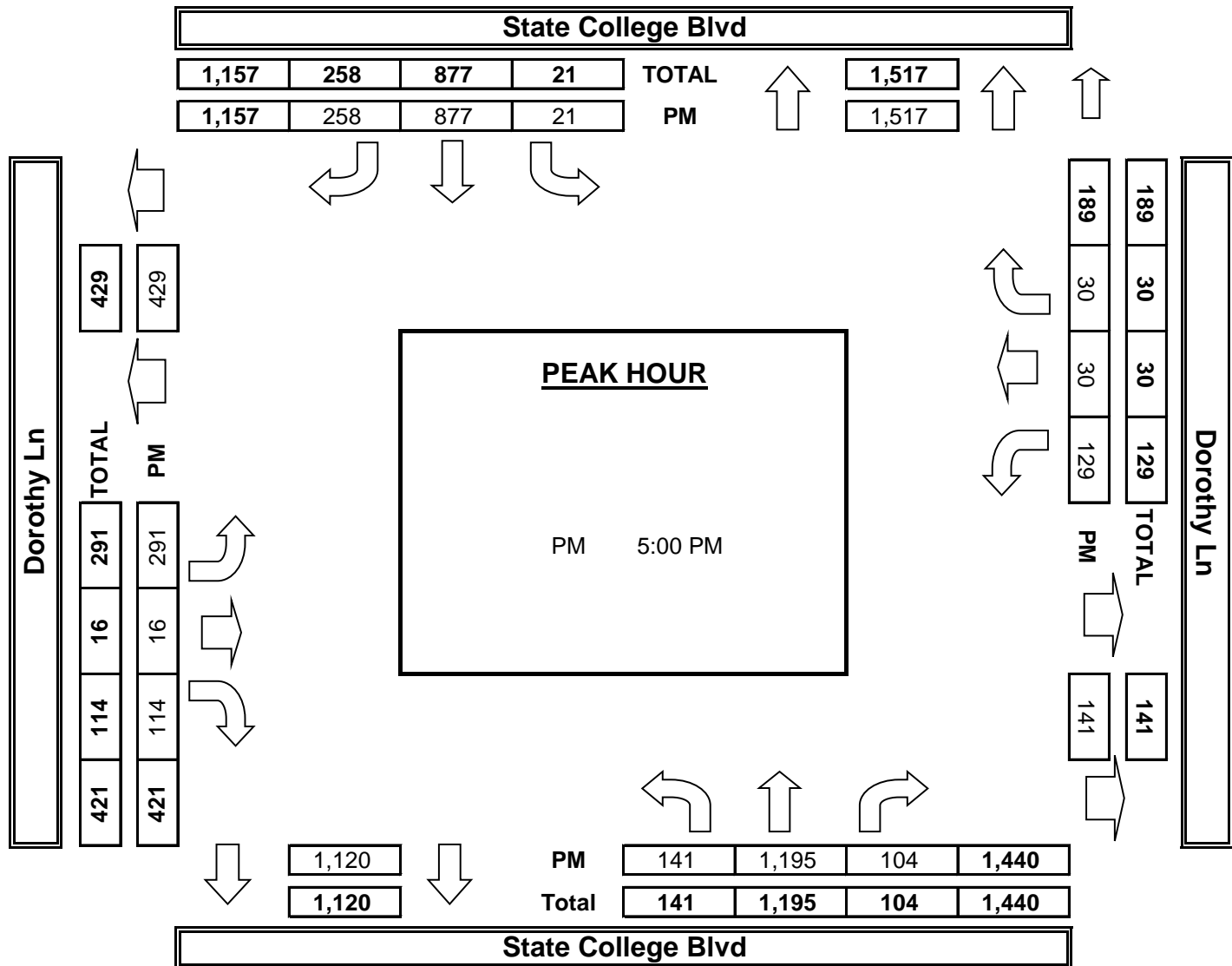
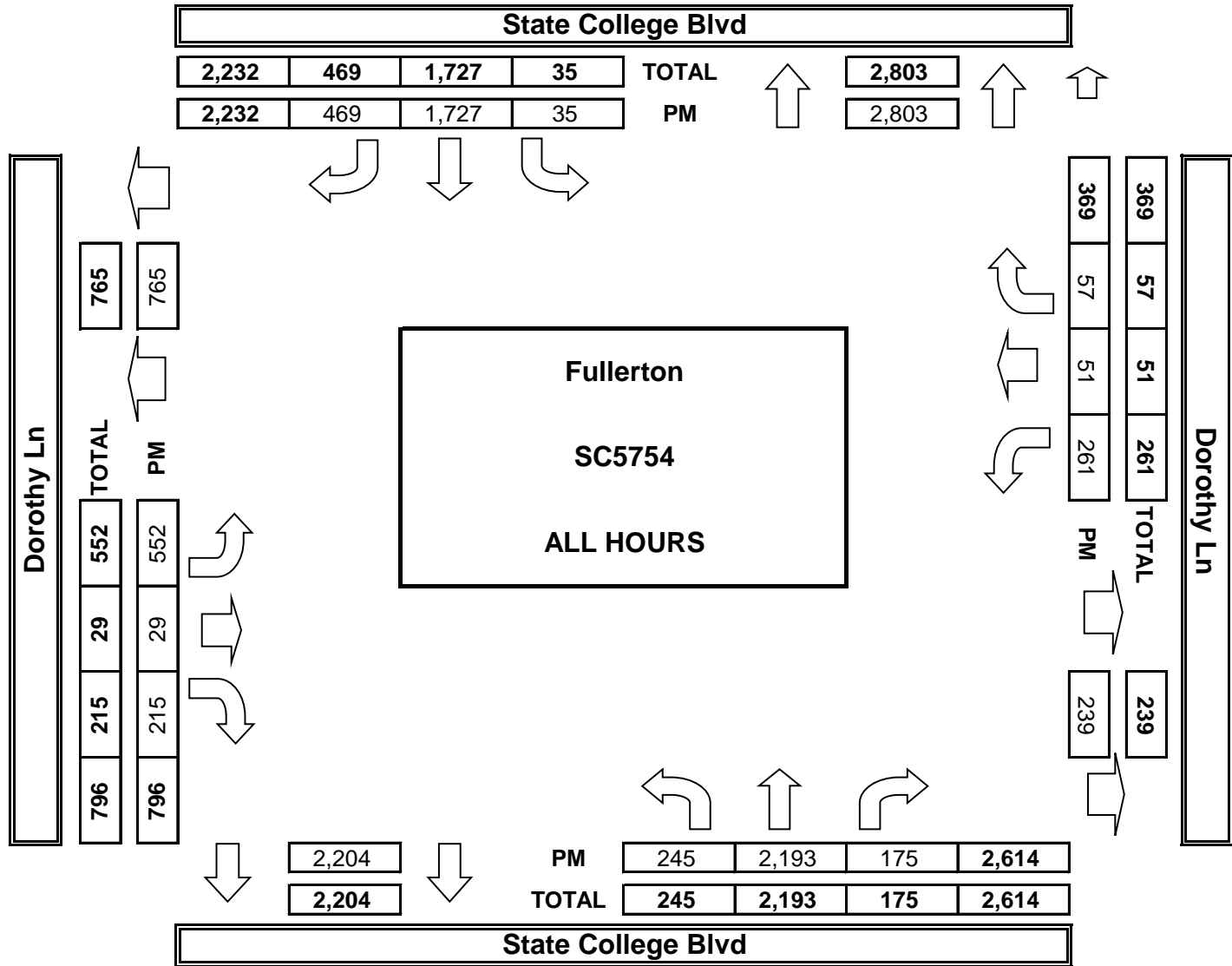
Time	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	25	326	19	7	208	50	77	2	26	43	8	11	802
4:15 PM	32	223	21	2	184	48	55	3	17	35	6	4	630
4:30 PM	27	235	14	2	193	61	67	2	27	32	2	5	667
4:45 PM	20	214	17	3	265	52	62	6	31	22	5	7	704
5:00 PM	34	291	23	11	223	50	63	4	24	35	8	9	775
5:15 PM	36	370	31	4	254	78	79	2	36	35	8	6	939
5:30 PM	40	289	25	1	212	67	75	2	25	34	6	5	781
5:45 PM	31	245	25	5	188	63	74	8	29	25	8	10	711
VOLUMES	245	2,193	175	35	1,727	469	552	29	215	261	51	57	6,011
APPROACH %	9%	84%	7%	2%	77%	21%	69%	4%	27%	71%	14%	15%	
APP/DEPART	2,614	/	2,803	2,232	/	2,204	796	/	239	369	/	765	0
BEGIN PEAK HR	5:00 PM												
VOLUMES	141	1,195	104	21	877	258	291	16	114	129	30	30	3,207
APPROACH %	10%	83%	7%	2%	76%	22%	69%	4%	27%	68%	16%	16%	
PEAK HR FACTOR	0.824		0.861		0.900		0.909		0.854				
APP/DEPART	1,440	/	1,517	1,157	/	1,120	421	/	141	189	/	429	0

0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2

0	1	0	0
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AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T012524

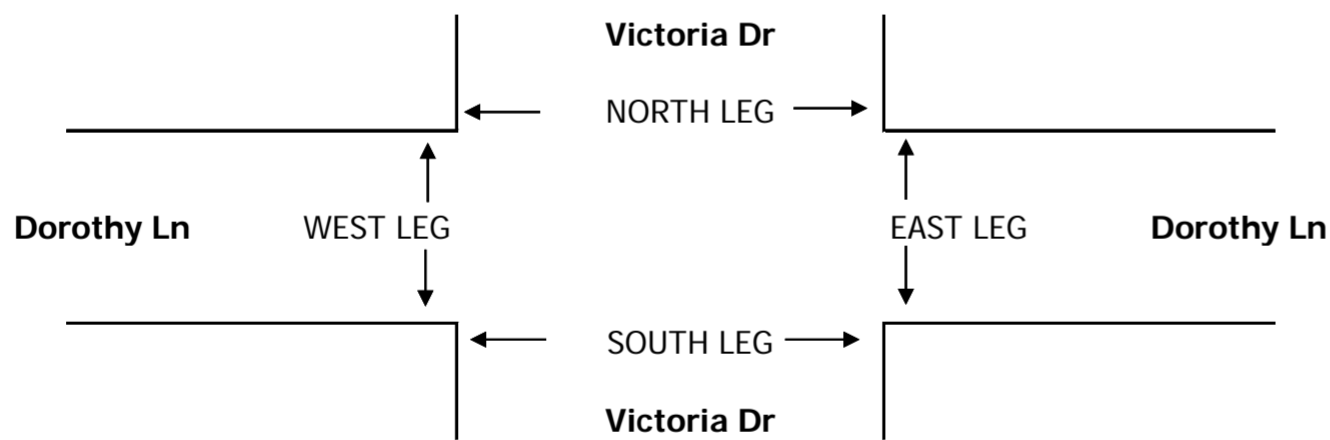
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 NORTH & SOUTH: **Victoria Dr** LOCATION #: **2**
 EAST & WEST: **Dorothy Ln** CONTROL: **STOP ALL**

NOTES:	AM	▲ N
	PM	
	MD	▼ S
	OTHER	
	OTHER	

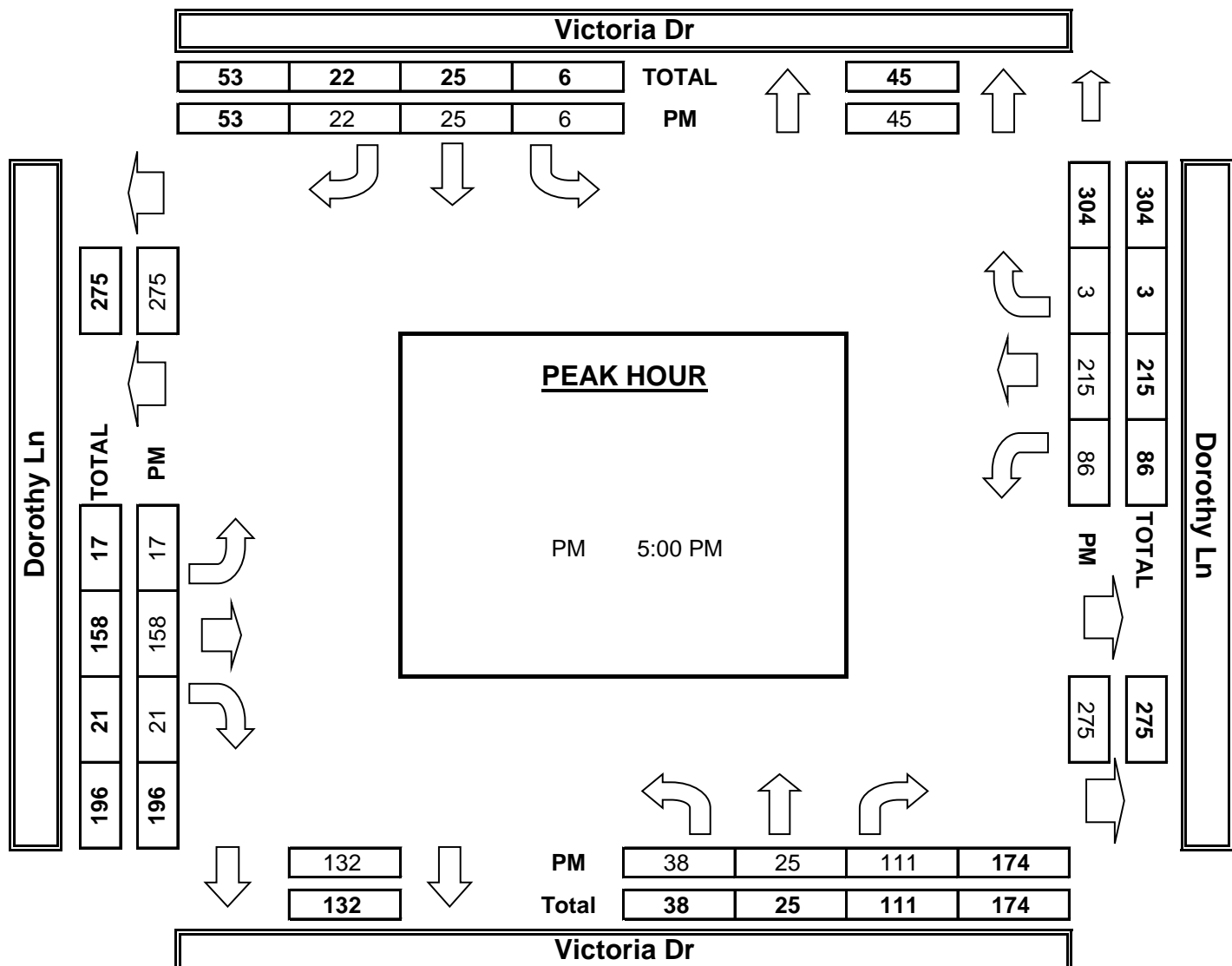
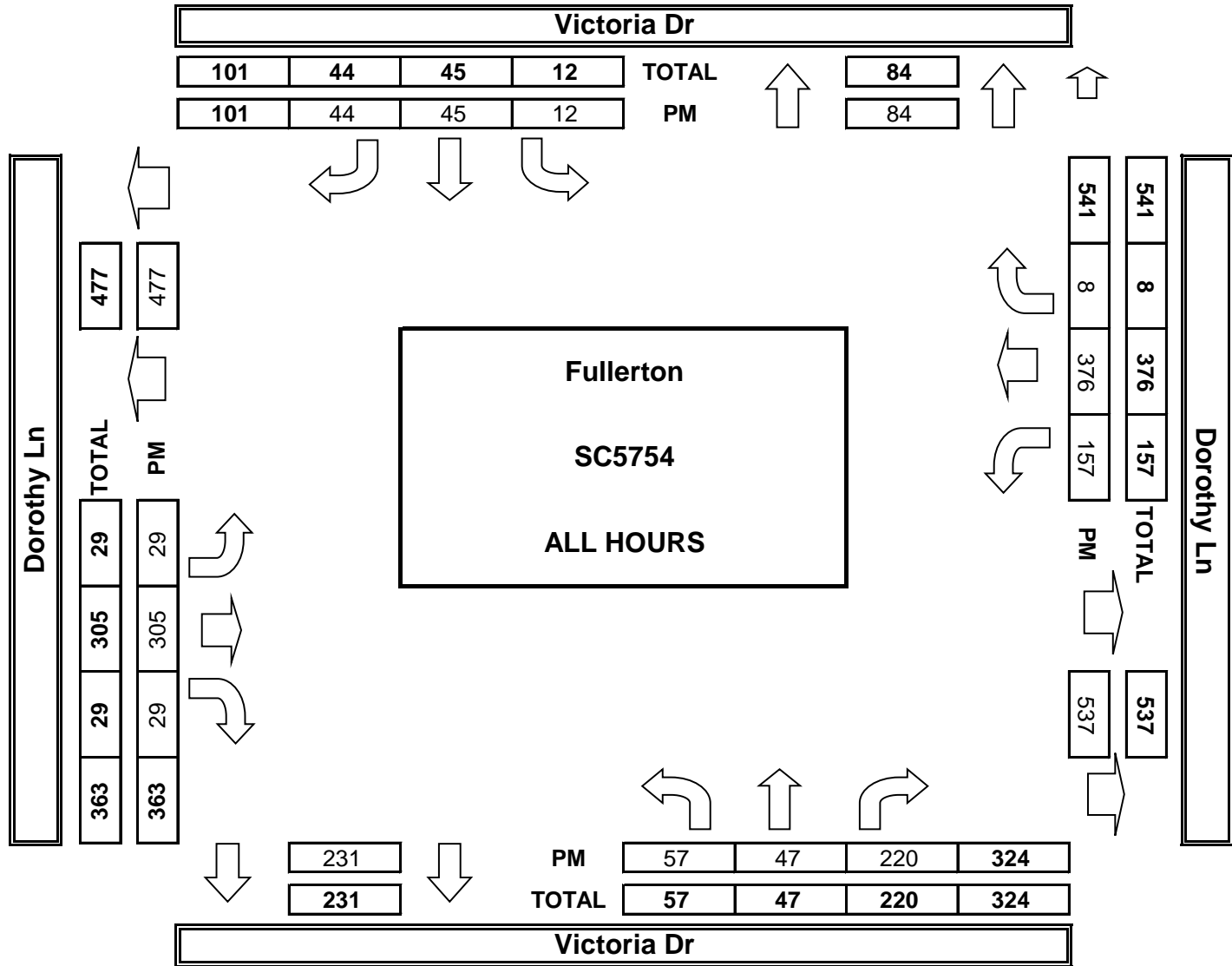
LANES:	NORTHBOUND Victoria Dr			SOUTHBOUND Victoria Dr			EASTBOUND Dorothy Ln			WESTBOUND Dorothy Ln			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0

Lane symbol: (<^>) (<^>) (<^>) (<^>)

4:00 PM	4	10	24	1	7	6	2	40	2	14	43	1	154	0	0	0	0	0					
4:15 PM	3	2	27	2	5	7	4	29	1	11	39	1	131	0	0	0	0	0					
4:30 PM	9	3	27	1	0	2	2	39	3	27	37	3	153	0	0	0	0	0					
4:45 PM	3	7	31	2	8	7	4	39	2	19	42	0	164	0	0	0	0	0					
5:00 PM	6	9	26	1	9	4	4	42	8	23	46	2	180	0	0	0	0	0					
5:15 PM	13	6	32	2	6	7	4	44	3	26	55	0	198	0	0	0	0	0					
5:30 PM	6	5	19	0	4	5	3	33	8	27	54	0	164	0	0	0	0	0					
5:45 PM	13	5	34	3	6	6	6	39	2	10	60	1	185	0	0	0	0	0					
VOLUMES	57	47	220	12	45	44	29	305	29	157	376	8	1,329	0	0	0	0	0					
APPROACH %	18%	15%	68%	12%	45%	44%	8%	84%	8%	29%	70%	1%											
APP/DEPART	324	/	84	101	/	231	363	/	537	541	/	477	0										
BEGIN PEAK HR	5:00 PM																						
VOLUMES	38	25	111	6	25	22	17	158	21	86	215	3	727	0	0	0	0	0					
APPROACH %	22%	14%	64%	11%	47%	42%	9%	81%	11%	28%	71%	1%											
PEAK HR FACTOR	0.837																		0.938	0.918			
APP/DEPART	174	/	45	53	/	132	196	/	275	304	/	275	0										



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T012524

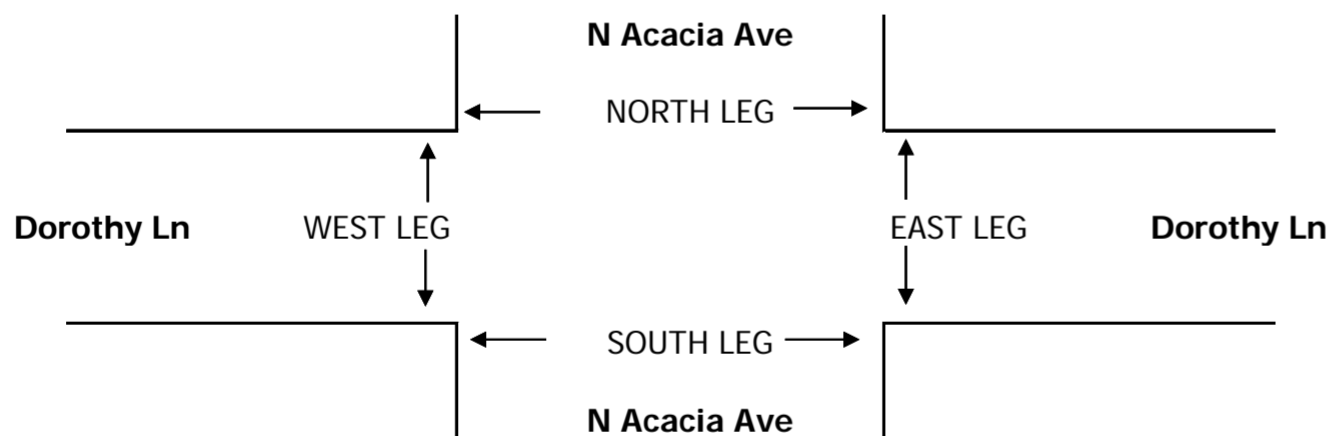
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 NORTH & SOUTH: **N Acacia Ave** LOCATION #: **3**
 EAST & WEST: **Dorothy Ln** CONTROL: **STOP ALL**

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

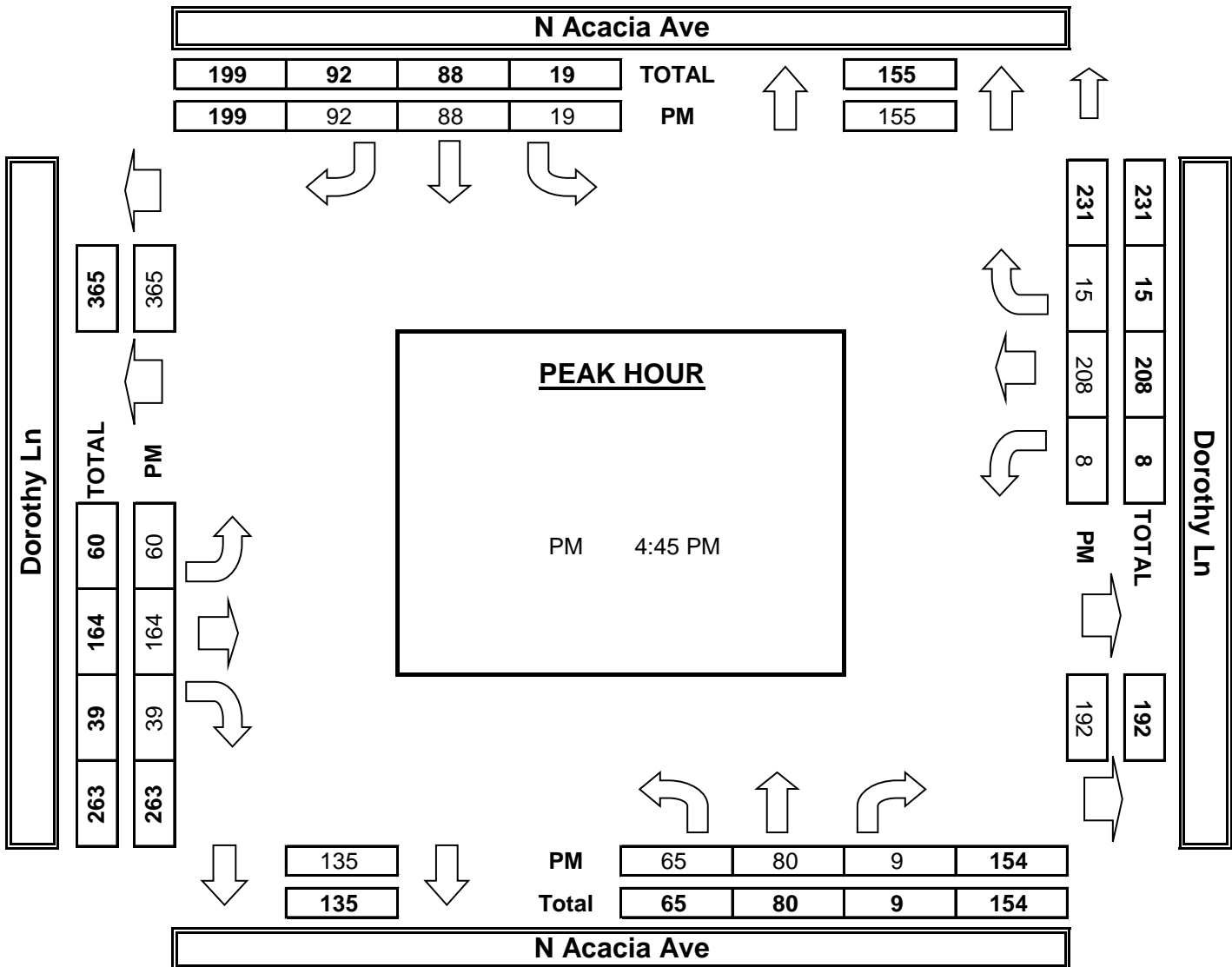
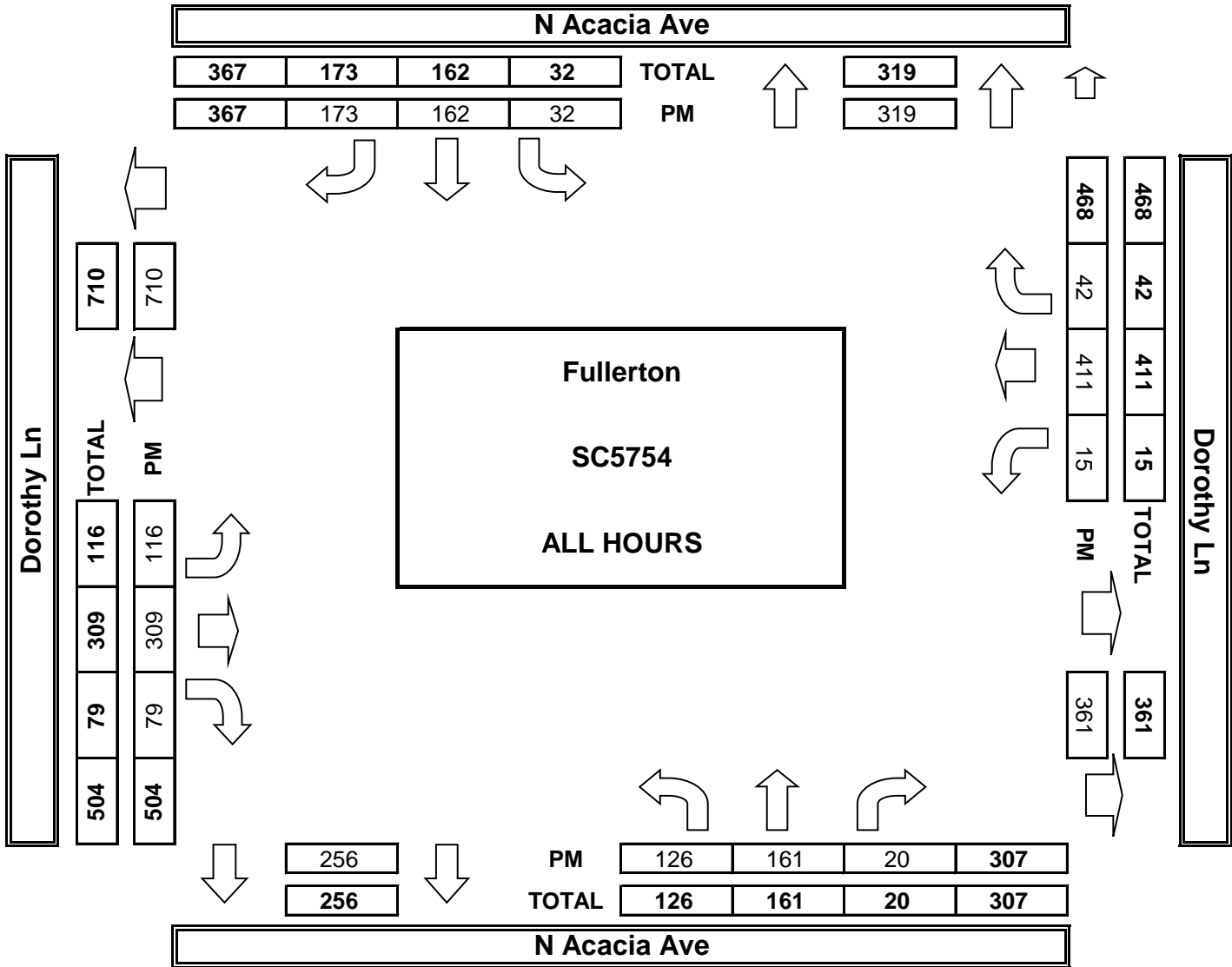
	NORTHBOUND N Acacia Ave			SOUTHBOUND N Acacia Ave			EASTBOUND Dorothy Ln			WESTBOUND Dorothy Ln			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
LANES:	0	1	1	0	1	1	0	1	1	0	1	1	0	0	0	0	0	0

Lane symbols: (<^) > (<^) > (<^) > (<^) >

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4:15 PM	15	24	4	2	16	23	15	30	13	2	49	6	199	0	0	0	0	0			
4:30 PM	15	23	2	5	25	22	8	34	11	1	39	9	194	0	0	0	0	0			
4:45 PM	14	24	2	4	24	25	23	38	6	1	47	5	213	0	0	0	0	0			
5:00 PM	16	19	3	5	27	22	13	43	19	5	43	2	217	0	0	0	0	0			
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5:45 PM	19	15	4	4	12	17	15	42	6	2	63	9	208	0	0	0	0	0			
VOLUMES	126	161	20	32	162	173	116	309	79	15	411	42	1,646	0	0	0	0	0			
APPROACH %	41%	52%	7%	9%	44%	47%	23%	61%	16%	3%	88%	9%									
APP/DEPART	307	/	319	367	/	256	504	/	361	468	/	710	0								
BEGIN PEAK HR	4:45 PM																				
VOLUMES	65	80	9	19	88	92	60	164	39	8	208	15	847	0	0	0	0	0			
APPROACH %	42%	52%	6%	10%	44%	46%	23%	62%	15%	3%	90%	6%									
PEAK HR FACTOR	0.963			0.921			0.877			0.862			0.976								
APP/DEPART	154	/	155	199	/	135	263	/	192	231	/	365	0								



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T012524

DATE: Wed, Nov 12, 25	LOCATION: NORTH & SOUTH: EAST & WEST:	Fullerton State College Blvd Nutwood Ave	PROJECT #: LOCATION #: CONTROL:	SC5754 4 SIGNAL
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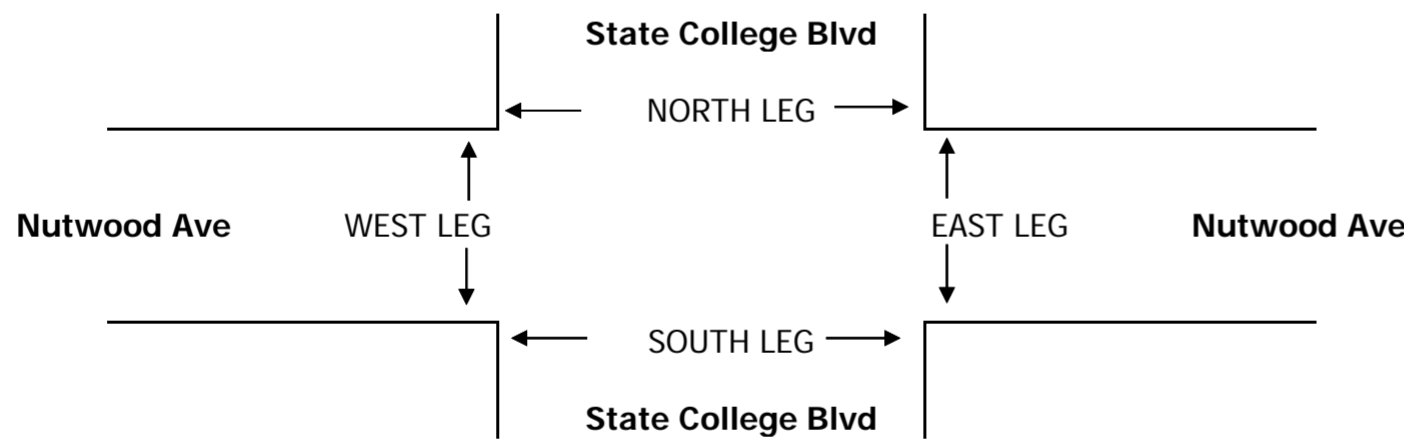
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	PM		N	
	MD	◀ W		E ▶
	OTHER		▼	
	OTHER			

	NORTHBOUND State College Blvd			SOUTHBOUND State College Blvd			EASTBOUND Nutwood Ave			WESTBOUND Nutwood Ave			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
LANES:	1	3	0	1	3	0	1	1	0	1	1	1						

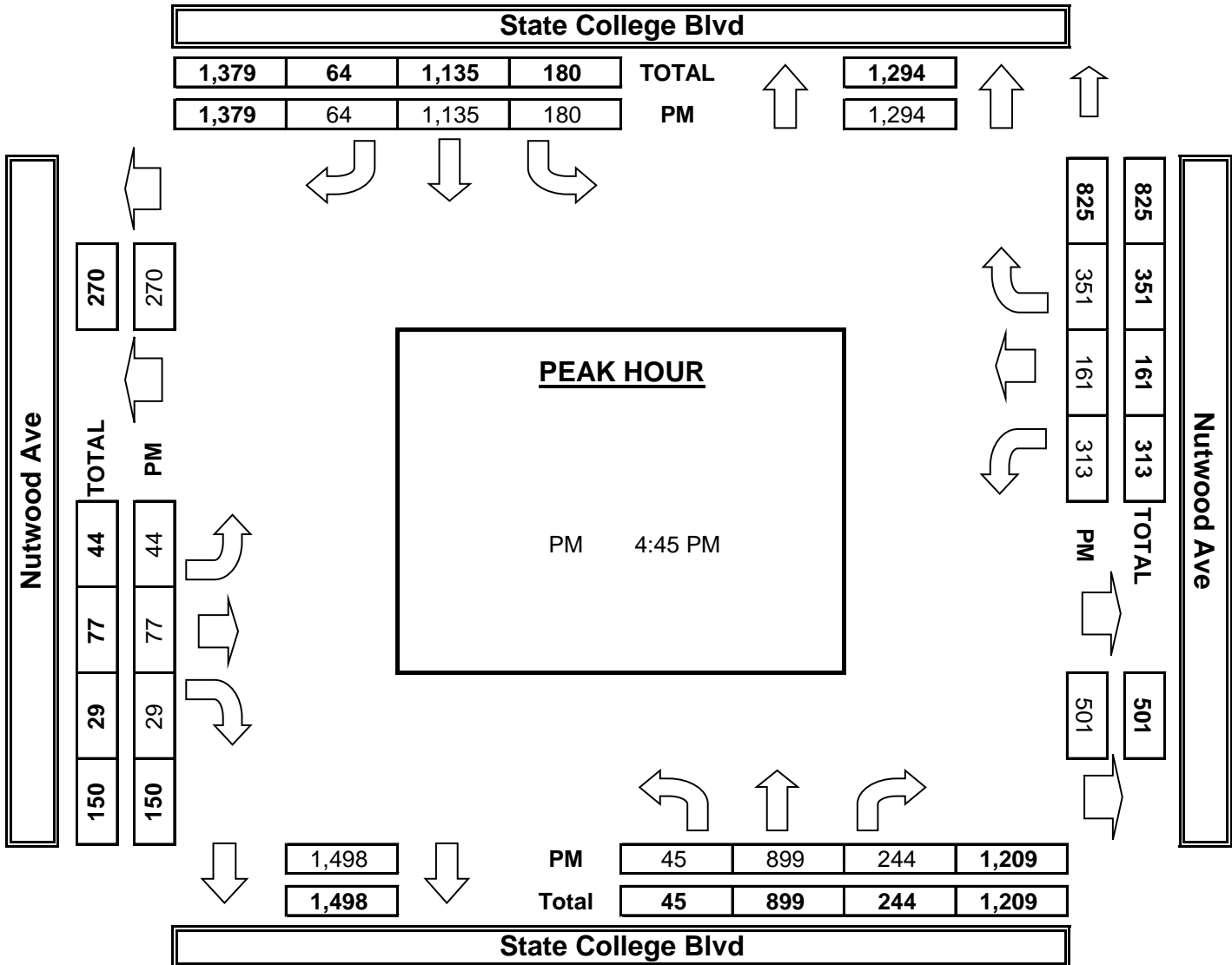
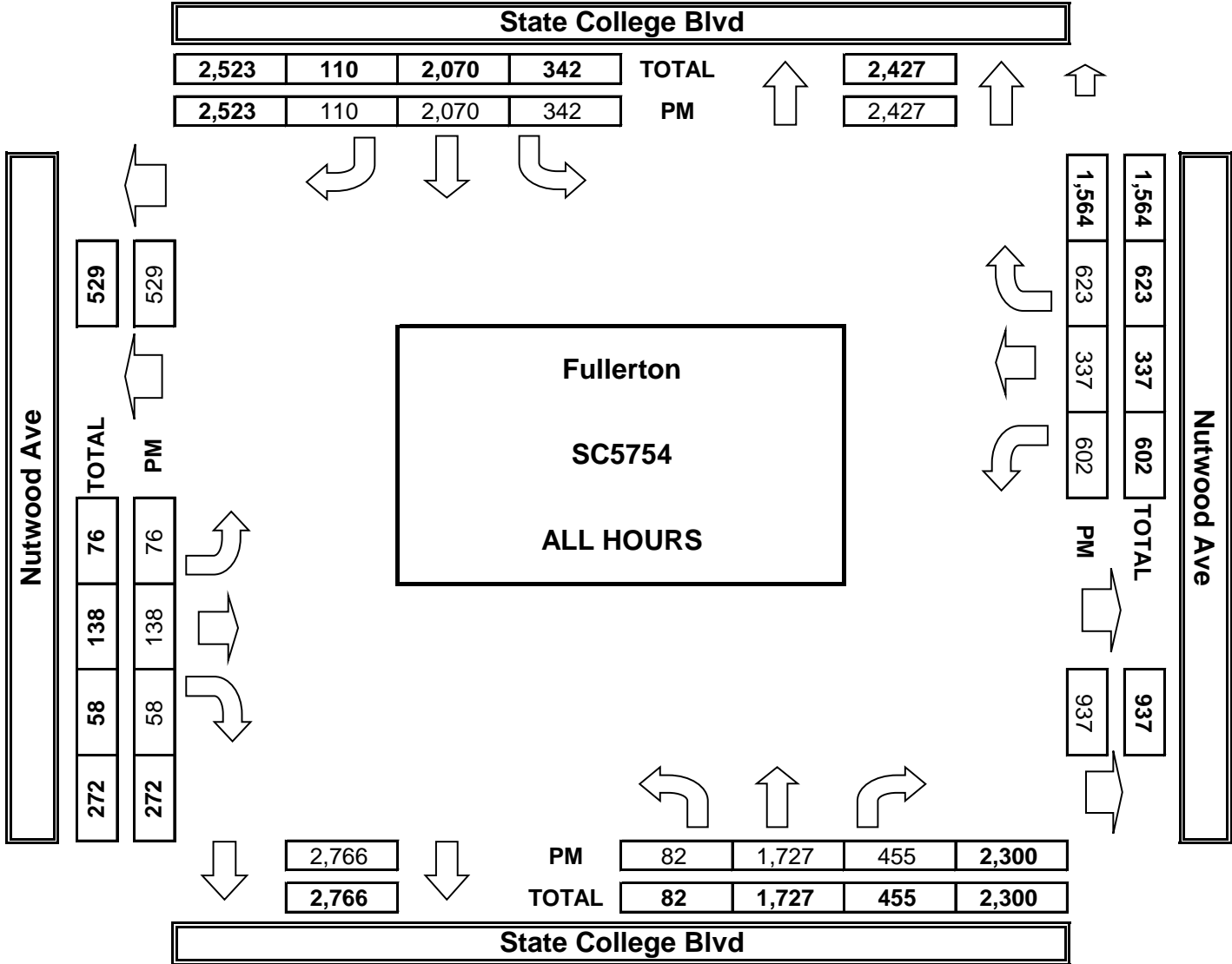
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Turn type: Left turn protected Right turn pe Left turn protected Right turn pe Left turn protected permitted Left turn protected permitted Right turn permitted protected

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
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4:15 PM	8	183	51	37	217	14	12	9	6	62	33	72	704	0	0	0	0	0
4:30 PM	11	204	55	35	222	10	8	18	5	79	31	42	720	2	1	0	0	3
4:45 PM	7	201	53	44	309	9	4	18	6	71	31	49	802	2	0	0	0	2
5:00 PM	7	231	69	49	256	15	9	14	6	81	37	98	872	0	0	0	0	0
5:15 PM	17	272	63	51	319	17	15	22	10	80	45	124	1,035	9	0	0	0	9
5:30 PM	14	195	59	36	251	23	16	23	7	81	48	80	833	10	0	0	0	10
5:45 PM	8	216	62	39	205	4	4	17	3	69	45	69	741	5	0	0	1	6
VOLUMES	82	1,727	455	342	2,070	110	76	138	58	602	337	623	6,659	36	1	0	2	39
APPROACH %	4%	75%	20%	14%	82%	4%	28%	51%	21%	38%	22%	40%						
APP/DEPART	2,300	/	2,427	2,523	/	2,766	272	/	937	1,564	/	529	0					
BEGIN PEAK HR	4:45 PM																	
VOLUMES	45	899	244	180	1,135	64	44	77	29	313	161	351	3,563	21	0	0	0	
APPROACH %	4%	74%	20%	13%	82%	5%	29%	51%	19%	38%	20%	43%						
PEAK HR FACTOR	0.837			0.891			0.798			0.828			0.853					
APP/DEPART	1,209	/	1,294	1,379	/	1,498	150	/	501	825	/	270	0					



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

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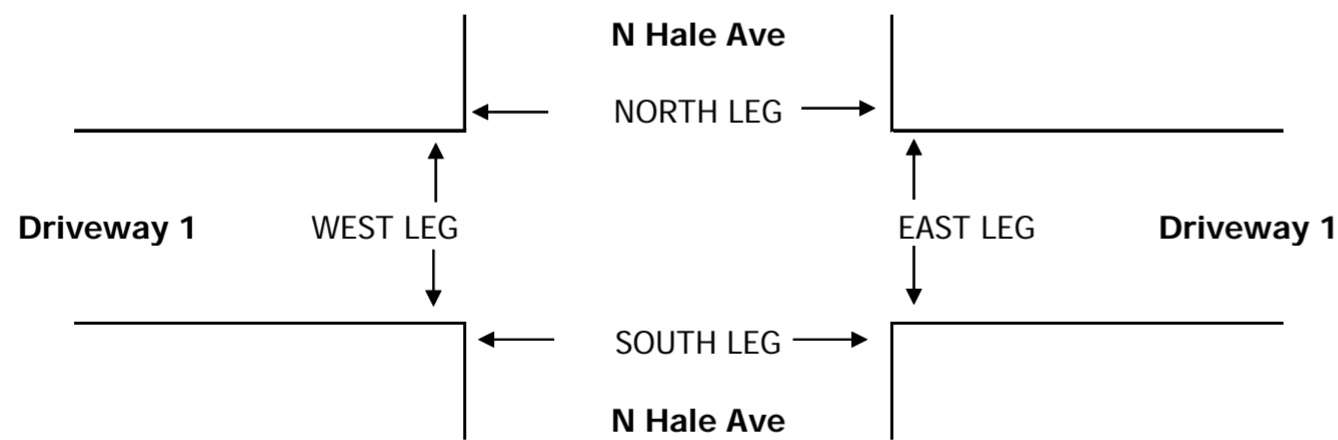
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NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N ▼ S	E ▶
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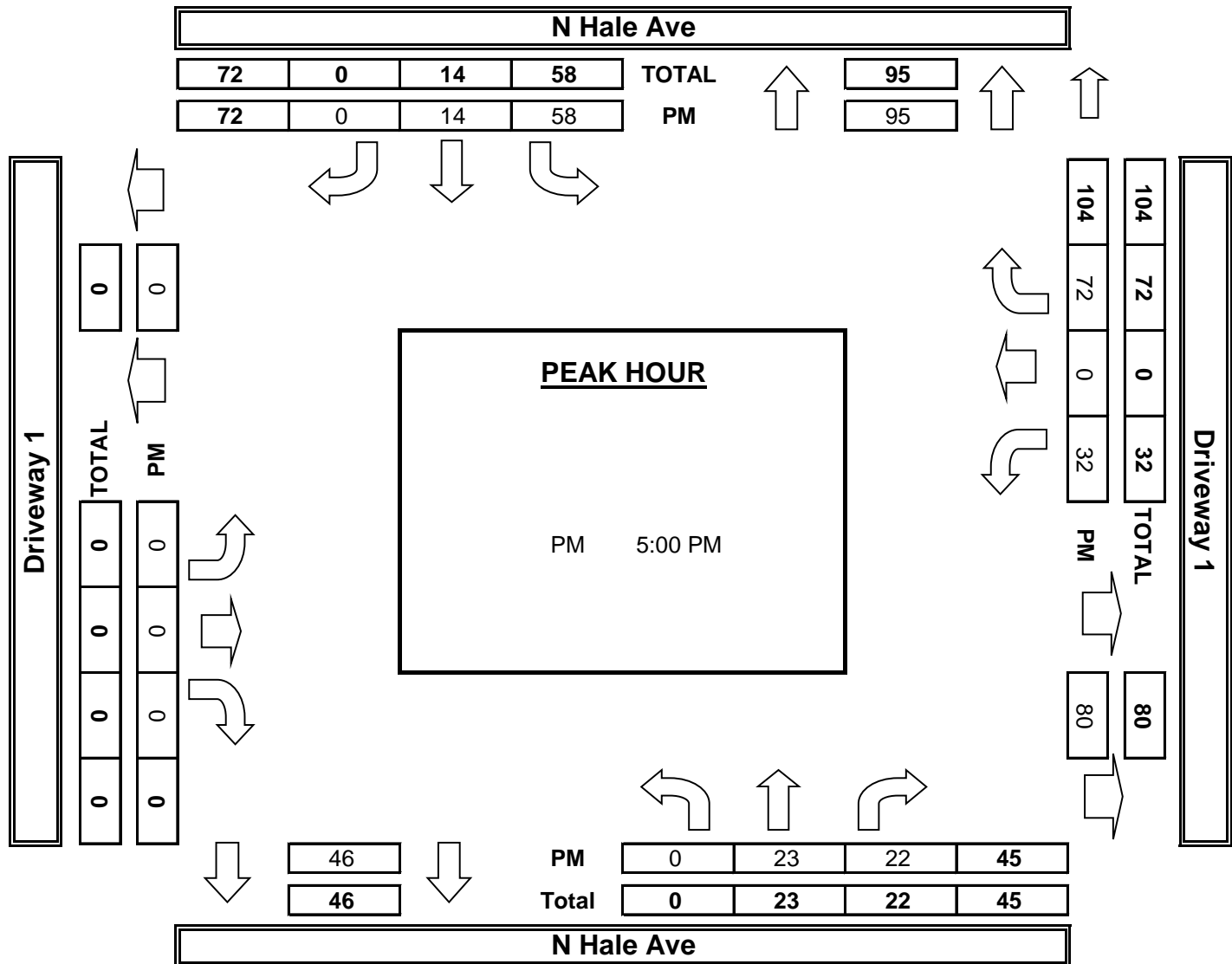
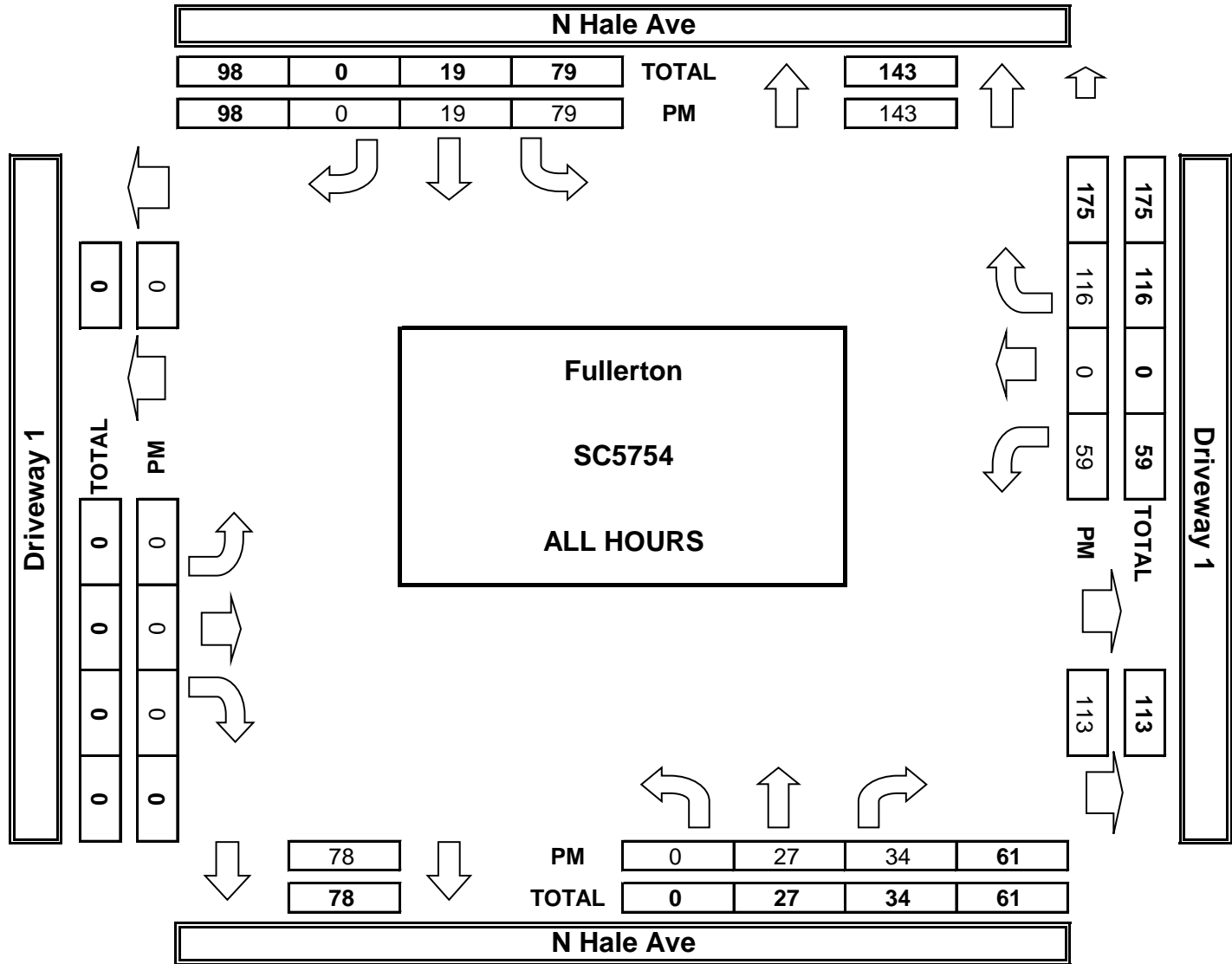
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	N Hale Ave			N Hale Ave			Driveway 1			Driveway 1				NB	SB	EB	WB	TTL
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR						
	X	1	0	0	1	X	X	X	X	0	X	1		0	0	0	0	0

Lane symbols: (^ >) (< ^) (< >)

PM	4:00 PM	0	4	3	3	0	0	0	0	12	0	10	32	0	0	0	0	0	
	4:15 PM	0	0	1	2	1	0	0	0	3	0	7	14	0	0	0	0	0	
	4:30 PM	0	0	6	7	3	0	0	0	7	0	17	40	0	0	0	0	0	
	4:45 PM	0	0	2	9	1	0	0	0	5	0	10	27	0	0	0	0	0	
	5:00 PM	0	5	3	9	4	0	0	0	6	0	11	38	0	0	0	0	0	
	5:15 PM	0	5	7	11	6	0	0	0	5	0	15	49	0	0	0	0	0	
	5:30 PM	0	9	9	22	3	0	0	0	10	0	15	68	0	0	0	0	0	
	5:45 PM	0	4	3	16	1	0	0	0	11	0	31	66	0	0	0	0	0	
	VOLUMES	0	27	34	79	19	0	0	0	59	0	116	334	0	0	0	0	0	
	APPROACH %	0%	44%	56%	81%	19%	0%	0%	0%	34%	0%	66%		0	0	0	0	0	
	APP/DEPART	61	/	143	98	/	78	0	/	113	175	/	0	0					
	BEGIN PEAK HR	5:00 PM																	
	VOLUMES	0	23	22	58	14	0	0	0	0	32	0	72	221	0	0	0	0	
	APPROACH %	0%	51%	49%	81%	19%	0%	0%	0%	0%	31%	0%	69%						
	PEAK HR FACTOR	0.625		0.720		0.000		0.619						0.813					
APP/DEPART	45	/	95	72	/	46	0	/	80	104	/	0	0						



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T012524

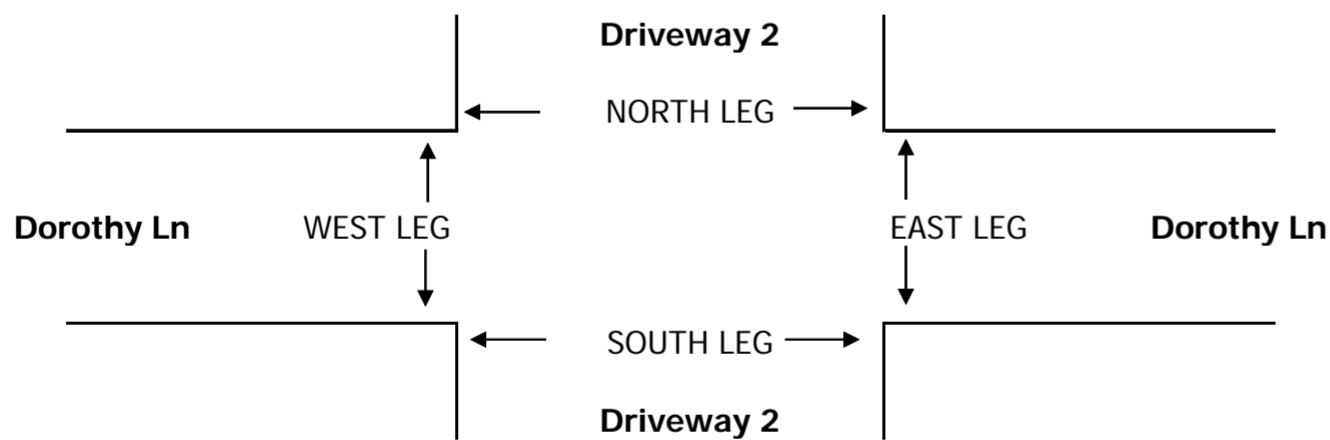
DATE: **Wed, Nov 12, 25** LOCATION: **Fullerton** PROJECT #: **SC5754**
 NORTH & SOUTH: **Driveway 2** LOCATION #: **6**
 EAST & WEST: **Dorothy Ln** CONTROL: **STOP N**

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

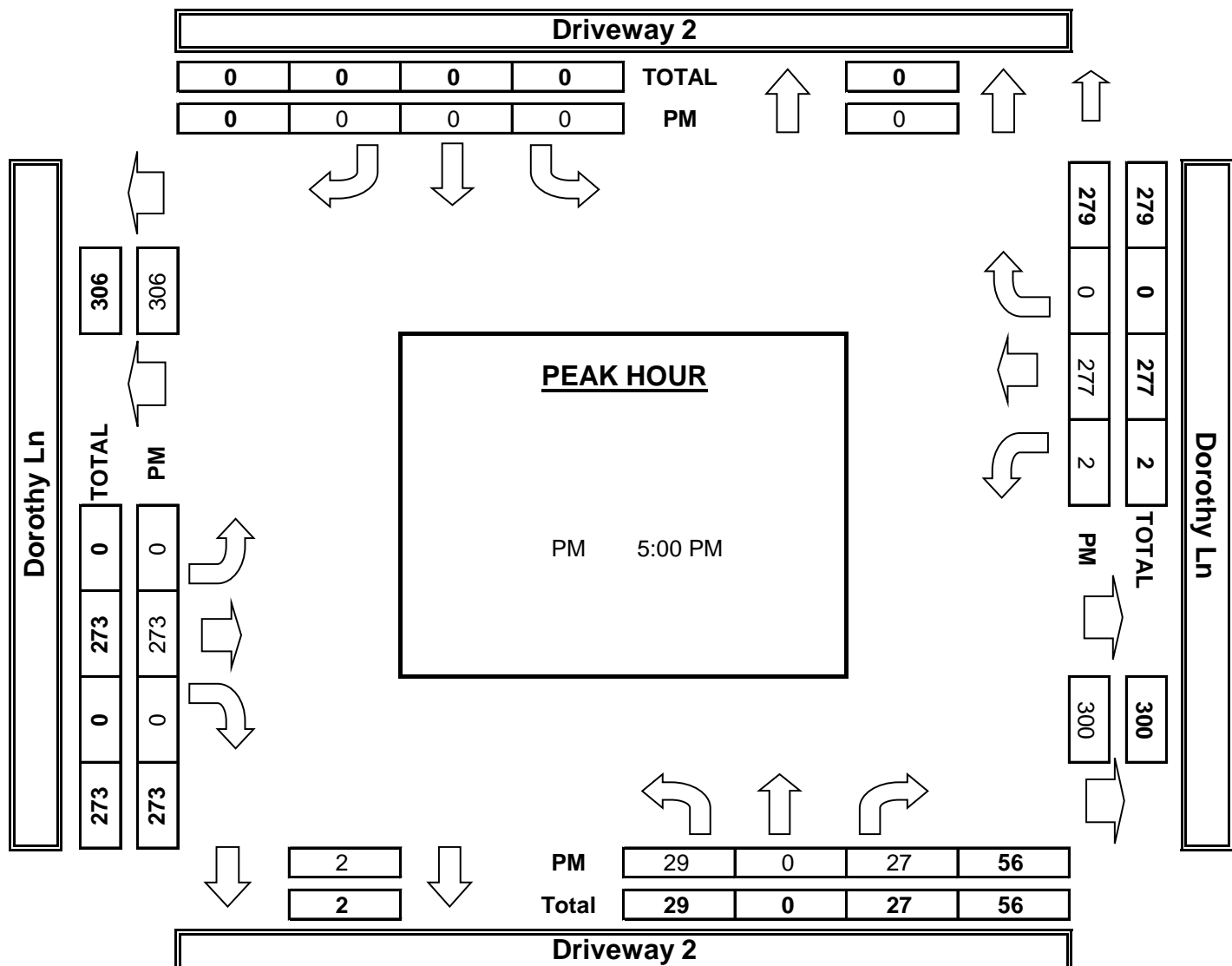
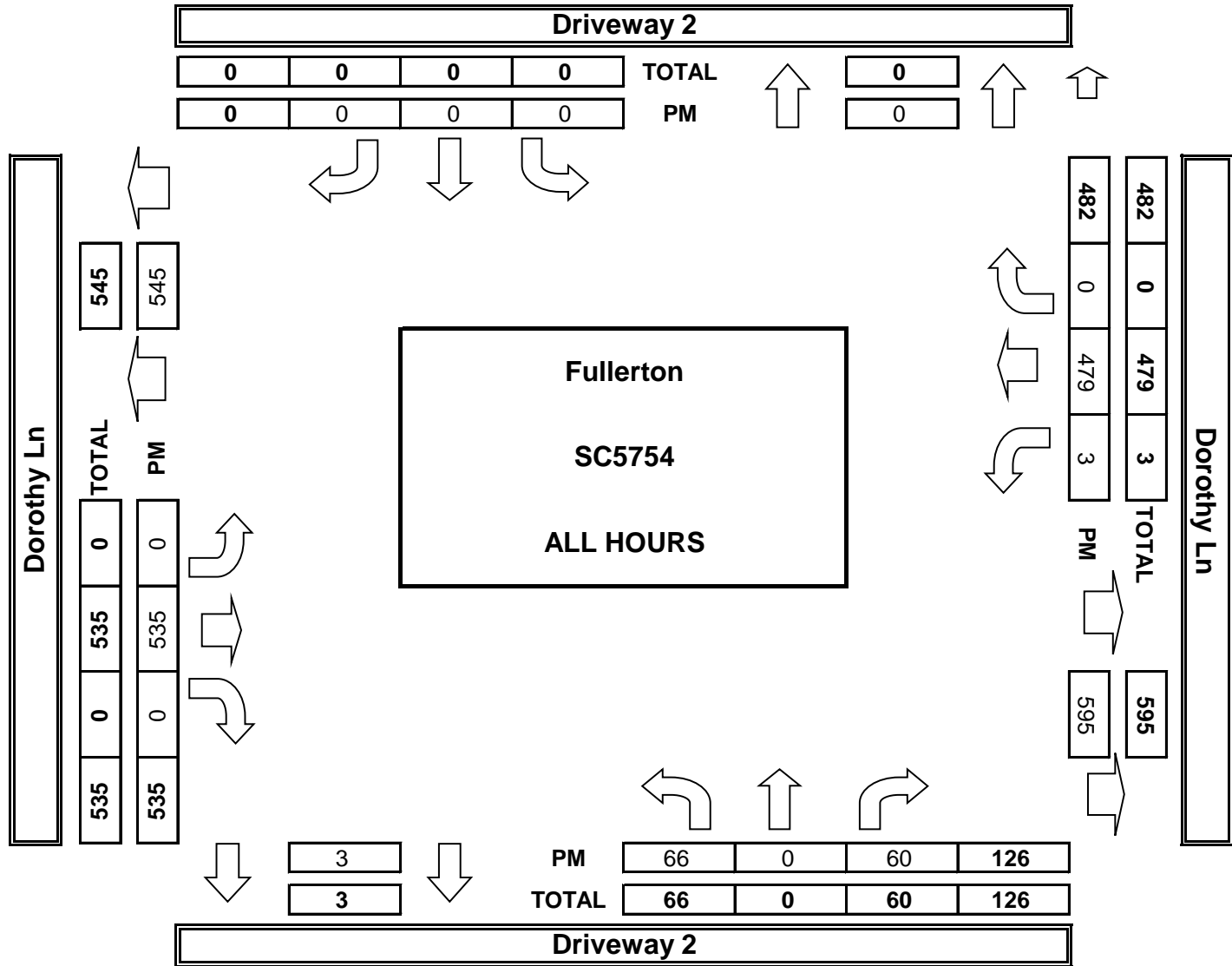
LANES:	NORTHBOUND Driveway 2			SOUTHBOUND Driveway 2			EASTBOUND Dorothy Ln			WESTBOUND Dorothy Ln			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
	0	X	0	X	X	X	X	1	0		1	1	X	0	0	0	0	0

Lane symbol: < X > ^ < ^

4:00 PM	8	0	12	0	0	0	0	65	0	1	50	0	136	0	0	0	0	0	
4:15 PM	8	0	7	0	0	0	0	58	0	0	44	0	117	0	0	0	0	0	
4:30 PM	11	0	7	0	0	0	0	67	0	0	57	0	142	0	0	0	0	0	
4:45 PM	10	0	7	0	0	0	0	72	0	0	51	0	140	0	0	0	0	0	
5:00 PM	7	0	8	0	0	0	0	69	0	0	60	0	144	0	0	0	0	0	
5:15 PM	6	0	7	0	0	0	0	73	0	1	69	0	156	0	0	0	0	0	
5:30 PM	6	0	5	0	0	0	0	55	0	1	80	0	147	0	0	0	0	0	
5:45 PM	10	0	7	0	0	0	0	76	0	0	68	0	161	0	0	0	0	0	
VOLUMES	66	0	60	0	0	0	0	535	0	3	479	0	1,143	0	0	0	0	0	
APPROACH %	52%	0%	48%	0%	0%	0%	0%	100%	0%	1%	99%	0%							
APP/DEPART	126	/	0	0	/	3	535	/	595	482	/	545	0						
BEGIN PEAK HR	5:00 PM																		
VOLUMES	29	0	27	0	0	0	0	273	0	2	277	0	608	0	0	0	0	0	
APPROACH %	52%	0%	48%	0%	0%	0%	0%	100%	0%	1%	99%	0%							
PEAK HR FACTOR	0.824			0.000			0.898			0.861			0.944						
APP/DEPART	56	/	0	0	/	2	273	/	300	279	/	306	0						



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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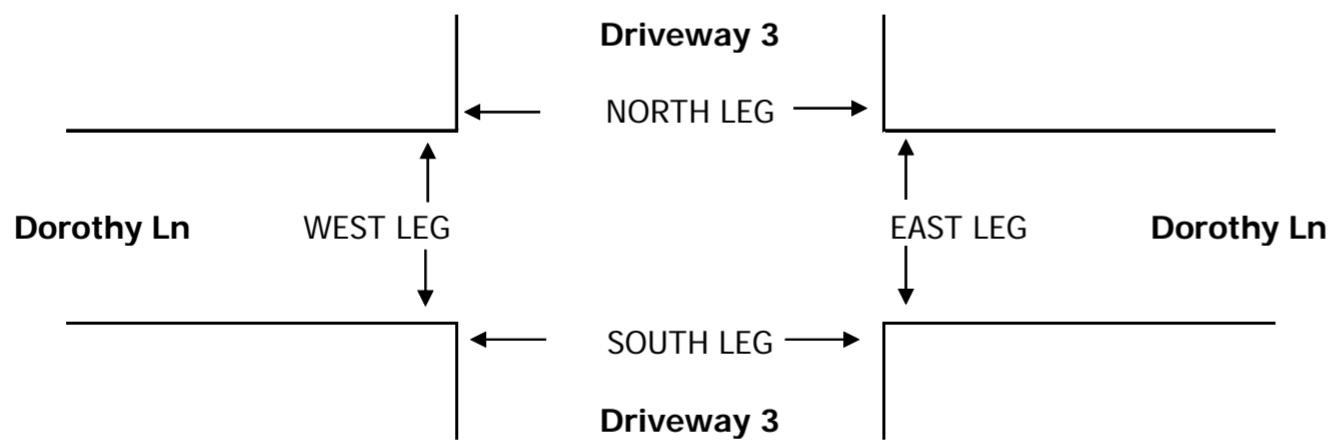
DATE: **Wed, Nov 12, 25** LOCATION: **Fullerton** PROJECT #: **SC5754**
 NORTH & SOUTH: **Driveway 3** LOCATION #: **7**
 EAST & WEST: **Dorothy Ln** CONTROL: **NO CONTROL**

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

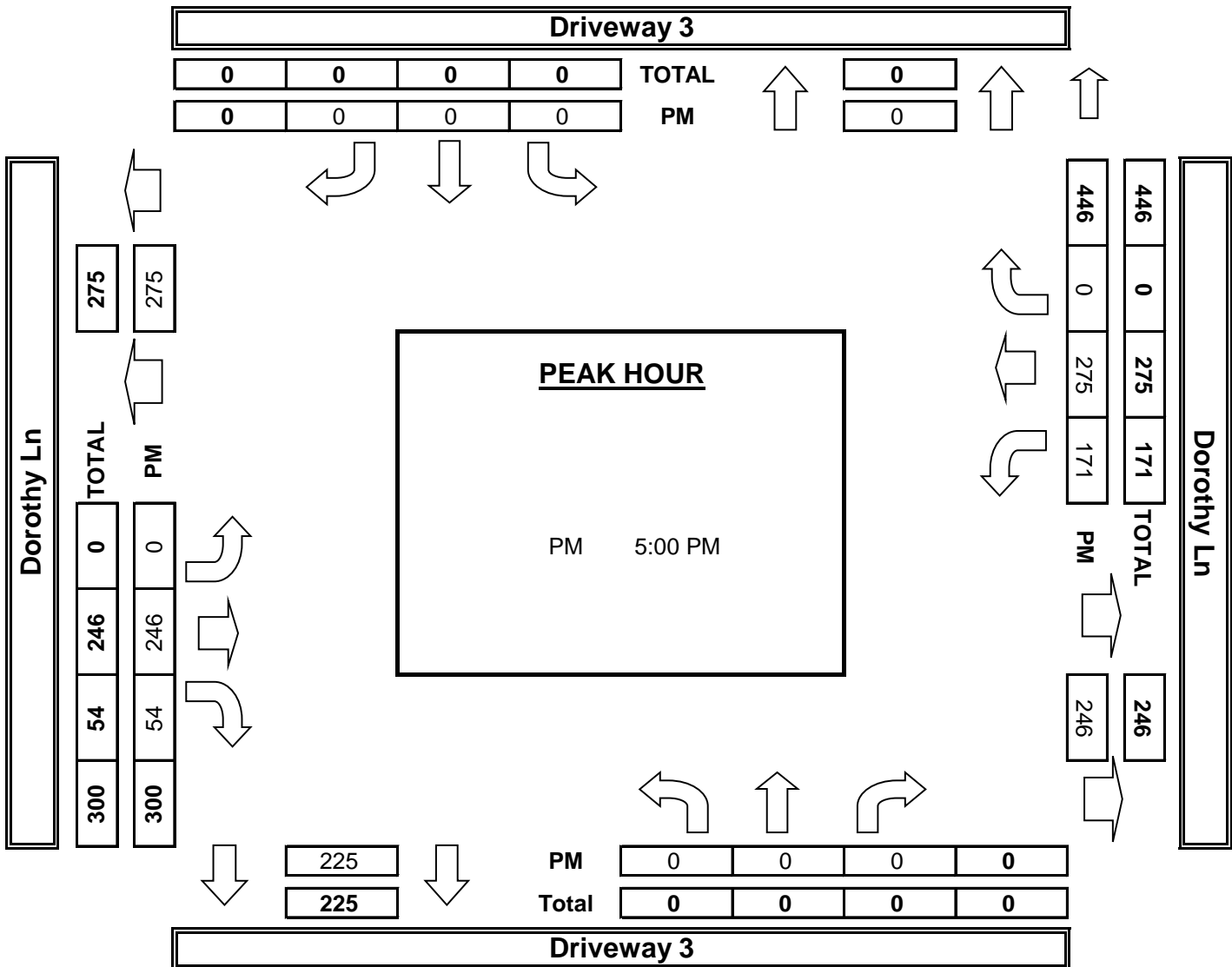
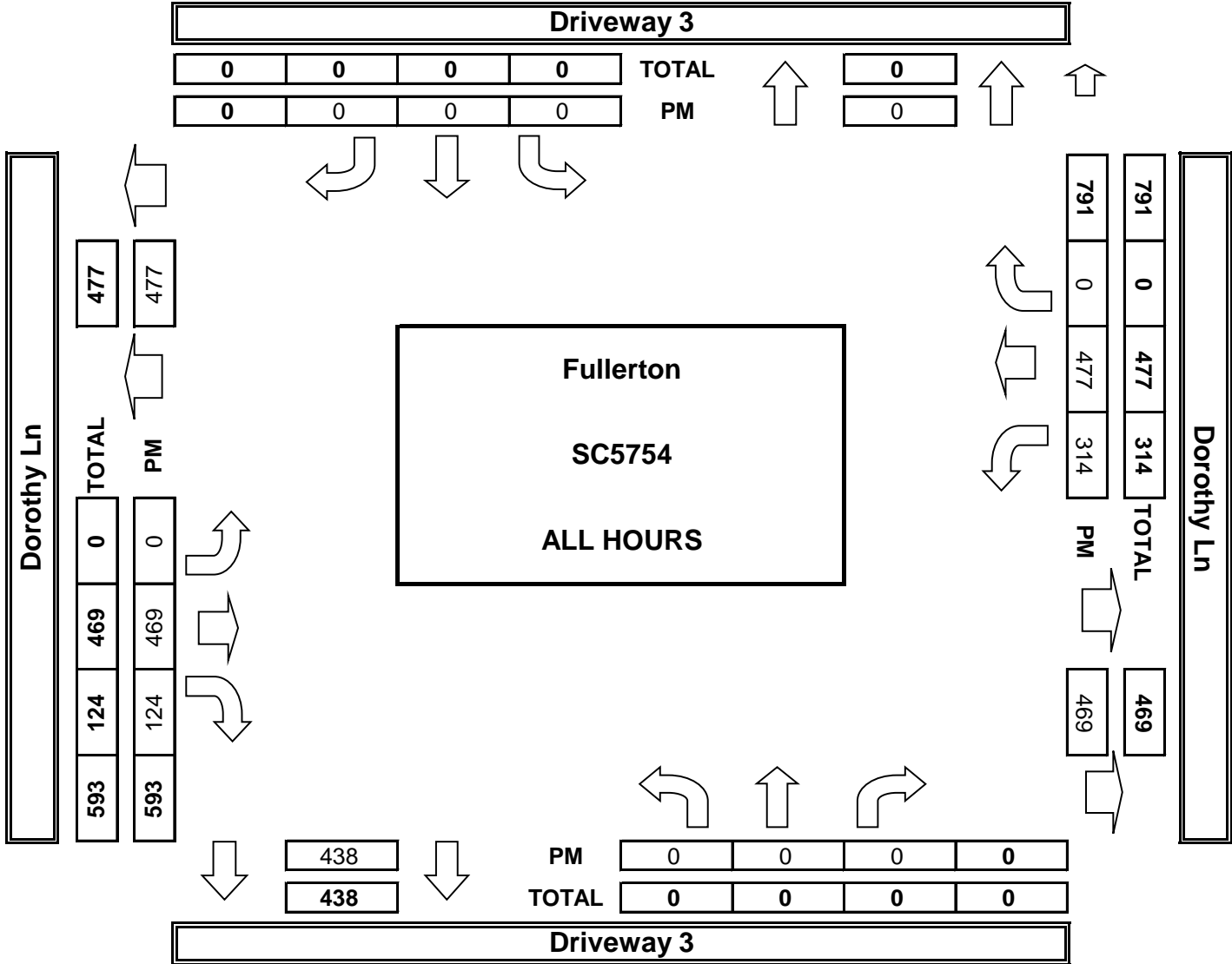
LANES:	NORTHBOUND Driveway 3			SOUTHBOUND Driveway 3			EASTBOUND Dorothy Ln			WESTBOUND Dorothy Ln			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
	X	X	X	X	X	X	X	1	0		1	1	X	0	0	0	0	0

Lane symbol: (^ >) < ^

PM	4:00 PM	0	0	0	0	0	0	0	59	19	34	52	0	164	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	50	9	39	44	0	142	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	58	17	37	63	0	175	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	56	25	33	43	0	157	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	58	16	40	56	0	170	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	66	15	56	68	0	205	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	52	10	45	80	0	187	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	70	13	30	71	0	184	0	0	0	0	0	
VOLUMES	0	0	0	0	0	0	0	469	124	314	477	0	1,384	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	79%	21%	40%	60%	0%							
APP/DEPART	0	/	0	0	/	438	593	/	469	791	/	477	0						
BEGIN PEAK HR	5:00 PM																		
VOLUMES	0	0	0	0	0	0	0	246	54	171	275	0	746	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	82%	18%	38%	62%	0%							
PEAK HR FACTOR	0.000			0.000			0.904			0.892			0.910						
APP/DEPART	0	/	0	0	/	225	300	/	246	446	/	275	0						



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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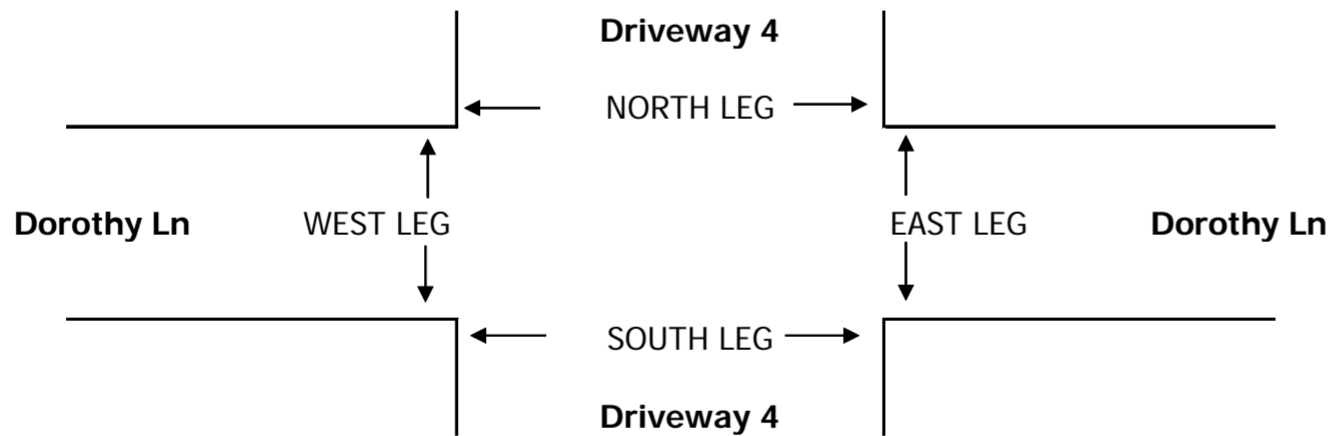
DATE: **Wed, Nov 12, 25** LOCATION: **Fullerton** PROJECT #: **SC5754**
 NORTH & SOUTH: **Driveway 4** LOCATION #: **8**
 EAST & WEST: **Dorothy Ln** CONTROL: **STOP N**

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

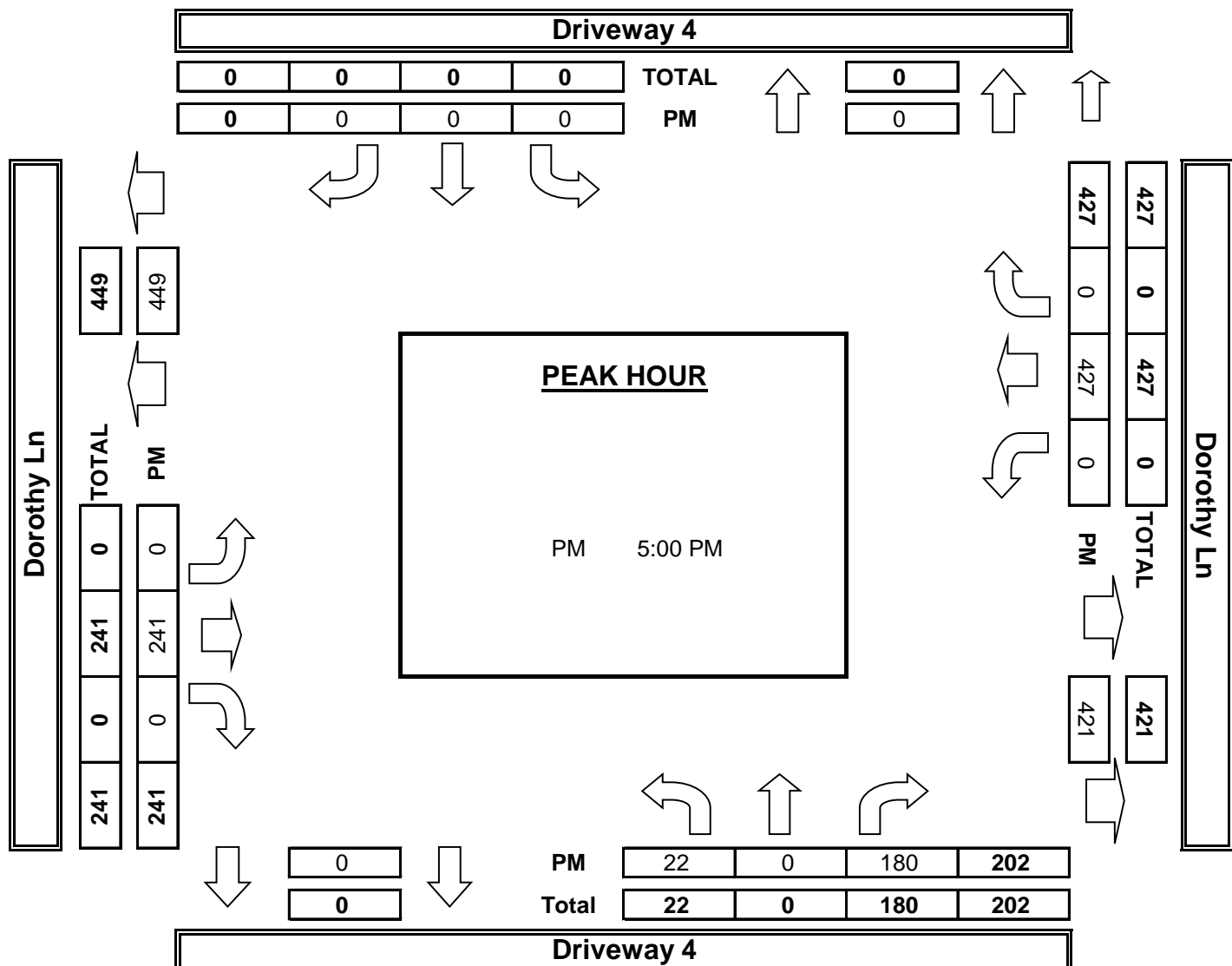
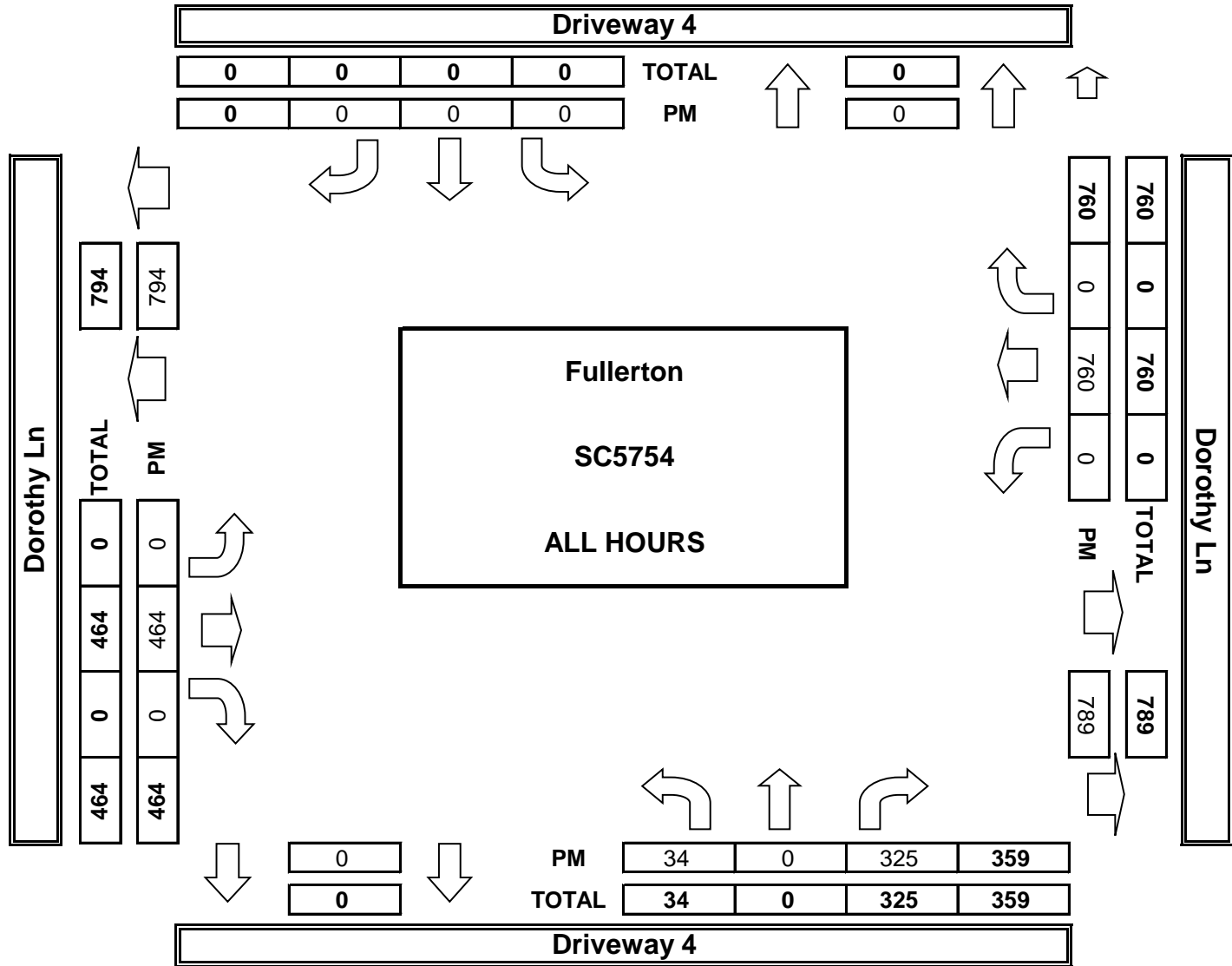
	NORTHBOUND Driveway 4			SOUTHBOUND Driveway 4			EASTBOUND Dorothy Ln			WESTBOUND Dorothy Ln			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
LANES:	0	X	0	X	X	X	X	1	X	X	1	X	0	0	0	0	0	

Lane symbol: < X > ^

PM	Time	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	
		4:00 PM	4	0	38	0	0	0	0	59	0	0	82	0	183	0	0	0	0	0
	4:15 PM	0	0	27	0	0	0	0	50	0	0	83	0	160	0	0	0	0	0	
	4:30 PM	8	0	38	0	0	0	0	58	0	0	92	0	196	0	0	0	0	0	
	4:45 PM	0	0	42	0	0	0	0	56	0	0	76	0	174	0	0	0	0	0	
	5:00 PM	3	0	37	0	0	0	0	58	0	0	93	0	191	0	0	0	0	0	
	5:15 PM	5	0	46	0	0	0	0	66	0	0	122	0	239	0	0	0	0	0	
	5:30 PM	12	0	56	0	0	0	0	47	0	0	113	0	228	0	0	0	0	0	
	5:45 PM	2	0	41	0	0	0	0	70	0	0	99	0	212	0	0	0	0	0	
	VOLUMES	34	0	325	0	0	0	0	464	0	0	760	0	1,583	0	0	0	0	0	
	APPROACH %	9%	0%	91%	0%	0%	0%	0%	100%	0%	0%	100%	0%		0	0	0	0	0	
	APP/DEPART	359	/	0	0	/	0	464	/	789	760	/	794	0						
	BEGIN PEAK HR	5:00 PM																		
	VOLUMES	22	0	180	0	0	0	0	241	0	0	427	0	870	0	0	0	0	0	
	APPROACH %	11%	0%	89%	0%	0%	0%	0%	100%	0%	0%	100%	0%		0	0	0	0	0	
	PEAK HR FACTOR	0.743		0.000			0.861		0.875			0.910								
	APP/DEPART	202	/	0	0	/	0	241	/	421	427	/	449	0						



AimTD LLC
TURNING MOVEMENT COUNTS



ADT1 Dorothy Ln between State College Blvd and Victoria Dr.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB		PM Period	EB		WB		
0:00	1		2		12:00	41		47		
0:15	3		3		12:15	43		60		
0:30	1		2		12:30	72		33		
0:45	1	6	1	8	14	83	239	63	203	
1:00	1		0		13:00	102		53		
1:15	1		2		13:15	47		62		
1:30	0		1		13:30	54		44		
1:45	3	5	0	3	8	34	237	22	181	
2:00	1		1		14:00	40		25		
2:15	2		1		14:15	43		40		
2:30	0		0		14:30	110		72		
2:45	0	3	0	2	5	76	269	72	209	
3:00	2		0		15:00	61		95		
3:15	1		1		15:15	57		98		
3:30	2		0		15:30	160		88		
3:45	0	5	0	1	6	182	460	87	368	
4:00	1		0		16:00	105		83		
4:15	0		0		16:15	75		86		
4:30	1		1		16:30	96		90		
4:45	3	5	3	4	9	99	375	77	336	
5:00	6		5		17:00	91		92		
5:15	8		3		17:15	117		122		
5:30	9		7		17:30	102		113		
5:45	15	38	5	20	58	111	421	102	429	
6:00	7		12		18:00	96		75		
6:15	16		11		18:15	65		66		
6:30	28		16		18:30	44		54		
6:45	49	100	59	98	198	42	247	54	249	
7:00	119		144		19:00	23		43		
7:15	171		149		19:15	40		46		
7:30	93		51		19:30	42		29		
7:45	57	440	76	420	860	15	120	23	141	
8:00	101		72		20:00	24		22		
8:15	145		102		20:15	40		27		
8:30	90		55		20:30	22		27		
8:45	43	379	46	275	654	26	112	15	91	
9:00	34		28		21:00	17		20		
9:15	52		35		21:15	23		18		
9:30	34		23		21:30	11		12		
9:45	36	156	28	114	270	7	58	21	71	
10:00	41		39		22:00	7		14		
10:15	39		32		22:15	7		7		
10:30	31		38		22:30	5		8		
10:45	49	160	32	141	301	3	22	5	34	
11:00	59		37		23:00	4		12		
11:15	75		36		23:15	3		3		
11:30	45		40		23:30	8		5		
11:45	51	230	45	158	388	1	16	3	23	
Total Vol.		1527		1244	2771		2576		2335	4911
							Daily Totals			
							EB	WB		Combined
							4103	3579		7682
							AM			PM
Split %		55.1%		44.9%	36.1%		52.5%		47.5%	63.9%
Peak Hour		7:00		7:00	7:00		15:30		17:00	15:30
Volume		440		420	860		522		429	866
P.H.F.		0.64		0.70	0.67		0.72		0.88	0.80

ADT2 Victoria Dr between Dorothy Ln and N Acacia Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB		PM Period	NB		SB	
0:00	1		1		12:00	28		13	
0:15	0		2		12:15	11		18	
0:30	0		1		12:30	24		34	
0:45	0	1	0	4	12:45	46	109	25	90
1:00	0		0		13:00	33		22	
1:15	2		2		13:15	16		23	
1:30	1		1		13:30	17		13	
1:45	0	3	0	3	13:45	16	82	17	75
2:00	0		0		14:00	15		9	
2:15	1		0		14:15	17		18	
2:30	0		0		14:30	50		33	
2:45	0	1	0	0	14:45	37	119	28	88
3:00	0		0		15:00	30		26	
3:15	1		1		15:15	34		25	
3:30	0		1		15:30	78		42	
3:45	0	1	0	2	15:45	48	190	34	127
4:00	2		0		16:00	38		23	
4:15	1		0		16:15	32		17	
4:30	0		1		16:30	39		30	
4:45	1	4	2	3	16:45	41	150	29	99
5:00	1		3		17:00	41		40	
5:15	2		1		17:15	51		35	
5:30	6		2		17:30	30		39	
5:45	2	11	2	8	17:45	52	174	18	132
6:00	1		3		18:00	43		25	
6:15	2		2		18:15	20		18	
6:30	5		6		18:30	18		19	
6:45	18	26	16	27	18:45	11	92	13	75
7:00	49		53		19:00	15		14	
7:15	82		69		19:15	9		15	
7:30	49		27		19:30	6		7	
7:45	38	218	30	179	19:45	8	38	6	42
8:00	37		45		20:00	6		10	
8:15	73		52		20:15	10		5	
8:30	36		26		20:30	8		6	
8:45	16	162	9	132	20:45	1	25	5	26
9:00	8		9		21:00	2		12	
9:15	21		10		21:15	3		2	
9:30	17		10		21:30	5		1	
9:45	8	54	14	43	21:45	3	13	6	21
10:00	14		12		22:00	3		4	
10:15	14		10		22:15	2		2	
10:30	10		11		22:30	3		1	
10:45	19	57	12	45	22:45	3	11	4	11
11:00	17		12		23:00	2		4	
11:15	13		15		23:15	1		2	
11:30	12		10		23:30	1		2	
11:45	10	52	7	44	23:45	1	5	1	9
Total Vol.	590		490			1008		795	

Daily Totals		
NB	SB	Combined
1598	1285	2883

	AM			PM		
Split %	54.6%	45.4%	37.5%	55.9%	44.1%	62.5%
Peak Hour	7:00	7:00	7:00	15:15	16:45	15:15
Volume	218	179	397	198	143	322
P.H.F.	0.66	0.65	0.66	0.63	0.89	0.67

ADT3 State College Blvd between Dorothy Ln and Nutwood Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	PM Period	NB	SB	
0:00	21	28	12:00	199	242	
0:15	16	7	12:15	221	230	
0:30	9	18	12:30	200	261	
0:45	18 64	10 63	12:45	272 892	285 1018	
1:00	15	8	13:00	255	276	
1:15	12	16	13:15	175	230	
1:30	9	15	13:30	197	229	
1:45	6 42	1 40	13:45	200 827	237 972	
2:00	8	4	14:00	208	243	
2:15	4	4	14:15	258	233	
2:30	12	5	14:30	329	278	
2:45	9 33	4 17	14:45	215 1010	269 1023	
3:00	3	8	15:00	225	245	
3:15	6	1	15:15	247	299	
3:30	7	15	15:30	290	350	
3:45	9 25	10 34	15:45	335 1097	321 1215	
4:00	7	6	16:00	370	277	
4:15	7	5	16:15	277	237	
4:30	19	11	16:30	276	252	
4:45	28 61	22 44	16:45	251 1174	318 1084	
5:00	14	33	17:00	348	282	
5:15	23	22	17:15	437	325	
5:30	29	44	17:30	354	271	
5:45	39 105	63 162	17:45	301 1440	242 1120	
6:00	36	76	18:00	261	210	
6:15	46	82	18:15	258	238	
6:30	59	168	18:30	249	243	
6:45	87 228	265 591	18:45	287 1055	200 891	
7:00	132	311	19:00	244	179	
7:15	188	366	19:15	180	153	
7:30	152	414	19:30	166	142	
7:45	195 667	382 1473	19:45	125 715	114 588	
8:00	171	461	20:00	114	113	
8:15	241	390	20:15	106	141	
8:30	185	336	20:30	113	111	
8:45	161 758	295 1482	20:45	111 444	124 489	
9:00	157	299	21:00	121	119	
9:15	167	249	21:15	95	127	
9:30	190	237	21:30	96	90	
9:45	185 699	308 1093	21:45	104 416	92 428	
10:00	153	264	22:00	86	62	
10:15	149	239	22:15	67	62	
10:30	186	176	22:30	43	57	
10:45	182 670	217 896	22:45	53 249	44 225	
11:00	202	231	23:00	62	41	
11:15	212	250	23:15	36	32	
11:30	212	187	23:30	32	36	
11:45	196 822	231 899	23:45	32 162	36 145	
Total Vol.	4174	6794	10968	9481	9198	18679

Daily Totals		
NB	SB	Combined
13655	15992	29647

	AM			PM		
Split %	38.1%	61.9%	37.0%	50.8%	49.2%	63.0%
Peak Hour	11:30	7:30	7:30	17:00	15:15	16:45
Volume	828	1647	2406	1440	1247	2586
P.H.F.	0.94	0.89	0.95	0.82	0.89	0.85

ADT4 State College Blvd between Dorothy Ln and Yorba Linda Blvd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB	SB	PM Period	NB	SB	
0:00	21	29	12:00	200	238	
0:15	18	9	12:15	202	231	
0:30	8	19	12:30	213	239	
0:45	19	66	12:45	265	880	
		10	67	229	937	
			133	1817		
1:00	16	8	13:00	288	235	
1:15	12	16	13:15	177	219	
1:30	8	15	13:30	202	220	
1:45	8	44	13:45	201	868	
		1	40	226	900	
			84	1768		
2:00	8	4	14:00	213	217	
2:15	4	4	14:15	263	211	
2:30	11	4	14:30	375	269	
2:45	7	30	14:45	228	1079	
		4	16	263	960	
			46	2039		
3:00	3	6	15:00	227	260	
3:15	6	1	15:15	234	311	
3:30	8	14	15:30	328	323	
3:45	8	25	15:45	413	1202	
		10	31	285	1179	
			56	2381		
4:00	7	6	16:00	414	265	
4:15	5	5	16:15	282	234	
4:30	18	11	16:30	307	256	
4:45	19	49	16:45	283	1286	
		22	44	320	1075	
			93	2361		
5:00	12	34	17:00	364	285	
5:15	20	19	17:15	455	336	
5:30	33	47	17:30	369	280	
5:45	36	101	17:45	329	1517	
		59	159	256	1157	
			260	2674		
6:00	28	76	18:00	296	209	
6:15	46	83	18:15	259	233	
6:30	58	161	18:30	239	237	
6:45	77	209	18:45	282	1076	
		281	601	205	884	
			810	1960		
7:00	153	363	19:00	227	175	
7:15	215	366	19:15	192	159	
7:30	153	400	19:30	172	122	
7:45	164	685	19:45	121	712	
		382	1511	102	558	
			2196	1270		
8:00	167	445	20:00	117	92	
8:15	235	372	20:15	110	125	
8:30	193	326	20:30	109	98	
8:45	148	743	20:45	128	464	
		306	1449	99	414	
			2192	878		
9:00	142	307	21:00	116	83	
9:15	164	246	21:15	99	98	
9:30	146	228	21:30	85	65	
9:45	169	621	21:45	86	386	
		302	1083	76	322	
			1704	708		
10:00	149	262	22:00	82	54	
10:15	146	235	22:15	66	49	
10:30	176	181	22:30	44	51	
10:45	178	649	22:45	52	244	
		215	893	38	192	
			1542	436		
11:00	185	201	23:00	58	44	
11:15	232	224	23:15	33	26	
11:30	216	187	23:30	33	28	
11:45	194	827	23:45	30	154	
		221	833	33	131	
			1660	285		
Total Vol.	4049	6727	10776	9868	8709	18577
						Daily Totals
						NB SB Combined
						13917 15436 29353
AM			PM			
Split %	37.6%	62.4%	36.7%	53.1%	46.9%	63.3%
Peak Hour	11:15	7:30	7:30	17:00	16:45	16:45
Volume	842	1599	2318	1517	1221	2692
P.H.F.	0.91	0.90	0.95	0.83	0.91	0.85



Appendix B— ITE Trip Generation Output: PM Peak Hour

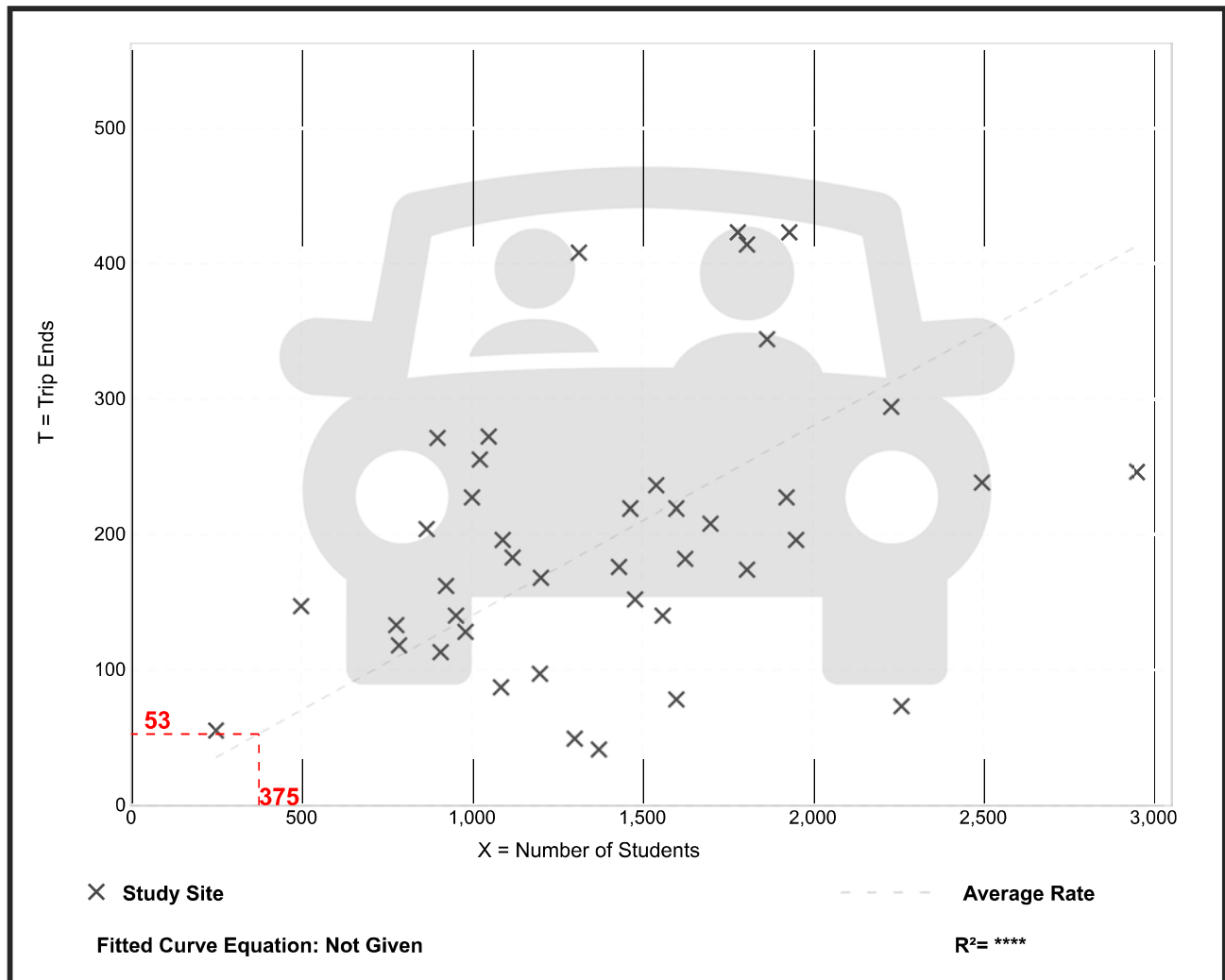
High School (525)

Vehicle Trip Ends vs: Students
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 41
 Avg. Num. of Students: 1405
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.14	0.03 - 0.31	0.07

Data Plot and Equation



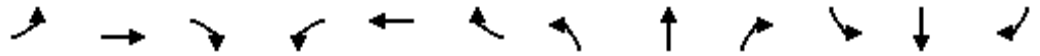


Appendix C— Synchro Reports [2025 Existing – PM Peak Hour]

Intersection Capacity Utilization

2: State College Blvd & Dorothy Ln/Student Union Way

12/02/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↸		↶	↷	↸	↑↑↑	↷	↶	↑↑↑	↷
Volume (vph)	291	16	114	129	30	30	141	1195	104	21	877	258
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	307	114	0	159	30	141	1195	104	21	1135	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3239	1445	0	1631	1445	1615	4631	1445	1615	4473	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	9.5			2.5			10.5	31.0	8.6	1.6	30.5	0.0
Adj Reference Time (s)	14.0			9.5			15.0	35.5	13.1	9.5	35.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	224	0	126	108	1544	108	1491	0	0	0	0
Reference Time A (s)	0.0	164.8	0.0	151.8	157.2	31.0	23.4	30.5	0.0	0.0	0.0	0.0
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	0	0	0	0
Reference Time B (s)	18.8	19.4	17.6	19.7	NA	NA	NA	NA	0	0	0	0
Reference Time (s)	19.4		19.7		157.2		30.5		0.0			0.0
Adj Reference Time (s)	23.9		24.2		161.7		35.0		0.0			0.0
Split Option												
Ref Time Combined (s)	0.0	11.4	0.0	11.7	10.5	31.0	1.6	30.5	0.0	0.0	0.0	0.0
Ref Time Seperate (s)	10.8	1.1	9.6	2.1	10.5	31.0	1.6	23.5	0.0	0.0	0.0	0.0
Reference Time (s)	11.4	11.4	11.7	11.7	31.0	31.0	30.5	30.5	0.0	0.0	0.0	0.0
Adj Reference Time (s)	15.9	15.9	16.2	16.2	35.5	35.5	35.0	35.0	0.0	0.0	0.0	0.0
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		49.9									
Permitted Option (s)	24.2		161.7									
Split Option (s)	32.1		70.4									
Minimum (s)	24.2		49.9		74.1							
Right Turns												
	EBR		WBR		NBR							
Adj Reference Time (s)	14.0		9.5		13.1							
Cross Thru Ref Time (s)	35.0		35.5		15.9							
Oncoming Left Ref Time (s)	16.2		15.9		9.5							
Combined (s)	65.1		60.8		38.5							
Intersection Summary												
Intersection Capacity Utilization	61.8%		ICU Level of Service		B							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	158	21	86	215	3	38	25	111	6	25	22
Future Vol, veh/h	17	158	21	86	215	3	38	25	111	6	25	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	172	23	93	234	3	41	27	121	7	27	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.9	9.8	8.9
HCM LOS	A	B	A	A

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	22%	9%	28%	11%
Vol Thru, %	14%	81%	71%	47%
Vol Right, %	64%	11%	1%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	196	304	53
LT Vol	38	17	86	6
Through Vol	25	158	215	25
RT Vol	111	21	3	22
Lane Flow Rate	189	213	330	58
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.291	0.446	0.086
Departure Headway (Hd)	4.964	4.91	4.86	5.393
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	715	722	734	668
Service Time	3.056	3	2.943	3.393
HCM Lane V/C Ratio	0.264	0.295	0.45	0.087
HCM Control Delay	9.8	10	11.9	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1	1.2	2.3	0.3

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↖	↗		↖	↗
Traffic Vol, veh/h	60	164	39	8	208	15	65	80	9	19	88	92
Future Vol, veh/h	60	164	39	8	208	15	65	80	9	19	88	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	178	42	9	226	16	71	87	10	21	96	100
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

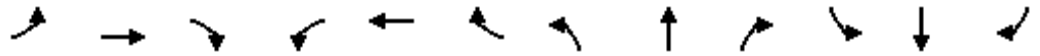
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	12.8	12.8	12.1	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	0%	27%	0%	4%	0%	18%	0%
Vol Thru, %	55%	0%	73%	0%	96%	0%	82%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	9	224	39	216	15	107	92
LT Vol	65	0	60	0	8	0	19	0
Through Vol	80	0	164	0	208	0	88	0
RT Vol	0	9	0	39	0	15	0	92
Lane Flow Rate	158	10	243	42	235	16	116	100
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.294	0.016	0.422	0.064	0.403	0.025	0.211	0.159
Departure Headway (Hd)	6.715	5.775	6.243	5.398	6.177	5.449	6.526	5.725
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	534	617	575	661	582	654	548	624
Service Time	4.477	3.537	3.997	3.152	3.933	3.204	4.287	3.485
HCM Lane V/C Ratio	0.296	0.016	0.423	0.064	0.404	0.024	0.212	0.16
HCM Control Delay	12.3	8.6	13.5	8.5	13.1	8.3	11	9.6
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	1.2	0	2.1	0.2	1.9	0.1	0.8	0.6

Intersection Capacity Utilization

2: State College Blvd & Nutwood Ave

12/02/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔		↔	↔	↔	↔	↑↑↑		↔	↔		
Volume (vph)	44	77	29	313	161	351	45	899	244	180	1135	64	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0	
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	44	106	0	313	161	351	45	1143	0	180	1199	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	1615	1630	0	1615	1700	1445	1615	4483	0	1615	4594	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	3.3	7.8	0.0	23.3	11.4	29.1	3.3	30.6	0.0	13.4	31.3	0.0	
Adj Reference Time (s)	9.5	12.3	0.0	27.8	15.9	33.6	9.5	35.1	0.0	17.9	35.8	0.0	
Permitted Option													
Adj Saturation A (vph)	108	1630		108	1700		108	1494		108	1531		
Reference Time A (s)	49.0	7.8		348.9	11.4		50.2	30.6		200.6	31.3		
Adj Saturation B (vph)	NA	NA		0	1700		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		31.3	11.4		NA	NA		NA	NA		
Reference Time (s)		49.0			31.3			50.2			200.6		
Adj Reference Time (s)		53.5			35.8			54.7			205.1		
Split Option													
Ref Time Combined (s)	3.3	7.8		23.3	11.4		3.3	30.6		13.4	31.3		
Ref Time Seperate (s)	3.3	5.7		23.3	11.4		3.3	24.1		13.4	29.6		
Reference Time (s)	7.8	7.8		23.3	23.3		30.6	30.6		31.3	31.3		
Adj Reference Time (s)	12.3	12.3		27.8	27.8		35.1	35.1		35.8	35.8		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	40.1		53.0										
Permitted Option (s)	53.5		205.1										
Split Option (s)	40.1		70.9										
Minimum (s)	40.1		53.0		93.0								
Right Turns													
	WBR												
Adj Reference Time (s)	33.6												
Cross Thru Ref Time (s)	35.1												
Oncoming Left Ref Time (s)	9.5												
Combined (s)	78.2												
Intersection Summary													
Intersection Capacity Utilization			77.5%		ICU Level of Service						D		
Reference Times and Phasing Options do not represent an optimized timing plan.													

HCM 6th TWSC
1: N Hale Ave & Driveway 1

12/03/2025

Intersection						
Int Delay, s/veh	6.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	72	23	22	58	14
Future Vol, veh/h	32	72	23	22	58	14
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	78	25	24	63	15

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	178	37	0	0	49	0
Stage 1	37	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	812	1035	-	-	1558	-
Stage 1	985	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	779	1035	-	-	1558	-
Mov Cap-2 Maneuver	779	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	779	1035	1558	-
HCM Lane V/C Ratio	-	-	0.045	0.076	0.04	-
HCM Control Delay (s)	-	-	9.8	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	-

HCM 6th TWSC
4: Driveway 2 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	↘
Traffic Vol, veh/h	273	0	2	277	29	27
Future Vol, veh/h	273	0	2	277	29	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	297	0	2	301	32	29

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	297	0	602 297
Stage 1	-	-	-	-	297 -
Stage 2	-	-	-	-	305 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	0	1264	-	463 742
Stage 1	-	0	-	-	754 -
Stage 2	-	0	-	-	748 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1264	-	462 742
Mov Cap-2 Maneuver	-	-	-	-	462 -
Stage 1	-	-	-	-	754 -
Stage 2	-	-	-	-	747 -

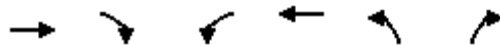
Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	462	742	-	1264	-
HCM Lane V/C Ratio	0.068	0.04	-	0.002	-
HCM Control Delay (s)	13.4	10.1	-	7.9	-
HCM Lane LOS	B	B	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	0	-

HCM Unsignalized Intersection Capacity Analysis

4: Dorothy Ln

12/03/2025



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔		
Traffic Volume (veh/h)	246	54	171	275	0	0
Future Volume (Veh/h)	246	54	171	275	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	267	59	186	299	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			326		968	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			326		968	296
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		100	100
cM capacity (veh/h)			1234		239	743
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	326	186	299			
Volume Left	0	186	0			
Volume Right	59	0	0			
cSH	1700	1234	1700			
Volume to Capacity	0.19	0.15	0.18			
Queue Length 95th (ft)	0	13	0			
Control Delay (s)	0.0	8.4	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	3.2				
Approach LOS						
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			32.4%		ICU Level of Service	A
Analysis Period (min)			15			

HCM 6th TWSC
4: Driveway 4 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↖	↗
Traffic Vol, veh/h	241	0	0	427	22	180
Future Vol, veh/h	241	0	0	427	22	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	262	0	0	464	24	196

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	726 131
Stage 1	-	-	-	-	262 -
Stage 2	-	-	-	-	464 -
Critical Hdwy	-	-	-	-	6.63 6.93
Critical Hdwy Stg 1	-	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	-	-	3.519 3.319
Pot Cap-1 Maneuver	-	0	0	-	375 895
Stage 1	-	0	0	-	759 -
Stage 2	-	0	0	-	632 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	375 895
Mov Cap-2 Maneuver	-	-	-	-	375 -
Stage 1	-	-	-	-	759 -
Stage 2	-	-	-	-	632 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBT
Capacity (veh/h)	375	895	-	-
HCM Lane V/C Ratio	0.064	0.219	-	-
HCM Control Delay (s)	15.3	10.1	-	-
HCM Lane LOS	C	B	-	-
HCM 95th %tile Q(veh)	0.2	0.8	-	-

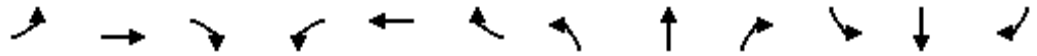


Appendix D— Synchro Reports [2028 No Project – PM Peak Hour]

Intersection Capacity Utilization

2: State College Blvd & Dorothy Ln/Student Union Way

12/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖	↗		↖	↗	↘	↑↑↑	↗	↘	↑↑↑	
Volume (vph)	300	16	117	133	31	31	145	1231	107	22	904	266
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	316	117	0	164	31	145	1231	107	22	1170	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3239	1445	0	1631	1445	1615	4631	1445	1615	4473	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	9.7			2.6			10.8	31.9	8.9	1.6	31.4	0.0
Adj Reference Time (s)	14.2			9.5			15.3	36.4	13.4	9.5	35.9	0.0
Permitted Option												
Adj Saturation A (vph)	0	223	0	126	108	1544	108	1491	108	1491		
Reference Time A (s)	0.0	169.8	0.0	156.5	161.6	31.9	24.5	31.4	24.5	31.4		
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	NA	NA		
Reference Time B (s)	19.1	19.7	17.9	20.1	NA	NA	NA	NA	NA	NA		
Reference Time (s)	19.7		20.1			161.6			31.4			
Adj Reference Time (s)	24.2		24.6			166.1			35.9			
Split Option												
Ref Time Combined (s)	0.0	11.7	0.0	12.1	10.8	31.9	1.6	31.4				
Ref Time Seperate (s)	11.1	1.1	9.9	2.2	10.8	31.9	1.6	24.3				
Reference Time (s)	11.7	11.7	12.1	12.1	31.9	31.9	31.4	31.4				
Adj Reference Time (s)	16.2	16.2	16.6	16.6	36.4	36.4	35.9	35.9				
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		51.2									
Permitted Option (s)	24.6		166.1									
Split Option (s)	32.8		72.3									
Minimum (s)	24.6		51.2		75.7							
Right Turns												
	EBR	WBR	NBR									
Adj Reference Time (s)	14.2	9.5	13.4									
Cross Thru Ref Time (s)	35.9	36.4	16.2									
Oncoming Left Ref Time (s)	16.6	16.2	9.5									
Combined (s)	66.7	62.1	39.1									
Intersection Summary												
Intersection Capacity Utilization	63.1%		ICU Level of Service					B				
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	163	40	89	222	3	39	26	114	6	26	23
Future Vol, veh/h	18	163	40	89	222	3	39	26	114	6	26	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	177	43	97	241	3	42	28	124	7	28	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	12.5	10.2	9.1
HCM LOS	B	B	B	A

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	22%	8%	28%	11%
Vol Thru, %	15%	74%	71%	47%
Vol Right, %	64%	18%	1%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	179	221	314	55
LT Vol	39	18	89	6
Through Vol	26	163	222	26
RT Vol	114	40	3	23
Lane Flow Rate	195	240	341	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.279	0.335	0.477	0.092
Departure Headway (Hd)	5.162	5.026	5.03	5.516
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	697	718	720	649
Service Time	3.195	3.037	3.037	3.557
HCM Lane V/C Ratio	0.28	0.334	0.474	0.092
HCM Control Delay	10.2	10.6	12.5	9.1
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.1	1.5	2.6	0.3

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↖	↗		↖	↗
Traffic Vol, veh/h	62	169	40	8	214	15	67	82	9	20	91	95
Future Vol, veh/h	62	169	40	8	214	15	67	82	9	20	91	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	184	43	9	233	16	73	89	10	22	99	103
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

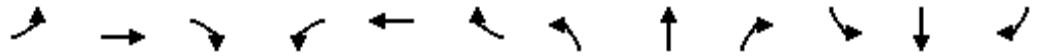
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.2	13.2	12.4	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	0%	27%	0%	4%	0%	18%	0%
Vol Thru, %	55%	0%	73%	0%	96%	0%	82%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	9	231	40	222	15	111	95
LT Vol	67	0	62	0	8	0	20	0
Through Vol	82	0	169	0	214	0	91	0
RT Vol	0	9	0	40	0	15	0	95
Lane Flow Rate	162	10	251	43	241	16	121	103
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.306	0.016	0.44	0.066	0.419	0.025	0.221	0.166
Departure Headway (Hd)	6.792	5.851	6.308	5.462	6.247	5.518	6.6	5.796
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	526	608	570	653	574	646	542	615
Service Time	4.562	3.62	4.068	3.222	4.007	3.278	4.368	3.564
HCM Lane V/C Ratio	0.308	0.016	0.44	0.066	0.42	0.025	0.223	0.167
HCM Control Delay	12.6	8.7	14	8.6	13.5	8.4	11.2	9.7
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	1.3	0	2.2	0.2	2.1	0.1	0.8	0.6

Intersection Capacity Utilization

2: State College Blvd & Nutwood Ave

12/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↗	↘		↗	↖	↗	↗	↑↑↑		↗	↑↑↑		
Volume (vph)	45	79	30	322	166	362	46	926	251	185	1169	66	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0	
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	45	109	0	322	166	362	46	1177	0	185	1235	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	1615	1630	0	1615	1700	1445	1615	4483	0	1615	4594	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	3.3	8.0	0.0	23.9	11.7	30.1	3.4	31.5	0.0	13.7	32.3	0.0	
Adj Reference Time (s)	9.5	12.5	0.0	28.4	16.2	34.6	9.5	36.0	0.0	18.2	36.8	0.0	
Permitted Option													
Adj Saturation A (vph)	108	1630		108	1700		108	1494		108	1531		
Reference Time A (s)	50.2	8.0		358.9	11.7		51.3	31.5		206.2	32.3		
Adj Saturation B (vph)	NA	NA		0	1700		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		31.9	11.7		NA	NA		NA	NA		
Reference Time (s)		50.2			31.9			51.3			206.2		
Adj Reference Time (s)		54.7			36.4			55.8			210.7		
Split Option													
Ref Time Combined (s)	3.3	8.0		23.9	11.7		3.4	31.5		13.7	32.3		
Ref Time Seperate (s)	3.3	5.8		23.9	11.7		3.4	24.8		13.7	30.5		
Reference Time (s)	8.0	8.0		23.9	23.9		31.5	31.5		32.3	32.3		
Adj Reference Time (s)	12.5	12.5		28.4	28.4		36.0	36.0		36.8	36.8		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	41.0		54.3										
Permitted Option (s)	54.7		210.7										
Split Option (s)	41.0		72.8										
Minimum (s)	41.0		54.3		95.2								
Right Turns													
	WBR												
Adj Reference Time (s)	34.6												
Cross Thru Ref Time (s)	36.0												
Oncoming Left Ref Time (s)	9.5												
Combined (s)	80.1												
Intersection Summary													
Intersection Capacity Utilization			79.3%		ICU Level of Service						D		
Reference Times and Phasing Options do not represent an optimized timing plan.													

HCM 6th TWSC
1: N Hale Ave & Driveway 1

12/03/2025

Intersection						
Int Delay, s/veh	6.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	74	24	23	60	14
Future Vol, veh/h	33	74	24	23	60	14
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	80	26	25	65	15

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	184	39	0	0	51	0
Stage 1	39	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	805	1033	-	-	1555	-
Stage 1	983	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	771	1033	-	-	1555	-
Mov Cap-2 Maneuver	771	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	771	1033	1555	-
HCM Lane V/C Ratio	-	-	0.047	0.078	0.042	-
HCM Control Delay (s)	-	-	9.9	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.1	-

HCM 6th TWSC
4: Driveway 2 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	↘
Traffic Vol, veh/h	281	0	2	285	30	0
Future Vol, veh/h	281	0	2	285	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	305	0	2	310	33	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	305	0	619 305
Stage 1	-	-	-	-	305 -
Stage 2	-	-	-	-	314 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	0	1256	-	452 735
Stage 1	-	0	-	-	748 -
Stage 2	-	0	-	-	741 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1256	-	451 735
Mov Cap-2 Maneuver	-	-	-	-	451 -
Stage 1	-	-	-	-	748 -
Stage 2	-	-	-	-	740 -

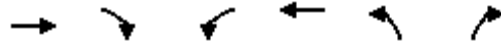
Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	451	-	-	1256	-
HCM Lane V/C Ratio	0.072	-	-	0.002	-
HCM Control Delay (s)	13.6	0	-	7.9	-
HCM Lane LOS	B	A	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM Unsignalized Intersection Capacity Analysis

4: Dorothy Ln

12/03/2025



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔		
Traffic Volume (veh/h)	253	56	176	283	0	0
Future Volume (Veh/h)	253	56	176	283	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	275	61	191	308	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			336		996	306
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			336		996	306
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			84		100	100
cM capacity (veh/h)			1223		229	734
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	336	191	308			
Volume Left	0	191	0			
Volume Right	61	0	0			
cSH	1700	1223	1700			
Volume to Capacity	0.20	0.16	0.18			
Queue Length 95th (ft)	0	14	0			
Control Delay (s)	0.0	8.5	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	3.2				
Approach LOS						
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			33.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 6th TWSC
4: Driveway 4 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↖	↗
Traffic Vol, veh/h	248	0	0	440	23	185
Future Vol, veh/h	248	0	0	440	23	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	270	0	0	478	25	201

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	748 135
Stage 1	-	-	-	-	270 -
Stage 2	-	-	-	-	478 -
Critical Hdwy	-	-	-	-	6.63 6.93
Critical Hdwy Stg 1	-	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	-	-	3.519 3.319
Pot Cap-1 Maneuver	-	0	0	-	364 890
Stage 1	-	0	0	-	752 -
Stage 2	-	0	0	-	623 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	364 890
Mov Cap-2 Maneuver	-	-	-	-	364 -
Stage 1	-	-	-	-	752 -
Stage 2	-	-	-	-	623 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBT
Capacity (veh/h)	364	890	-	-
HCM Lane V/C Ratio	0.069	0.226	-	-
HCM Control Delay (s)	15.6	10.2	-	-
HCM Lane LOS	C	B	-	-
HCM 95th %tile Q(veh)	0.2	0.9	-	-

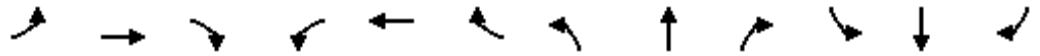


Appendix E— Synchro Reports [2025 With Project – PM Peak Hour]

Intersection Capacity Utilization

2: State College Blvd & Dorothy Ln/Student Union Way

12/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖	↗		↖	↗	↘	↑↑↑	↗	↘	↑↑↑	
Volume (vph)	302	17	118	129	31	30	146	1195	104	21	877	266
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	319	118	0	160	30	146	1195	104	21	1143	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3239	1445	0	1631	1445	1615	4631	1445	1615	4469	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	9.8			2.5			10.8	31.0	8.6	1.6	30.7	0.0
Adj Reference Time (s)	14.3			9.5			15.3	35.5	13.1	9.5	35.2	0.0
Permitted Option												
Adj Saturation A (vph)	0	224	0	126	108	1544	108	1490	0	0	0	0
Reference Time A (s)	0.0	171.1	0.0	152.0	162.7	31.0	23.4	30.7	0.0	0.0	0.0	0.0
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	0	0	0	0
Reference Time B (s)	19.2	19.8	17.6	19.8	NA	NA	NA	NA	0	0	0	0
Reference Time (s)	19.8		19.8		162.7		30.7		0.0			
Adj Reference Time (s)	24.3		24.3		167.2		35.2		0.0			
Split Option												
Ref Time Combined (s)	0.0	11.8	0.0	11.8	10.8	31.0	1.6	30.7	0.0	0.0	0.0	0.0
Ref Time Seperate (s)	11.2	1.2	9.6	2.2	10.8	31.0	1.6	23.5	0.0	0.0	0.0	0.0
Reference Time (s)	11.8	11.8	11.8	11.8	31.0	31.0	30.7	30.7	0.0	0.0	0.0	0.0
Adj Reference Time (s)	16.3	16.3	16.3	16.3	35.5	35.5	35.2	35.2	0.0	0.0	0.0	0.0
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		50.5									
Permitted Option (s)	24.3		167.2									
Split Option (s)	32.6		70.7									
Minimum (s)	24.3		50.5		74.9							
Right Turns												
	EBR	WBR	NBR									
Adj Reference Time (s)	14.3	9.5	13.1									
Cross Thru Ref Time (s)	35.2	35.5	16.3									
Oncoming Left Ref Time (s)	16.3	16.3	9.5									
Combined (s)	65.8	61.3	39.0									
Intersection Summary												
Intersection Capacity Utilization	62.4%		ICU Level of Service				B					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	162	22	88	219	3	39	25	114	6	26	22
Future Vol, veh/h	17	162	22	88	219	3	39	25	114	6	26	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	176	24	96	238	3	42	27	124	7	28	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	12.1	10	9
HCM LOS	B	B	A	A

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	22%	8%	28%	11%
Vol Thru, %	14%	81%	71%	48%
Vol Right, %	64%	11%	1%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	201	310	54
LT Vol	39	17	88	6
Through Vol	25	162	219	26
RT Vol	114	22	3	22
Lane Flow Rate	193	218	337	59
Geometry Grp	1	1	1	1
Degree of Util (X)	0.269	0.3	0.457	0.089
Departure Headway (Hd)	4.998	4.937	4.886	5.446
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	710	719	728	662
Service Time	3.094	3.033	2.974	3.446
HCM Lane V/C Ratio	0.272	0.303	0.463	0.089
HCM Control Delay	10	10.2	12.1	9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	1.1	1.3	2.4	0.3

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↖	↗		↖	↗
Traffic Vol, veh/h	60	168	39	8	213	15	65	80	9	20	88	92
Future Vol, veh/h	60	168	39	8	213	15	65	80	9	20	88	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	183	42	9	232	16	71	87	10	22	96	100
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

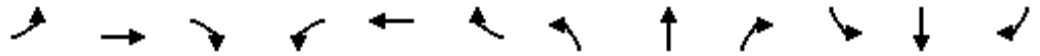
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	12.9	13	12.2	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	0%	26%	0%	4%	0%	19%	0%
Vol Thru, %	55%	0%	74%	0%	96%	0%	81%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	9	228	39	221	15	108	92
LT Vol	65	0	60	0	8	0	20	0
Through Vol	80	0	168	0	213	0	88	0
RT Vol	0	9	0	39	0	15	0	92
Lane Flow Rate	158	10	248	42	240	16	117	100
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.296	0.016	0.431	0.064	0.413	0.025	0.214	0.16
Departure Headway (Hd)	6.753	5.813	6.258	5.415	6.193	5.465	6.566	5.76
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	531	613	572	658	579	652	545	620
Service Time	4.517	3.576	4.016	3.173	3.953	3.224	4.328	3.522
HCM Lane V/C Ratio	0.298	0.016	0.434	0.064	0.415	0.025	0.215	0.161
HCM Control Delay	12.4	8.7	13.7	8.5	13.3	8.4	11.1	9.6
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	1.2	0	2.2	0.2	2	0.1	0.8	0.6

Intersection Capacity Utilization

2: State College Blvd & Nutwood Ave

12/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↗	↘		↗	↖	↗	↗	↑↑↑		↗	↑↑↑		
Volume (vph)	44	77	29	313	161	352	45	902	244	181	1139	64	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0	
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	44	106	0	313	161	352	45	1146	0	181	1203	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	1615	1630	0	1615	1700	1445	1615	4483	0	1615	4594	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	3.3	7.8	0.0	23.3	11.4	29.2	3.3	30.7	0.0	13.4	31.4	0.0	
Adj Reference Time (s)	9.5	12.3	0.0	27.8	15.9	33.7	9.5	35.2	0.0	17.9	35.9	0.0	
Permitted Option													
Adj Saturation A (vph)	108	1630		108	1700		108	1494		108	1531		
Reference Time A (s)	49.0	7.8		348.9	11.4		50.2	30.7		201.7	31.4		
Adj Saturation B (vph)	NA	NA		0	1700		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		31.3	11.4		NA	NA		NA	NA		
Reference Time (s)		49.0			31.3			50.2			201.7		
Adj Reference Time (s)		53.5			35.8			54.7			206.2		
Split Option													
Ref Time Combined (s)	3.3	7.8		23.3	11.4		3.3	30.7		13.4	31.4		
Ref Time Seperate (s)	3.3	5.7		23.3	11.4		3.3	24.1		13.4	29.8		
Reference Time (s)	7.8	7.8		23.3	23.3		30.7	30.7		31.4	31.4		
Adj Reference Time (s)	12.3	12.3		27.8	27.8		35.2	35.2		35.9	35.9		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	40.1		53.1										
Permitted Option (s)	53.5		206.2										
Split Option (s)	40.1		71.1										
Minimum (s)	40.1		53.1		93.2								
Right Turns													
	WBR												
Adj Reference Time (s)	33.7												
Cross Thru Ref Time (s)	35.2												
Oncoming Left Ref Time (s)	9.5												
Combined (s)	78.4												
Intersection Summary													
Intersection Capacity Utilization			77.7%		ICU Level of Service						D		
Reference Times and Phasing Options do not represent an optimized timing plan.													

HCM 6th TWSC
1: N Hale Ave & Driveway 1

12/03/2025

Intersection						
Int Delay, s/veh	6.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	78	23	24	63	14
Future Vol, veh/h	34	78	23	24	63	14
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	85	25	26	68	15

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	189	38	0	0	51	0
Stage 1	38	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	800	1034	-	-	1555	-
Stage 1	984	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	765	1034	-	-	1555	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	838	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	6.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	765	1034	1555	-
HCM Lane V/C Ratio	-	-	0.048	0.082	0.044	-
HCM Control Delay (s)	-	-	9.9	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.1	-

HCM 6th TWSC
4: Driveway 2 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	↘
Traffic Vol, veh/h	273	0	2	277	31	29
Future Vol, veh/h	273	0	2	277	31	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	297	0	2	301	34	32

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	297	0	602 297
Stage 1	-	-	-	-	297 -
Stage 2	-	-	-	-	305 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	0	1264	-	463 742
Stage 1	-	0	-	-	754 -
Stage 2	-	0	-	-	748 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1264	-	462 742
Mov Cap-2 Maneuver	-	-	-	-	462 -
Stage 1	-	-	-	-	754 -
Stage 2	-	-	-	-	747 -

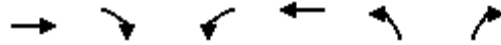
Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	462	742	-	1264	-
HCM Lane V/C Ratio	0.073	0.042	-	0.002	-
HCM Control Delay (s)	13.4	10.1	-	7.9	-
HCM Lane LOS	B	B	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	0	-

HCM Unsignalized Intersection Capacity Analysis

4: Dorothy Ln

12/03/2025



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔		
Traffic Volume (veh/h)	246	58	185	275	0	0
Future Volume (Veh/h)	246	58	185	275	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	267	63	201	299	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			330	1000	298	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			330	1000	298	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			84	100	100	
cM capacity (veh/h)			1229	226	741	
Direction, Lane #						
	EB 1	WB 1	WB 2			
Volume Total	330	201	299			
Volume Left	0	201	0			
Volume Right	63	0	0			
cSH	1700	1229	1700			
Volume to Capacity	0.19	0.16	0.18			
Queue Length 95th (ft)	0	15	0			
Control Delay (s)	0.0	8.5	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	3.4				
Approach LOS						
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			33.4%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 6th TWSC
4: Driveway 4 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↖	↗
Traffic Vol, veh/h	241	0	0	427	24	194
Future Vol, veh/h	241	0	0	427	24	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	262	0	0	464	26	211

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	726 131
Stage 1	-	-	-	-	262 -
Stage 2	-	-	-	-	464 -
Critical Hdwy	-	-	-	-	6.63 6.93
Critical Hdwy Stg 1	-	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	-	-	3.519 3.319
Pot Cap-1 Maneuver	-	0	0	-	375 895
Stage 1	-	0	0	-	759 -
Stage 2	-	0	0	-	632 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	375 895
Mov Cap-2 Maneuver	-	-	-	-	375 -
Stage 1	-	-	-	-	759 -
Stage 2	-	-	-	-	632 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBT
Capacity (veh/h)	375	895	-	-
HCM Lane V/C Ratio	0.07	0.236	-	-
HCM Control Delay (s)	15.3	10.3	-	-
HCM Lane LOS	C	B	-	-
HCM 95th %tile Q(veh)	0.2	0.9	-	-

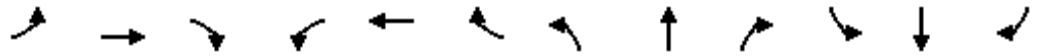


Appendix F— Synchro Reports [2028 With Project – PM Peak Hour]

Intersection Capacity Utilization

2: State College Blvd & Dorothy Ln/Student Union Way

12/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘		↗	↘	↘	↑↑↑	↘	↘	↑↑↑	
Volume (vph)	311	17	122	133	32	31	150	1231	107	22	904	275
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	328	122	0	165	31	150	1231	107	22	1179	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3239	1445	0	1631	1445	1615	4631	1445	1615	4469	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	10.1			2.6			11.1	31.9	8.9	1.6	31.7	0.0
Adj Reference Time (s)	14.6			9.5			15.6	36.4	13.4	9.5	36.2	0.0
Permitted Option												
Adj Saturation A (vph)	0	224	0	126	108	1544	108	1490				
Reference Time A (s)	0.0	176.1	0.0	156.7	167.2	31.9	24.5	31.7				
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA				
Reference Time B (s)	19.6	20.2	17.9	20.1	NA	NA	NA	NA				
Reference Time (s)	20.2		20.1			167.2			31.7			
Adj Reference Time (s)	24.7		24.6			171.7			36.2			
Split Option												
Ref Time Combined (s)	0.0	12.2	0.0	12.1	11.1	31.9	1.6	31.7				
Ref Time Seperate (s)	11.6	1.2	9.9	2.3	11.1	31.9	1.6	24.3				
Reference Time (s)	12.2	12.2	12.1	12.1	31.9	31.9	31.7	31.7				
Adj Reference Time (s)	16.7	16.7	16.6	16.6	36.4	36.4	36.2	36.2				
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		51.8									
Permitted Option (s)	24.7		171.7									
Split Option (s)	33.3		72.6									
Minimum (s)	24.7		51.8		76.5							
Right Turns												
	EBR		WBR		NBR							
Adj Reference Time (s)	14.6		9.5		13.4							
Cross Thru Ref Time (s)	36.2		36.4		16.7							
Oncoming Left Ref Time (s)	16.6		16.7		9.5							
Combined (s)	67.4		62.6		39.5							
Intersection Summary												
Intersection Capacity Utilization	63.7%		ICU Level of Service			B						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	167	22	90	226	3	40	26	118	6	26	23
Future Vol, veh/h	18	167	22	90	226	3	40	26	118	6	26	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	182	24	98	246	3	43	28	128	7	28	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	12.7	10.2	9.1
HCM LOS	B	B	B	A

Lane	NELn1	EBLn1	WBLn1	SWLn1
Vol Left, %	22%	9%	28%	11%
Vol Thru, %	14%	81%	71%	47%
Vol Right, %	64%	11%	1%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	184	207	319	55
LT Vol	40	18	90	6
Through Vol	26	167	226	26
RT Vol	118	22	3	23
Lane Flow Rate	200	225	347	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.286	0.318	0.484	0.091
Departure Headway (Hd)	5.142	5.093	5.024	5.507
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	698	709	721	650
Service Time	3.175	3.103	3.032	3.548
HCM Lane V/C Ratio	0.287	0.317	0.481	0.092
HCM Control Delay	10.2	10.5	12.7	9.1
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.2	1.4	2.7	0.3

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↖	↗		↖	↗
Traffic Vol, veh/h	62	173	40	8	219	16	67	82	10	20	91	95
Future Vol, veh/h	62	173	40	8	219	16	67	82	10	20	91	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	188	43	9	238	17	73	89	11	22	99	103
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

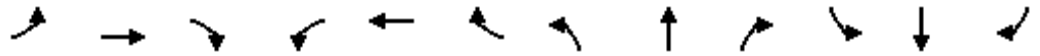
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.4	13.4	12.4	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	45%	0%	26%	0%	4%	0%	18%	0%
Vol Thru, %	55%	0%	74%	0%	96%	0%	82%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	10	235	40	227	16	111	95
LT Vol	67	0	62	0	8	0	20	0
Through Vol	82	0	173	0	219	0	91	0
RT Vol	0	10	0	40	0	16	0	95
Lane Flow Rate	162	11	255	43	247	17	121	103
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.307	0.018	0.449	0.066	0.429	0.027	0.223	0.167
Departure Headway (Hd)	6.832	5.89	6.327	5.483	6.264	5.535	6.64	5.836
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	604	567	650	572	643	538	611
Service Time	4.602	3.66	4.088	3.244	4.027	3.298	4.408	3.604
HCM Lane V/C Ratio	0.309	0.018	0.45	0.066	0.432	0.026	0.225	0.169
HCM Control Delay	12.6	8.8	14.2	8.6	13.7	8.5	11.3	9.8
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	1.3	0.1	2.3	0.2	2.1	0.1	0.8	0.6

Intersection Capacity Utilization

2: State College Blvd & Nutwood Ave

12/03/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↗	↘		↗	↖	↗	↗	↑↑↑		↗	↑↑↑		
Volume (vph)	45	79	30	322	166	363	46	930	251	186	1173	66	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0	
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	45	109	0	322	166	363	46	1181	0	186	1239	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	1615	1630	0	1615	1700	1445	1615	4483	0	1615	4594	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	3.3	8.0	0.0	23.9	11.7	30.1	3.4	31.6	0.0	13.8	32.4	0.0	
Adj Reference Time (s)	9.5	12.5	0.0	28.4	16.2	34.6	9.5	36.1	0.0	18.3	36.9	0.0	
Permitted Option													
Adj Saturation A (vph)	108	1630		108	1700		108	1494		108	1531		
Reference Time A (s)	50.2	8.0		358.9	11.7		51.3	31.6		207.3	32.4		
Adj Saturation B (vph)	NA	NA		0	1700		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		31.9	11.7		NA	NA		NA	NA		
Reference Time (s)		50.2			31.9			51.3			207.3		
Adj Reference Time (s)		54.7			36.4			55.8			211.8		
Split Option													
Ref Time Combined (s)	3.3	8.0		23.9	11.7		3.4	31.6		13.8	32.4		
Ref Time Seperate (s)	3.3	5.8		23.9	11.7		3.4	24.9		13.8	30.6		
Reference Time (s)	8.0	8.0		23.9	23.9		31.6	31.6		32.4	32.4		
Adj Reference Time (s)	12.5	12.5		28.4	28.4		36.1	36.1		36.9	36.9		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	41.0		54.4										
Permitted Option (s)	54.7		211.8										
Split Option (s)	41.0		73.0										
Minimum (s)	41.0		54.4		95.4								
Right Turns													
	WBR												
Adj Reference Time (s)	34.6												
Cross Thru Ref Time (s)	36.1												
Oncoming Left Ref Time (s)	9.5												
Combined (s)	80.3												
Intersection Summary													
Intersection Capacity Utilization			79.5%		ICU Level of Service				D				
Reference Times and Phasing Options do not represent an optimized timing plan.													

HCM 6th TWSC
1: N Hale Ave & Driveway 1

12/03/2025

Intersection						
Int Delay, s/veh	6.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	80	24	25	65	14
Future Vol, veh/h	36	80	24	25	65	14
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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	87	26	27	71	15

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	197	40	0	0	53	0
Stage 1	40	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	792	1031	-	-	1553	-
Stage 1	982	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	756	1031	-	-	1553	-
Mov Cap-2 Maneuver	756	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	831	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	6.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	756	1031	1553	-
HCM Lane V/C Ratio	-	-	0.052	0.084	0.045	-
HCM Control Delay (s)	-	-	10	8.8	7.4	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.1	-

HCM 6th TWSC
4: Driveway 2 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	↘
Traffic Vol, veh/h	281	0	2	285	32	30
Future Vol, veh/h	281	0	2	285	32	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	305	0	2	310	35	33

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	305	0	619
Stage 1	-	-	-	-	305
Stage 2	-	-	-	-	314
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	0	1256	-	452
Stage 1	-	0	-	-	748
Stage 2	-	0	-	-	741
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1256	-	451
Mov Cap-2 Maneuver	-	-	-	-	451
Stage 1	-	-	-	-	748
Stage 2	-	-	-	-	740

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	451	735	-	1256	-
HCM Lane V/C Ratio	0.077	0.044	-	0.002	-
HCM Control Delay (s)	13.6	10.1	-	7.9	-
HCM Lane LOS	B	B	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	0	-

HCM Unsignalized Intersection Capacity Analysis

4: Dorothy Ln

12/03/2025



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻		
Traffic Volume (veh/h)	253	60	191	283	0	0
Future Volume (Veh/h)	253	60	191	283	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	275	65	208	308	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			340		1032	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			340		1032	308
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			83		100	100
cM capacity (veh/h)			1219		214	732
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	340	208	308			
Volume Left	0	208	0			
Volume Right	65	0	0			
cSH	1700	1219	1700			
Volume to Capacity	0.20	0.17	0.18			
Queue Length 95th (ft)	0	15	0			
Control Delay (s)	0.0	8.6	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	3.5				
Approach LOS						
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			34.2%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM 6th TWSC
4: Driveway 4 & Dorothy Ln

12/03/2025

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↖	↗
Traffic Vol, veh/h	248	0	0	440	24	200
Future Vol, veh/h	248	0	0	440	24	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	270	0	0	478	26	217

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	748 135
Stage 1	-	-	-	-	270 -
Stage 2	-	-	-	-	478 -
Critical Hdwy	-	-	-	-	6.63 6.93
Critical Hdwy Stg 1	-	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	-	-	3.519 3.319
Pot Cap-1 Maneuver	-	0	0	-	364 890
Stage 1	-	0	0	-	752 -
Stage 2	-	0	0	-	623 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	364 890
Mov Cap-2 Maneuver	-	-	-	-	364 -
Stage 1	-	-	-	-	752 -
Stage 2	-	-	-	-	623 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBT
Capacity (veh/h)	364	890	-	-
HCM Lane V/C Ratio	0.072	0.244	-	-
HCM Control Delay (s)	15.7	10.3	-	-
HCM Lane LOS	C	B	-	-
HCM 95th %tile Q(veh)	0.2	1	-	-