

# Subarea 29 Specific Plan Amendment Transportation Study

Prepared for:

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Richland Ontario Developer, LLC

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OC21-0829

FEHR  PEERS

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# Executive Summary

Fehr & Peers has completed a transportation study for an amendment to the Subarea 29 Specific Plan (Project). This study was developed based on coordination with the City of Ontario and surrounding jurisdictions.

The City of Ontario approved the Subarea 29 Specific Plan (Specific Plan) and certified the associated *Subarea 29 Specific Plan Final Environmental Impact Report* in October 2006. The Project proposes to expand the Specific Plan boundary to add approximately 113 gross acres of land to the previously analyzed 540 gross acres of land, resulting in a new site area of 653 gross acres of land. The new Planning Areas (PAs) will require an amendment to the City's General Plan to allow the development of the proposed land uses. In addition to the new PAs, the Project proposes to increase the density of residential dwelling units in two PAs. The total Project consists of a net increase of 1,470 residential dwelling units and a 1,200-student middle school compared to what was proposed/evaluated in the October 2006 Specific Plan.

## Analysis

Level of Service (LOS) was calculated at 59 study intersections under the following analysis scenarios:

- Existing (2021) Conditions
- Opening Year (2025) with and without Project conditions
- Cumulative Year (2040) with and without Project conditions

## Findings

Under Opening Year (2025) Plus Project Conditions, 21 study intersections operate below the governing jurisdiction's acceptable level of service (LOS) standard during at least the AM or PM peak hour, and the Project is forecast to add delay at 17 intersections. At these 17 study intersections, Fehr & Peers recommended operational improvements to provide better than pre-project conditions or acceptable operations.

Under Cumulative Year (2040) Plus Project Conditions, eight study intersections operate below the governing jurisdiction's acceptable LOS standard during at least the AM or PM peak hour, and the Project is forecast to add delay at seven intersections. At these seven intersections, Fehr & Peers recommended operational improvements to provide acceptable operations. Fair share contributions towards the improvements were estimated.



# 1. Introduction

Fehr & Peers has completed a transportation study in support of an amendment to expand the Subarea 29 Specific Plan (Project) located in the Ontario Ranch (Ranch) area of Ontario, California. This report summarizes the methodology, findings, and conclusions of the analysis. The analysis comprises a Level of Service (LOS) assessment and identification of recommended improvements for intersections with deficient LOS. This chapter outlines the project description, geographic scope of the analysis, and analysis

## 1.1 Project Description

The City of Ontario approved the Subarea 29 Specific Plan (Specific Plan) and certified the associated *Subarea 29 Specific Plan Final Environmental Impact Report* in October 2006. The Approved Specific Plan area is bounded by Eucalyptus Avenue to the north, the Cucamonga Creek Channel on the west, Haven Avenue/Sumner Avenue on the east, and Merrill Avenue/Bellegrave Avenue on the south. **Figure 1** shows the Approved Specific Plan land use map that allows for up to:

- 2,418 single family dwelling units (SF DUs)
- 14,600 square feet recreational facility
- 87,000 square feet commercial retail
- 800-student elementary school
- 12 acres of public park

**Figure 2** shows the proposed Project's land use map. The Project proposes to expand the Specific Plan boundary to add approximately 113 gross acres of land to the previously analyzed 540 gross acres of land, resulting in a new site area of 653 gross acres of land. The Project proposes to incorporate Planning Areas (PA) 32, 33, and 34 into the Specific Plan and allow for the development of:

- 1,315 SF DUs
- 1,200-student middle school

The new PAs (32, 33, and 34) are bounded by Eucalyptus Avenue on the north, Haven Avenue/Sumner Avenue on the west, Mill Creek Avenue/Scholar Way on the east, and Merrill Avenue/Bellegrave Avenue on the south and currently exist as dairy farming, agriculture uses, and vacant land.

The Project also proposes to increase the density in Planning Areas 30 and 31 from 197 units to 352 units, which would increase the total number of allowed units in the Specific Plan from 2,418 units to 3,888 units, resulting in a net increase of 1,470 units and a 1,200-student middle school due to the Project.

**Table 1** summarizes the differences between the Approved and Proposed Specific Plan Land Uses.



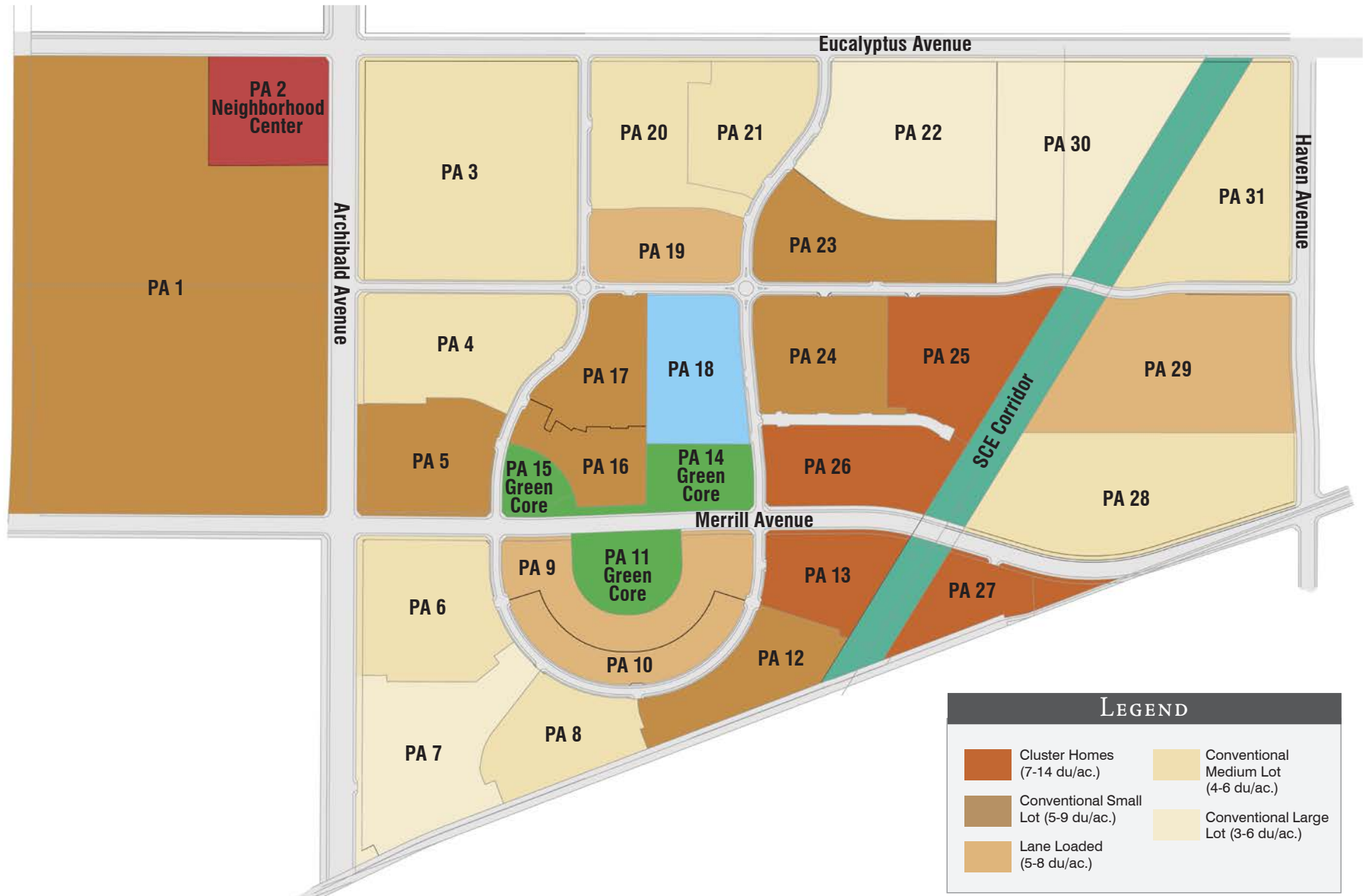


Figure 1

Subarea 29 Specific Plan  
Approved Land Use Plan



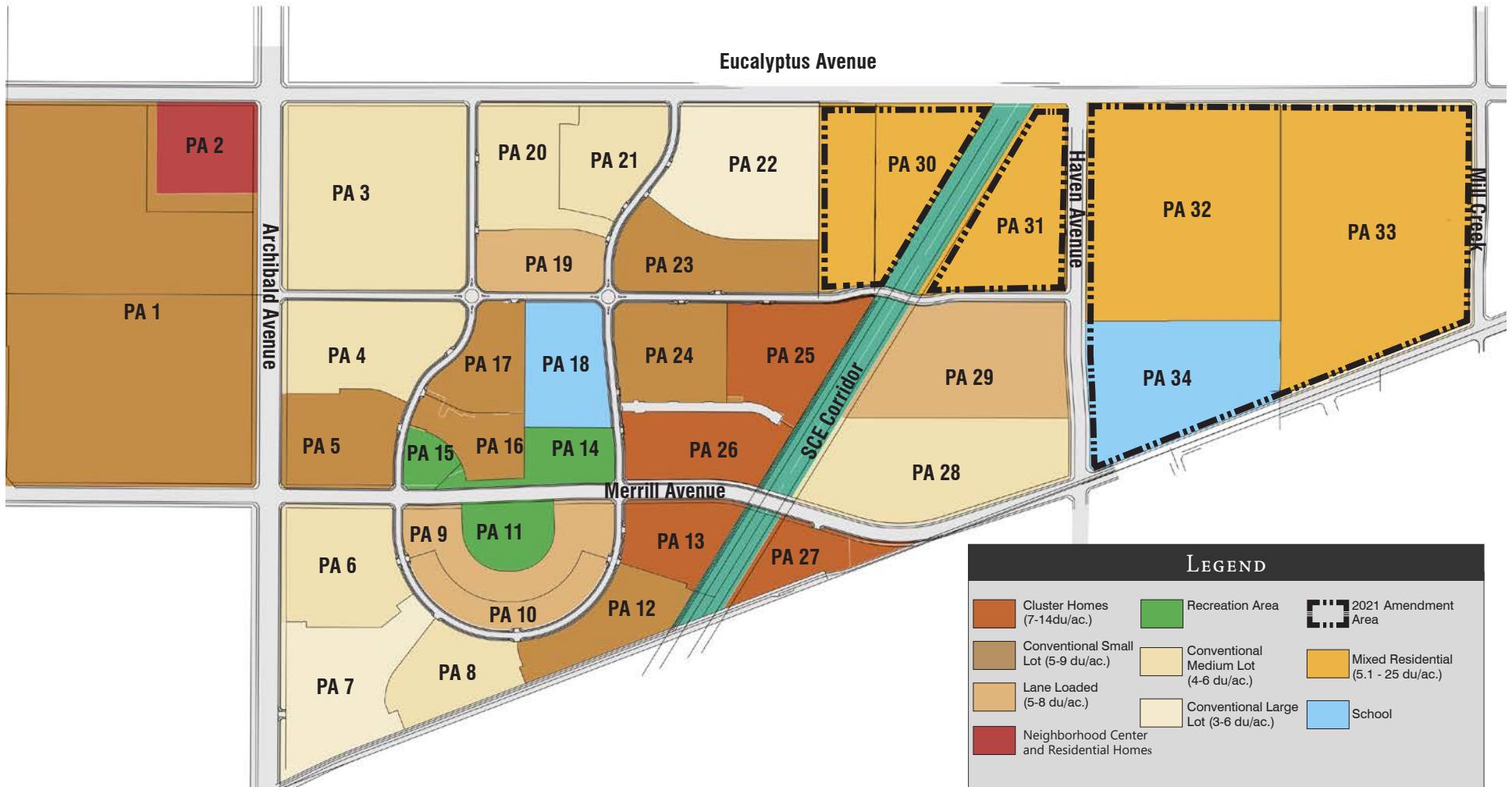


Figure 2

### Subarea 29 Specific Plan Proposed Land Use Plan



**Table 1: Proposed and Approved Specific Plan Land Use Summaries**

Planning Area	Apporved Land Use	Proposed Land Use	Net Difference
1	432 DUs	432 DUs	0
2	87 KSF of Commercial/Retail Space	87 KSF of Commercial/Retail Space	0
3	186 DUs	186 DUs	0
4	88 DUs	88 DUs	0
5	68 DUs	68 DUs	0
6	67 DUs	67 DUs	0
7	65 DUs	65 DUs	0
8	46 DUs	46 DUs	0
9	69 DUs	69 DUs	0
10	57 DUs	57 DUs	0
11	5.7 Net Acres of Recreational Park	5.7 Net Acres of Recreational Park	0
12	53 DUs	53 DUs	0
13	75 DUs	75 DUs	0
14	6.3 Net Acres of Recreational Park	6.3 Net Acres of Recreational Park	0
15	14.6 KSF Recerational Community Center	14.6 KSF Recerational Community Center	0
16	41 DUs	41 DUs	0
17	56 DUs	56 DUs	0
18	800-Student Elementary School	800-Student Elementary School	0
19	61 DUs	61 DUs	0
20	67 DUs	67 DUs	0
21	48 DUs	48 DUs	0
22	79 DUs	79 DUs	0
23	82 DUs	82 DUs	0
24	75 DUs	75 DUs	0
25	102 DUs	102 DUs	0
26	102 DUs	102 DUs	0
27	73 DUs	73 DUs	0
28	121 DUs	121 DUs	0
29	108 DUs	108 DUs	0
30	110 DUs	176 DUs	66 DUs
31	87 DUs	176 DUs	90 DUs
32	<u>163</u> <sup>2</sup>	671 DUs	508 DUs
33	<u>163</u> <sup>2</sup>	644 DUs	481 DUs
34	<u>451-Student School</u> <sup>2</sup>	1,200-Student Middle School/Junior High	749 - Students

Notes:

1 DUs = Dwelling Units

2 PAs 32-34 do not exist under the Approved Specific Plan. Underlined values represent Approved General Plan land use assumptions.

Source: Fehr & Peers, 2022.



## 1.2 Study Area

Fehr & Peers utilized the project the trip generation and trip distribution for this project, which are discussed in detail in Chapter 4, to determine the appropriate study intersections. Consistent with San Bernardino County Congestion Management Program (CMP) requirements, intersections classified as collectors or higher that the project is anticipated to add 50 or more peak hour trips to were chosen as study intersections. **Figure 3** shows the Project's study area, and the Project's study intersections and their corresponding jurisdictions are noted below and were reviewed and approved by the City of Ontario:

1. Archibald Avenue and SR-60 Westbound Ramps (City of Ontario and Caltrans)
2. Haven Avenue and SR-60 Westbound Ramps (City of Ontario and Caltrans)
3. Archibald Avenue and SR-60 Eastbound Ramps (City of Ontario and Caltrans)
4. Haven Avenue and SR-60 Eastbound Ramps (City of Ontario and Caltrans)
5. Archibald Avenue and Riverside Drive (City of Ontario)
6. Haven Avenue and Riverside Drive (City of Ontario)
7. Archibald Avenue and Chino Avenue (City of Ontario)
8. Haven Avenue and Chino Avenue (City of Ontario)
9. Archibald Avenue and Schaefer Avenue (City of Ontario)
10. Haven Avenue and Schaefer Avenue (City of Ontario)
11. Archibald Avenue and Ontario Ranch Road (City of Ontario)
12. Haven Avenue and Ontario Ranch Road (City of Ontario)
13. Hamner Avenue and Ontario Ranch Road (Cities of Ontario and Eastvale)
14. I-15 Southbound Ramps and Ontario Ranch Road (City of Eastvale and Caltrans)
15. I-15 Northbound Ramps and Ontario Ranch Road (City of Jurupa Valley and Caltrans)
16. Ivy Avenue and Eucalyptus Avenue (City of Ontario)
17. Archibald Avenue and Eucalyptus Avenue (City of Ontario)
18. Parkplace Avenue and Eucalyptus Avenue (City of Ontario)
19. Celebration Avenue and Eucalyptus Avenue (City of Ontario)
20. Proposed Driveway A and Eucalyptus Avenue (City of Ontario)
21. Haven Avenue/Sumner Avenue and Eucalyptus Avenue (City of Ontario)
22. Proposed Driveway B and Eucalyptus Avenue (City of Ontario)
23. Mill Creek Avenue/Scholar Way and Eucalyptus Avenue (City of Ontario)
24. Hamner Avenue and Eucalyptus Avenue (Cities of Ontario and Eastvale)
25. Archibald Avenue and Parkview Street (City of Ontario)
26. Haven Avenue/Sumner Avenue and Parkview Street (City of Ontario)
27. Mill Creek Avenue/Scholar Way and Proposed Driveway C/East Amanecer Privado (City of Ontario)
28. Hamner Avenue and Bellegrave Avenue (Cities of Ontario and Eastvale)
29. Charlotte Avenue and Merrill Avenue (City of Ontario)
30. Archibald Avenue and Merrill Avenue (City of Ontario)
31. Parkplace Avenue/McCleve Way and Merrill Avenue (City of Ontario)
32. Celebration Avenue/McCleve Way and Merrill Avenue (City of Ontario)





33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue (Cities of Ontario and Eastvale)
34. Proposed Driveway D and Bellegrave Avenue (Cities of Ontario and Eastvale)
35. Mill Creek Avenue/Scholar Way and Bellegrave Avenue (Cities of Ontario and Eastvale)
36. Archibald Avenue and Limonite Avenue (City of Eastvale)
37. Sumner Avenue and Limonite Avenue (City of Eastvale)
38. Scholar Way and Limonite Avenue (City of Eastvale)
39. Hamner Avenue and Limonite Avenue (City of Eastvale)
40. I-15 Southbound Ramps and Limonite Avenue (City of Eastvale and Caltrans)
41. I-15 Northbound Ramps and Limonite Avenue (City of Jurupa Valley and Caltrans)
42. Archibald Avenue and Schleisman Road (City of Eastvale)
43. Hamner Avenue and 68<sup>th</sup> Street (City of Eastvale)
44. Hamner Avenue and Schleisman Road (City of Eastvale)
45. Archibald Avenue and Chandler Street (City of Eastvale)
46. Hamner Avenue and Norco Drive/Sixth Street (City of Norco)
47. River Road and Corydon Street (City of Norco)
48. SR-71 Southbound Ramps and Grand Avenue (City of Chino Hills and Caltrans)
49. Roswell Avenue/SR-71 Northbound Ramps and Grand Avenue (City of Chino and Caltrans)
50. Ramona Avenue and Edison Avenue (City of Chino)
51. Central Avenue and Edison Avenue (City of Chino)
52. Mountain Avenue and Edison Avenue (City of Chino)
53. Euclid Avenue (SR-83) and Edison Avenue (Cities of Ontario and Chino and Caltrans)
54. Grove Avenue and Edison Avenue/Ontario Ranch Road (City of Ontario)
55. Euclid Avenue (SR-83) and Merrill Avenue (Cities of Ontario and Chino and Caltrans)
56. Grove Avenue and Merrill Avenue (City of Ontario)
57. Euclid Avenue (SR-83) and Kimball Avenue (City of Chino and Caltrans)
58. Euclid Avenue (SR-83) and Pine Avenue (City of Chino and Caltrans)
59. SR-71 Northbound Ramps and Euclid Avenue (SR-83) (City of Chino and Caltrans)

### 1.3 Analysis Scenarios

To identify potential project effects on the surrounding transportation network, Fehr & Peers analyzed intersection LOS for the following scenarios, which are consistent with *Subarea 29 Specific Plan Amendment Traffic Study Scoping Assessment* previously submitted to the City:

- Existing (2021) Conditions – Based on traffic counts collected in Fall of 2021.
- Opening Year (2025) Conditions – Includes the traffic from pending and approved development projects in the City in addition to Existing (2021) Conditions traffic volumes grown by ambient growth rates. Assumed development in operation includes project PAs currently under construction in the Specific Plan. Ambient growth rates were determined using the County of San Bernardino’s travel demand model, SBTAM.



- Opening Year (2025) Plus Project Conditions – Includes Project trips in addition to Opening Year (2025) Conditions traffic volumes.
- Cumulative Year (2040) No Project Conditions – Estimated using the County of San Bernardino’s travel demand forecasting model, SBTAM, and the adopted general plan land use assumptions. This scenario assumes the buildout of the Adopted Specific Plan.
- Cumulative Year (2040) Plus Project Conditions – The net increase in traffic from the Approved Specific Plan to the Proposed Specific Plan was added to the Cumulative Year (2040) No Project Conditions traffic volumes.

## 1.4 Report Organization

The report is divided into nine chapters as described below:

- **Chapter 1 – Introduction** discusses the project description and location, study area, and analysis scenarios.
- **Chapter 2 – Analysis Methodology** describes the methodology used for developing future year forecasts and conducting the Level of Service (LOS) and freeway off ramp queuing summary.
- **Chapter 3 – Existing Conditions** describes the transportation system in the project vicinity, including the surrounding roadway network and existing bicycle, pedestrian, and transit facilities. Morning (AM) and evening (PM) peak hour intersection turning movement volumes and existing intersection operations are also presented in this chapter.
- **Chapter 4 – Project Characteristics** presents relevant project information, such as the project trip generation, distribution, and assignment.
- **Chapter 5 – Opening Year (2025) and Opening Year (2025) Plus Project Conditions** describes Opening Year (2025) and Opening Year (2025) Plus Project site conditions, planned roadway improvements, and traffic volumes. This chapter also presents LOS results for the Opening Year (2025) scenarios.
- **Chapter 6 – Cumulative Year (2040) No Project and Cumulative Year (2040) Plus Project Conditions** describes Cumulative Year (2040) No Project and Cumulative Year (2040) Plus Project site conditions, planned roadway improvements, and traffic volumes. This chapter also presents LOS results for the Cumulative Year (2040) scenarios.
- **Chapter 7 – Improvements and Recommendations** describes the improvements recommended to improve LOS deficiencies identified under Opening Year (2025) Plus Project Conditions and Cumulative Year (2040) Plus Project Conditions.
- **Chapter 8 – Freeway Off Ramp Queuing** describes the results of the freeway off ramp queuing analysis for all analysis scenarios.
- **Chapter 9 – Conclusion** summarizes the key findings of the transportation study.



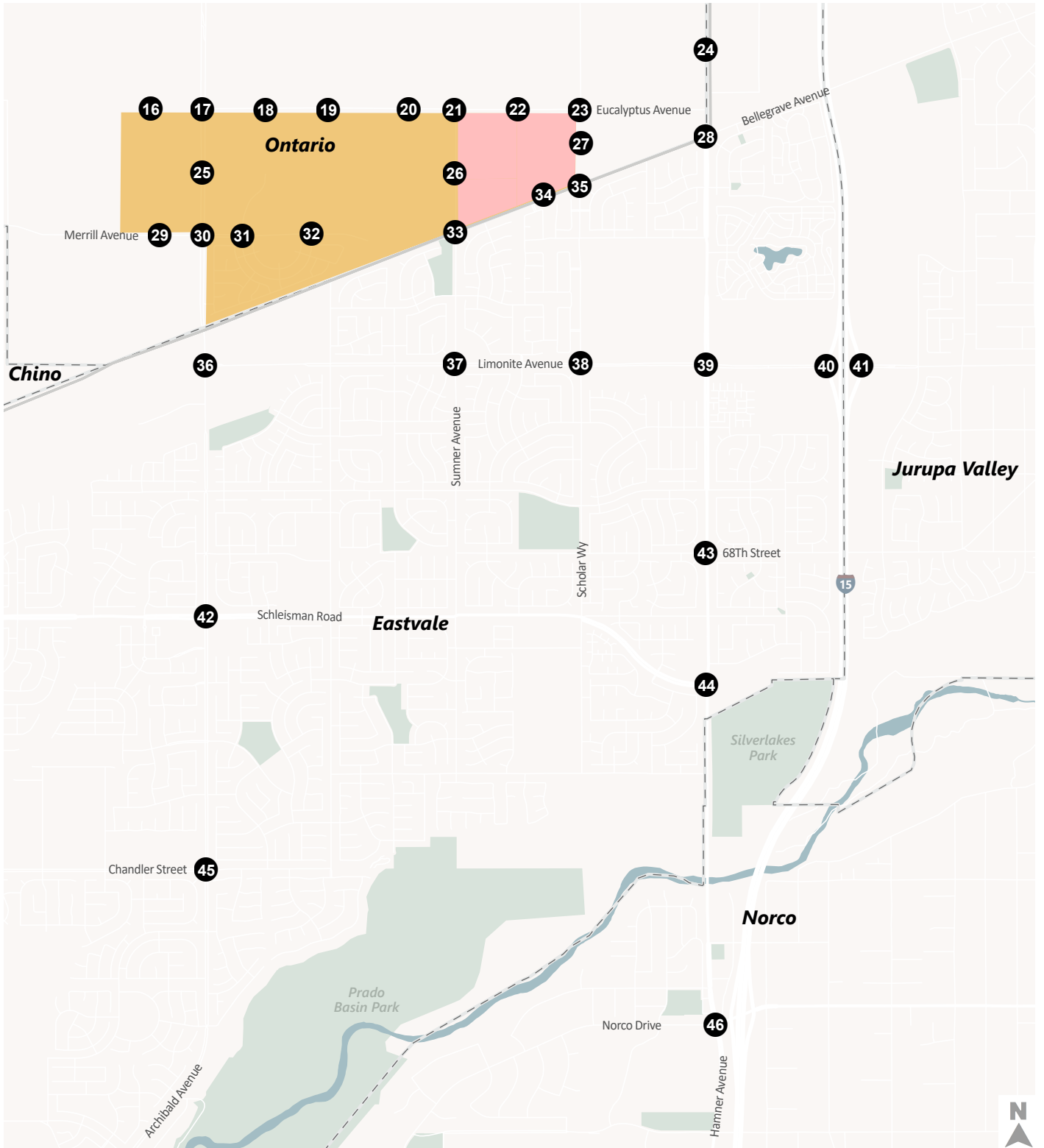


- Study Intersection
- Approved Specific Plan Area
- ▭ Cities
- Proposed Amended Specific Plan Area

Figure 3A

Study Area





- Study Intersection
- Approved Specific Plan Area
- Cities
- Proposed Amended Specific Plan Area

Figure 3B

Study Area





Plan Area - 2 miles East



-  Study Intersection
-  Cities

Figure 3C

Study Area



## 2. Analysis Methodology

### 2.1 LOS Analysis Methodology

Intersection operating conditions in the study area were evaluated using the Transportation Research Board (TRB) *Highway Capacity Manual, 6<sup>th</sup> Edition* (HCM) methodology, which is considered the state-of-the-practice methodology for evaluating intersection operations and is consistent with the City of Ontario and County of San Bernardino requirements.

The HCM 6<sup>th</sup> Edition methodology for signalized intersections estimates the average control delay for vehicles at the intersection. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in **Table 2**.

**Table 2: Intersection Level of Service (LOS) Grades**

Level of Service	Description	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences	> 55.0 to 80.0	> 35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	> 80.0	> 50.0

Source: *Highway Capacity Manual* 6th Edition (Transportation Research Board, 2017).



## Intersection LOS Criteria

The Project adds traffic to facilities in multiple jurisdictions. Therefore, each jurisdiction's LOS criteria was applied when appropriate. Based on the City of Ontario, City of Chino, City of Jurupa Valley, City of Eastvale, City of Norco, and Caltrans guidelines regarding LOS analysis, the following standards were used to determine deficiencies at study facilities:

- **City of Ontario** – The City has adopted LOS "E" as the minimum acceptable standard for intersection operations.
- **City of Chino Hills** – The City has adopted LOS "D" as the minimum acceptable standard for intersection operations, unless the intersection is within one-half mile of SR-71, where the minimum acceptable standard is LOS "E".
- **City of Chino** – The City has adopted LOS "D" as the minimum acceptable standard for intersection operations.
- **City of Jurupa Valley** – The City has adopted LOS "D" as the minimum acceptable standard for intersection operations.
- **City of Eastvale** – The City has adopted LOS "C" as the minimum acceptable standard for intersection operations, unless certain roadway classifications, identified in the City's general plan, intersect. In such a case, the minimum acceptable standard is LOS "D". All study locations in the City's jurisdiction use LOS "D" as the minimum acceptable standard.
- **City of Norco** – The City has adopted LOS "D" as the minimum acceptable standard for intersection operations.
- **Caltrans** – Caltrans no longer defines acceptable LOS standards with their latest adoption of the *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG), May 2020*. This study assumes LOS "D" minimum acceptable standard at Caltrans locations.

## LOS Analysis Assumptions

The following assumptions were applied in the intersection analysis:

- Peak Hour Factor (PHF) were based on traffic counts collected in the field for all Existing and Opening Year Conditions Analysis.
- PHF for all Cumulative Year analysis were set to 0.95, unless the existing PHF was higher.
- Heavy vehicle percentages for truck routes were based on existing counts.
- The HCM default value of 3% heavy vehicles was used for all major non-truck route facilities. The Synchro software default value of 2% heavy vehicles was used for all other facilities (local roadways, residential access points, etc.).



## 2.2 Off-Ramp Queueing Methodology

Storage capacities for all SR-60, I-15, and SR-71 off ramps in study area were evaluated using HCM 6<sup>th</sup> methodologies. Storage capacities were compared against 95<sup>th</sup> percentile queue estimates using Synchro 11 software. Turn pockets where the 95<sup>th</sup> percentile queue exceeded the existing storage capacity were considered inadequate and feasible improvements were recommended to improve the deficiency.

## 2.3 Traffic Volume Forecasting Methodology

The San Bernardino County Transportation Analysis Model (SBTAM) is the most appropriate tool for testing changes in land use and roadway network in San Bernardino County and therefore SBTAM was used to develop traffic volume forecasts for this study. As directed by the City of Ontario and confirmed in *Subarea 29 Specific Plan Amendment Traffic Study Scoping Assessment*, the SBTAM roadway network and socio-economic data within the City of Ontario were updated to be consistent with The Ontario Plan (TOP) Environmental Impact Report (EIR) scenario modeling for Base Year (2019) and Adopted General Plan Buildout (2050). Outside of the City of Ontario, this model assumes datasets consistent with the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) with a base year of 2012 and future year of 2040<sup>1</sup>. As recommended in the SBTAM model documentation, model assignment parameters were set to run up-to five loops with a minimum convergence criterion<sup>2</sup> of 0.01.

### Opening Year (2025) Forecasting

Opening Year (2025) No Project Conditions includes traffic from pending and approved development projects in the City and Existing (2021) Conditions traffic volumes grown by ambient growth rates. Fehr & Peers referenced SBTAM to determine appropriate growth rates at study intersections. The Ranch area is anticipated to experience a rate of traffic growth consistent with the projected development in the area. To estimate Opening Year (2025) Conditions, all pending and approved development projects in the City were conservatively assumed to be completed and were manually assigned to the study area in addition to ambient growth. Fehr & Peers coordinated with the Cities of Ontario, Chino, Eastvale, and Norco and the County of Riverside to obtain the list of pending and approved development projects that could influence the study locations. This list of projects and associated trip generation estimates are provided in

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<sup>1</sup> Please note that SBTAM does not have an available dataset consistent with the SCAG 2020 RTP/SCS. At the time of this analysis, SBTAM was in the process of being updated with the SCAG 2020 RTP/SCS data, but the data was not available. This analysis uses the most current, available SBTAM model version consistent with the City of Ontario's VMT Impact Resolution.

<sup>2</sup> Convergence criteria refers to the acceptable difference in the traffic volumes produced by different loops of the vehicle assignment. A convergence criterion of 0.01 indicates that the model is producing similar outputs with an allowance of 1% difference between each loop. This criterion is outlined in the model documentation as the recommended convergence criteria for the model.





**Appendix A.** When applying all pending and approved development projects, the average annual growth rate within the Ranch area for Opening Year (2025) was approximately 12 percent per year while outside of the Ranch area the average annual growth rate was approximately 4 percent per year.

### **Cumulative Year (2040) Forecasting**

The Base Year and Future Year models produce link and intersection turning movement volumes. National Cooperative Highway Research Program (NCHRP) Report 765 prescribes a variety of methods for developing intersection turning movement volume forecasts from travel demand model outputs. For typical applications, the Base Year and Future Year model outputs are compared to one another and are used in conjunction with existing traffic counts to develop future traffic forecasts. In this study, the absolute difference between the Base Year and Future Year model outputs were used to develop the Cumulative Year (2040) volume forecasts. This method, known as the difference method, is a state of the practice approach consistent with NCHRP Report 765.

As noted above, due to the Ranch area being mostly undeveloped, there is significant traffic growth associated with the land use projects and transportation network improvements anticipated to be completed by year 2040. Within the Ranch area the average annual growth rate from base to future year model is approximately 5 percent per year from existing conditions, while outside the Ranch area the average annual growth rate is approximately 2 percent per year. Please note, a higher growth rate is anticipated by the opening year as it includes increased development anticipated with approved and pending development projects; whereas the growth through the Cumulative Year reflects a more sustained level of growth consistent with the RTP/SCS. However, the study covers a large area and traffic growth at each intersection varies throughout the study area based on land use growth forecasts and significantly improved transportation network that redistributes trips. The SCAG RTP/SCS projects assumed to be in operation are detailed later in this report.



## 3. Existing (2021) Conditions

This chapter describes transportation facilities in the project study area, including the surrounding roadway network, transit, pedestrian, and bicycle facilities in the project site vicinity. Existing (2021) project site conditions, traffic volumes, and intersection operations are also described.

### 3.1 Existing (2021) Roadway System

Regional access to the study area is provided from State Route 71, State Route 60, Interstate 15, and Interstate 10. Local access to the site is provided from Milliken Avenue/Hamner Avenue, Mill Creek Avenue/Scholar Way, Haven Avenue/Sumner Avenue, Archibald Avenue, State Route 83/Euclid Avenue, Riverside Drive, Chino Avenue, Edison Avenue/Ontario Ranch Road, Eucalyptus Avenue, Merrill Avenue/Bellegrave Avenue, and Limonite Avenue. The existing roadway system throughout the Ranch area is largely undeveloped and some planned roads are currently dirt or do not exist. Many roadways throughout the Ranch area are planned in the Ontario Plan and SCAG RTP/SCS to be improved with pavement, curb and gutter, and more lanes. Specific improvements are detailed later in this report.

#### Regional Access Roads

**Interstate 10 (I-10)** is a major east-west freeway that traverses through the states of Arizona, Alabama, California, Florida, Louisiana, New Mexico, and Texas. Within the study area, I-10 is a six-to-eight lane freeway. Access to I-10 near the project study area is provided at Milliken Avenue/Hamner Avenue, Haven Avenue/Sumner Avenue, and Archibald Avenue.

**Interstate 15 (I-15)** is a major north-south freeway that traverses through the states of Arizona, California, Idaho, Nevada, and Utah. Within the study area, I-15 is a six-to-ten lane freeway. I-15 is a ten-lane freeway near Junctions. South of the SR-60 and I-15 Junction, I-15 has three general purpose lanes and two express lanes in each direction. In between SR-60 and I-10, I-15 has four general purpose lanes in each direction. North of I-10 and I-15 Junction, I-15 has four general purpose lanes in each direction. Access to SR-60 near the project study area is provided at Edison Avenue/Ontario Ranch Road, Limonite Avenue, and Sixth Street.

**State Route 60 (SR-60)** is a major east-west highway that traverses Southern California. SR-60 branches off from I-10 in Santa Monica and passes through East Los Angeles and continues east, terminating at I-10 in the City of Beaumont. Within the city limits, the corridor has eight lanes and two high occupancy vehicles lanes. Access to SR-60 near the project study area is provided at Milliken Avenue/Hamner Avenue, Haven Avenue/Sumner Avenue, and Archibald Avenue.

**State Route 71 (SR-71)** runs in the north/south direction. It extends from SR-91 at the southernmost end to SR-57 at the northernmost end. SR-71 is located west of the project site and near the project study



area is generally an eight-lane facility with two high occupancy vehicle lanes. Access to SR-71 near the project study area is provided at SR-83/Euclid Avenue and Grand Avenue/Edison Avenue.

**State Route 83 (SR-83)/Euclid Avenue** is classified as a Principal Arterial in the City's Adopted General Plan and is a truck route. It is located west of the project site, runs in the north/south direction, and borders the cities of Chino and Ontario. In the project study area, the roadway exists as a four-lane facility, has a median, and the posted speed limit is 55 miles per hour.

### Local Access Roads

**Archibald Avenue** is classified as a Principal Arterial in the City's Adopted General Plan and is a truck route. It travels directly through the proposed project site and runs in the north/south direction. In the project study area, the roadway exists as a six-lane facility with a raised median, and the posted speed limit is 55 miles per hour.

**Chino Avenue** classified as a Collector Street in the City's Adopted General Plan. It is located north of the project site, south of Riverside Drive, and runs in the east/west direction. East of Archibald Avenue, the facility exists as a four-lane facility with a striped median. West of Archibald Avenue, the facility exists as a two-lane facility and does not have a median. The posted speed limit is 40 miles per hour. The roadway currently deadens into Haven Avenue/Sumner Avenue but is planned to extend to Milliken Avenue/Hamner Avenue.

**Edison Avenue/Ontario Ranch Road** is classified as a Principal Arterial in the City's Adopted General Plan and is a truck route. It is located north of the project site, south of Chino Avenue, and runs in the east/west direction. West of Archibald Avenue, the roadway is named Edison Avenue and exists as a two-lane facility and does not have a median. East of Archibald Avenue, the roadway is named Ontario Ranch Road and exists as a four to eight-lane facility and has a raised median. The posted speed limit is 50-55 miles per hour. The roadway is planned to be widened to an eight-lanes and is anticipated to become a major east/west connection through the Ranch area.

**Eucalyptus Avenue** is classified as a Principal Arterial in the City's Adopted General Plan. It bounds the northernmost end of the proposed project site and runs in the east/west direction. Near the project site, the roadway is a four-lane facility but narrows to a two-lane facility before intersecting Haven Avenue/Sumner Avenue where it continues as a dirt road. The roadway is planned to be extended between Haven Avenue/Sumner Avenue and Mill Creek Avenue/Scholar Way. The roadway also terminates west of Archibald Avenue but is planned to be connected to existing Eucalyptus Avenue roadway in the west.

**Haven Avenue/Sumner Avenue** is classified as a Principal Arterial in the City's Adopted General Plan. It travels directly through the proposed project site and runs in the north/south direction. North of Eucalyptus Avenue, the facility is named Haven Avenue. South of Eucalyptus Avenue, the facility is named Sumner Avenue. Near the project site, the roadway has a northbound lane, two southbound lanes, a raised median, and the posted speed limit is 45 miles per hour.



**Limonite Avenue** is classified as an Urban Arterial in the City of Eastvale's Adopted General Plan. It is located south of the project site, south of Merrill Avenue, and runs in the east/west direction. Near the project site, the roadway exists as a four to six-lane facility, has striped and raised medians, and the posted speed limit is 45 miles per hour. The roadway currently terminates at Archibald Avenue but is planned to be extended to existing Limonite Avenue roadway in the west.

**Merrill Avenue/Bellegrave Avenue** is classified as a Collector Street west of Haven Avenue/Sumner Avenue and a Minor Arterial east of Haven Avenue/Sumner Avenue in the City's Adopted General Plan. It bounds the southernmost end of the proposed project site and runs in the east/west direction. West of Haven Avenue/Sumner Avenue, the facility is named Merrill Avenue. East of Haven Avenue/Sumner Avenue, the facility is named Bellegrave Avenue. Between Archibald Avenue and Haven Avenue/Sumner Avenue, the roadway exists as a four-lane facility, has a striped median, and the posted speed limit is 35 miles per hour. Between Haven Avenue/Sumner Avenue and Mill Creek Avenue/Scholar Way, the roadway exists as a two-lane facility, does not have a median, and the posted speed limit is 50 miles per hour.

**Mill Creek Avenue/Scholar Way** is classified as a Collector Street in the City's Adopted General Plan. It bounds the easternmost end of the proposed project site and runs in the north/south direction. North of Merrill Avenue/Bellegrave Avenue, the facility is named Mill Creek Avenue. South of Merrill Avenue/Bellegrave Avenue, the facility is named Scholar Way. Near the project site, the roadway has two northbound lanes, a southbound lane, a striped median, and the posted speed limit is 35 miles per hour. The roadway currently terminates north of Eucalyptus Avenue but is planned to be extended as a four-lane facility to Riverside Drive.

**Milliken Avenue/Hamner Avenue** is classified as a Principal Arterial in the City's Adopted General Plan and is a truck route. It is located east of the project site near I-15 and runs in the north/south direction. North of Riverside Drive, the facility is named Milliken Avenue. South of Riverside Drive, the facility is named Hamner Avenue. Near the project site, Hamner Avenue exists as a six-lane facility with a raised median and the posted speed limit is 50 miles per hour.

**Riverside Drive** is classified as a Minor Arterial in the City's Adopted General Plan. It is located north of the project site, south of SR-60, and runs in the east/west direction. Near the project site, the roadway exists as a four-lane facility, has a striped median, and the posted speed limit is 50 miles per hour.

### 3.2 Existing (2021) Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, and multi-use trails. Over the last decade, the Ranch area has been undergoing major redevelopment as it shifts from agricultural to residential land uses. The portions of the Ranch area that have already been redeveloped have accessible pedestrian facilities. At existing signalized intersections, adjacent to and within the project site, crosswalks



and pedestrian push-button actuated signals are provided. At existing unsignalized intersections, adjacent to and within the project site, striped crosswalks are generally provided. Existing and proposed bicycle and pedestrian facilities are presented on **Figure 4**.

### 3.3 Existing (2021) Bicycle Facilities

There are three bicycle facility classifications recognized by the City of Ontario and are classified as follows:

#### 3.3.1 Class I Bikeways (Bike Paths)

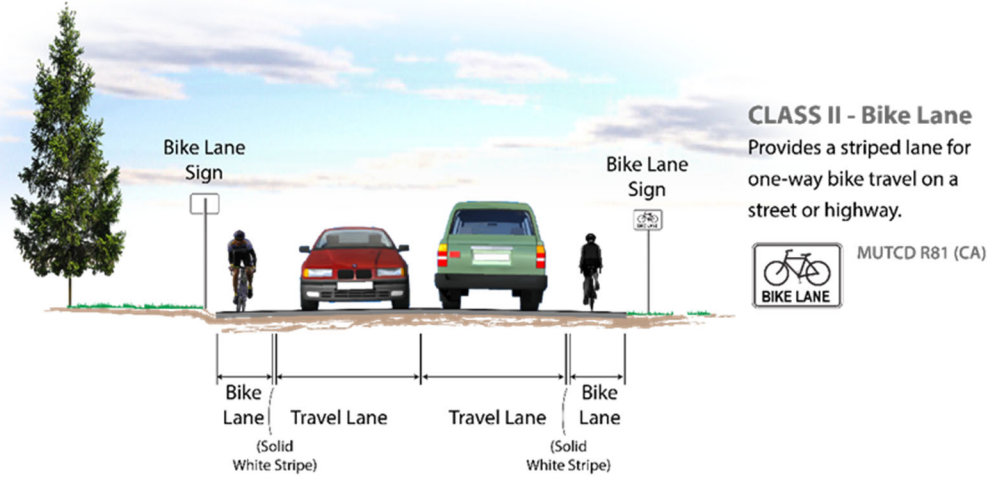
Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a completely separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.



#### 3.3.2 Class II Bikeways (Bike Lanes)

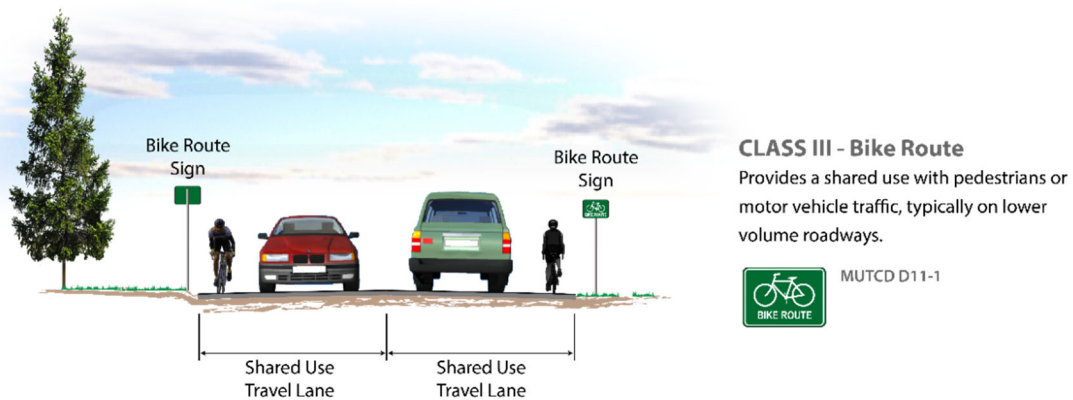
Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.





### 3.3.3 Class III Bikeways (Bike Routes)

Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage by the side of the street and sometimes stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.



### 3.3.4 Existing (2021) Bicycle Facilities

Existing and proposed bike facilities in the study area are shown on **Figure 4**. The Ranch area has a limited existing bicycle network. In the area adjacent to the project site, existing Class II bikeways can be found on the following roadway segments:

- Northbound on Hamner Avenue/Milliken Avenue north of Ontario Ranch Road
- Both sides on Hamner Avenue/Milliken Avenue south of Merrill Avenue/Bellegrave Avenue
- Southbound on Haven Avenue/Sumner Avenue south of Merrill Avenue/Bellegrave Avenue
- Both sides on Schaefer Avenue between Archibald Avenue and Haven Avenue/Sumner Avenue
- Both sides on Merrill Avenue/Bellegrave Avenue east of Mill Creek Avenue/Scholar Way
- Both sides on Limonite Avenue from Archibald Avenue to Milliken Avenue/Hamner Avenue

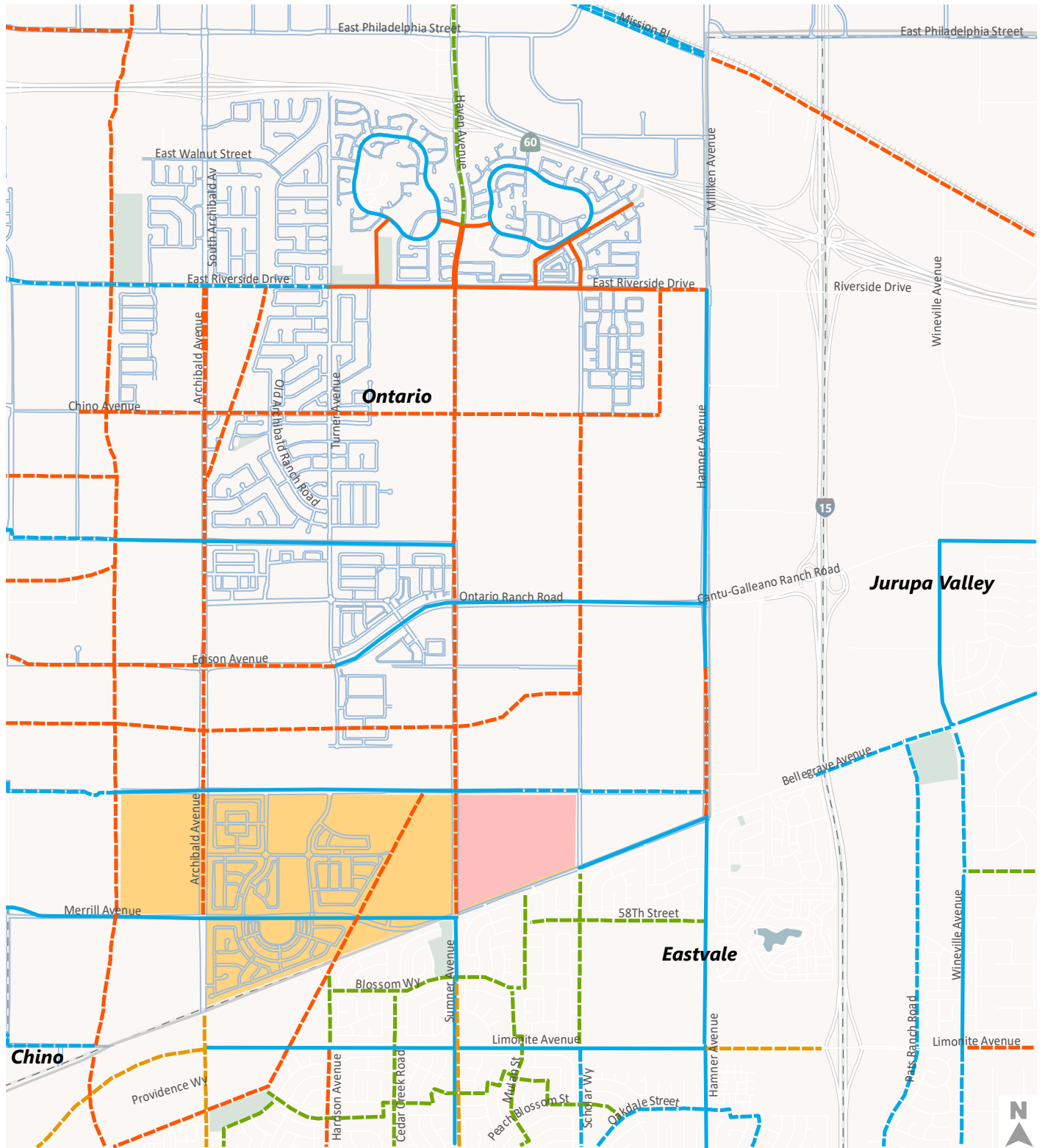
In the project site, Class II bikeways exist on the following roadway segments:

- Both sides on the portions of Eucalyptus Avenue that are constructed
- Both Sides on Merrill Avenue/Bellegrave Avenue between Archibald Avenue and Haven Avenue/Sumner Avenue

Many bicycle facilities are proposed in the Ranch area on most major north-south and east-west streets. A multi-purpose pedestrian and bicycle trail will be provided by the project within the Southern California Edison (SCE) Corridor between Eucalyptus Avenue and County Line Channel. This multi-purpose trail will provide a link within the City's Master Planned trail system proposed for SCE easements and corridors throughout the City.







- Existing Sidewalk    - - - Planned Class I    ■ Approved Specific Plan Area
- Existing Class I    - - - Planned Class II    ■ Proposed Amended Specific Plan Area
- Existing Class II    - - - Planned Class III    □ Cities
- Existing Class III    - - - Planned Class IV    ■ Parks

Figure 4





## 3.4 Existing (2021) Transit Service

There are bus and regional transit service options available to the City of Ontario. Along with those options, Amtrak provides rail service across the United States and has a station located in the City of Ontario. Existing transit routes in the study area are shown on **Figure 5**.

### 3.4.1 Omnitrans

Omnitrans provides local and express services to San Bernardino County, which includes the City of Ontario. The only Omnitrans route that provides service near the Project site is Route 87 north of the project site.

**Route 87** operates Monday to Saturday between 4:35 AM and 9:50 PM with one-hour headways and provides service to Rancho Cucamonga and Eastvale through the Ranch area. The closest bus stops are on Ontario Ranch Road north of the Project site, although a new bus stop is planned on the northeast corner of the intersection of Bellegrave Avenue/Haven Avenue, approximately five hundred feet north of the project site.

**Route 87 Colony High School Tripper Service** is regularly scheduled bus service open to the public, and which is designed or modified to accommodate the needs of school students and personnel. In August 2021, OmniTrans launched the Free Fares for School program, granting all K-12 students free bus rides on all buses. To help the students at Colony High School in Ontario get to class on time, the southbound Route 87 bus will serve the high school with a stop at Riverside Avenue and Mill Creek Avenue at 8:18 AM. After school, the northbound Route 87 will serve the same stop at 3:38 PM. The school tripper will operate Monday through Friday only and is free for all K-12 students with student ID.

### 3.4.2 Riverside Transit Agency (RTA)

RTA coordinates transit services throughout Riverside County. RTA Provides local and regional services throughout the region with 33 fixed routes, four Commuter Link express routes, and Dial-A-Ride services using 334 vehicles. RTA provides two transit lines near the project with bus stops on Hamner Avenue at Bellegrave Avenue a half mile east of the Project site.

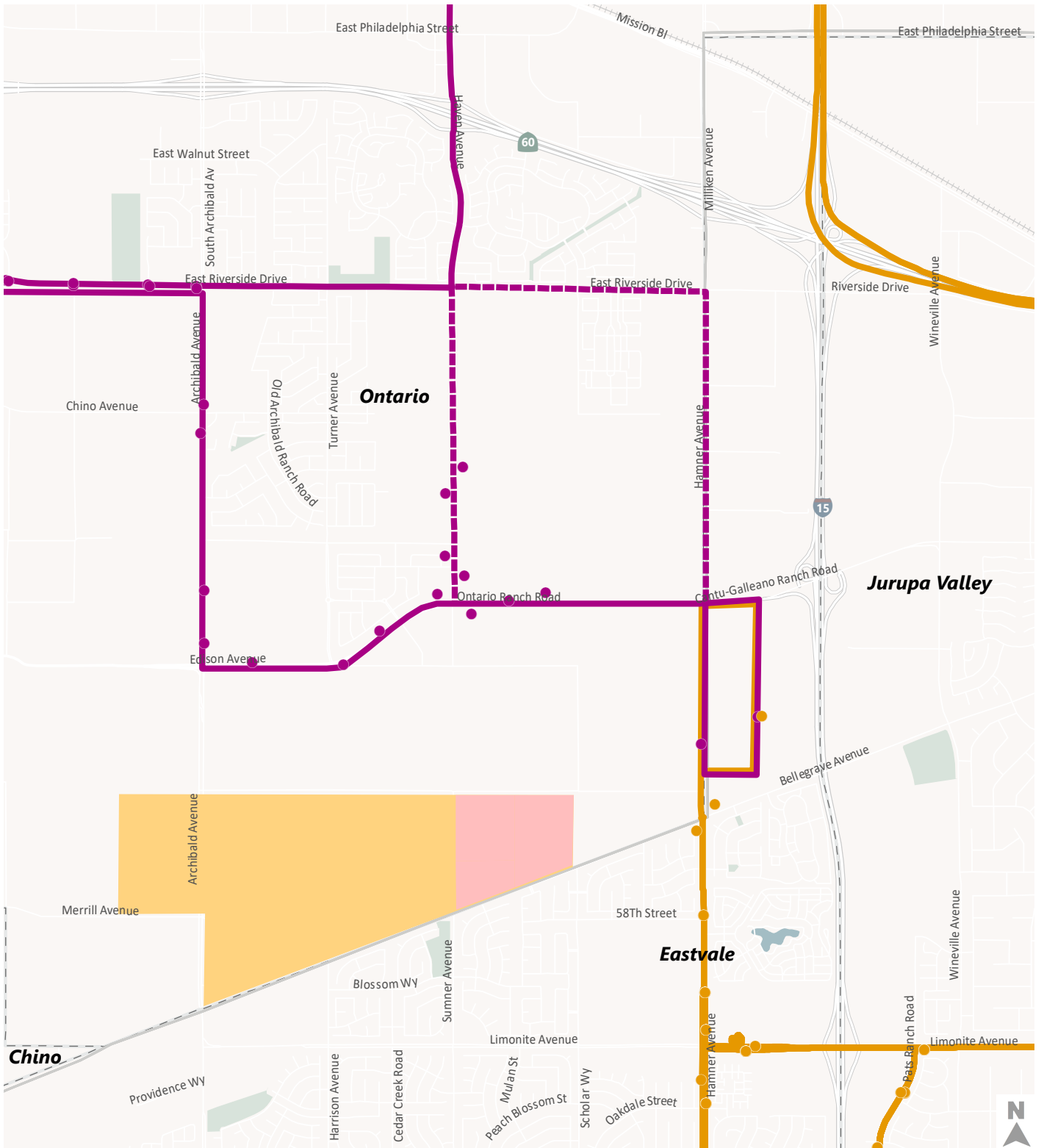
**Route 3** connects Eastvale, Norco and Corona. Route 3 operates weekdays 5:00 AM – 10:00 PM and weekends 6:00 AM to 9:00 PM on approximately 70-minute headways.

**Route 29** connects Downtown Riverside, Jurupa Valley and Eastvale. Route 29 operates weekdays 5:00 AM – 10:00 PM and weekends 6:00 AM to 9:00 PM on approximately 70-minute headways.

### 3.4.3 Metrolink

Commuter train service in the City of Ontario is provided by Metrolink, which provides service throughout the Southern California region. The Ontario-East Metrolink Station is located near the corner of Mission Boulevard and Haven Avenue, approximately three and half miles north of the Project site. Metrolink runs





- Omnitrans Routes
- Tripper Routes
- Approved Specific Plan Area
- Proposed Amended Specific Plan Area
- Riverside Transit Agency (RTA) Routes
- Cities
- Omnitrans Transit Stops
- RTA Transit Stops
- Parks

Figure 5



## Transit Facilities

east-west through the middle of the city, with grade separations at Milliken and Haven Avenues. This same rail line is occasionally used by freight trains when the Union Pacific Railroad line (running east-west south of the I-10 freeway) is closed or restricted for limited periods. Local freight train traffic in the city includes switches on various spur lines serving the industrial areas at the southern section of the city.

**Riverside Line** links downtown Riverside to Union Station in downtown Los Angeles with a stop at the Ontario Train Station. There are five morning trains and one afternoon train to Union Station on weekdays. There are five afternoon trains from Ontario to Riverside on weekdays.

### 3.4.4 Amtrak

Amtrak is a passenger railroad service that provides medium and long-distance inter-city rail service throughout the United States. Locally, a station is provided southeast of the intersection of Euclid Avenue at Holt Boulevard. Two lines are available at the Ontario Station.

**Sunset Limited Line** provides intercity rail service three times per week between Los Angeles and New Orleans, Louisiana, with California stops in Los Angeles, Pomona, Ontario and Palm Springs. The service is available at the Ontario Train Station at 10:54 PM from Los Angeles.

**Texas Eagle Line** provides intercity rail service three times per week between Los Angeles and Chicago, Illinois, with California stops in Los Angeles, Pomona, Ontario and Palm Springs.. The service is available at the Ontario Train Station at 10:54 PM from Los Angeles.

## 3.5 Existing (2021) Conditions

The Approved Specific Plan is partially constructed and/or entitled. PAs 3-17 and 19-26 are fully constructed and occupied, totaling:

- 1,487 SF DUs
- 14.6 KSF recreational facility
- 12 acres of public park

PAs 1, 18, and 28-29 are entitled and under construction but not yet occupied, totaling:

- 661 SF DUs
- 800 student elementary school

PAs 2, 27, and 30-31 have not been occupied, totaling:

- 270 SF DUs
- 87 KSF commercial retail

A 1,200-student middle school is also proposed in the expansion area, consistent with the City General Plan.



**Figure 6** shows the PAs that are fully constructed and occupied/in operation. These PAs were included in the existing intersection operations analysis.

### 3.6 Existing (2021) Conditions Traffic Volumes

Traffic counts were collected in November of 2021 during AM peak period (7-9AM) and PM peak period (4-6PM) at the 59 study intersections listed in Chapter 1. Counts were collected during fair weather, while school was in session, and during a typical (non-holiday) Tuesday. The turning movement counts are provided in **Appendix B**. Existing (2021) traffic volume are presented on **Figure 7** along with existing lane configurations and traffic control.

### 3.7 Existing (2021) Conditions Intersection Operations

Existing lane configurations and traffic volumes were used to evaluate operations at the study intersections under peak hour conditions. Signal timing data was obtained for majority of signalized intersections from the appropriate jurisdictions. For intersections that did not have signal timing data available, field work was conducted to estimate the signal timing. The results are summarized in **Table 3** and detailed LOS worksheets are provided in **Appendix C**.

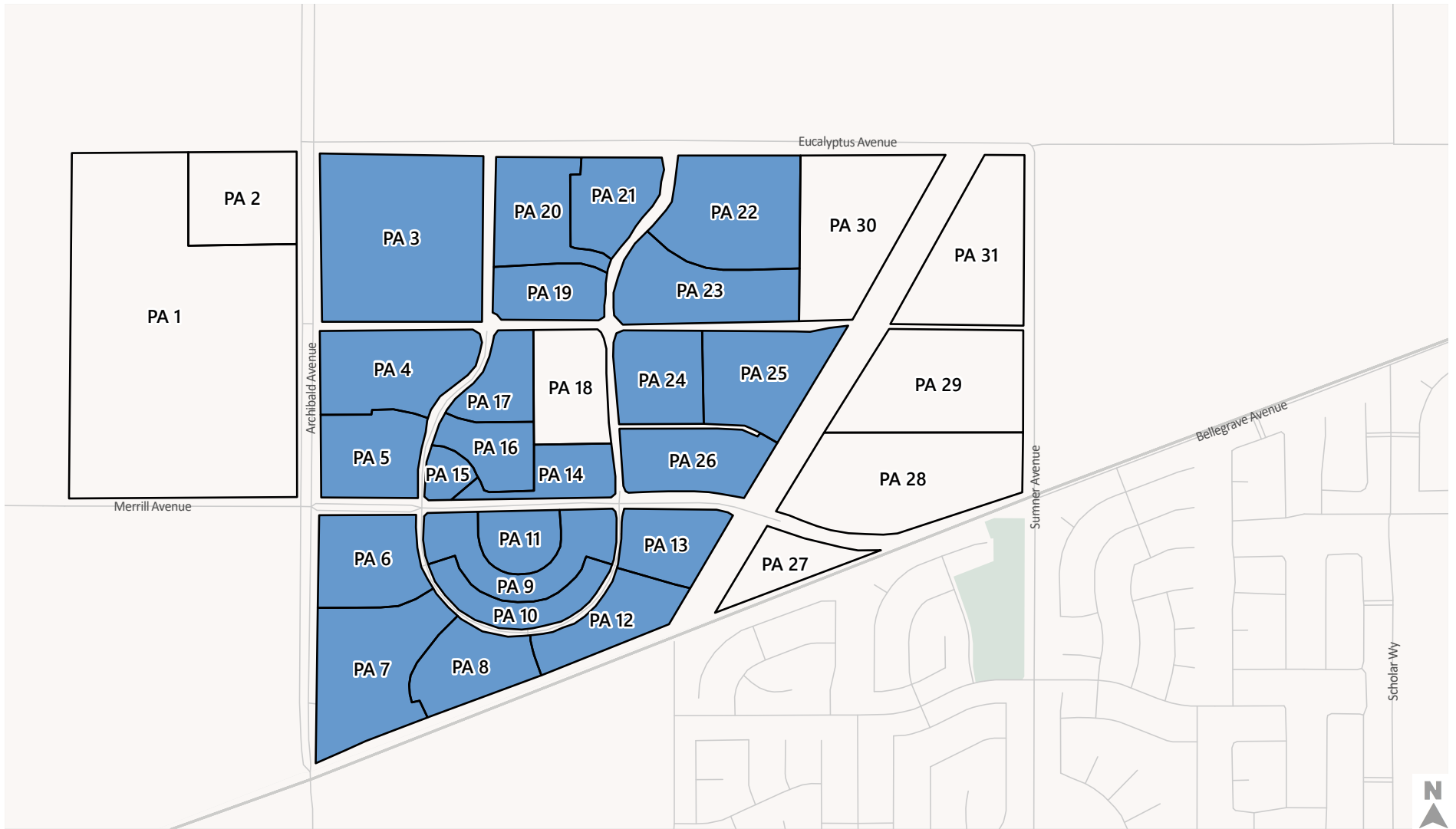
When traffic counts were collected, the intersection of Mill Creek Avenue/Scholar Way and Eucalyptus Avenue was operating as a flashing red light, as it was under construction to become a signalized intersection. As a result, the intersection analyzed as an all-way-stop-controlled (AWSC) intersection.

As shown in **Table 3**, the following three intersections operate below acceptable standards under Existing (2021) Conditions:

- 49. Roswell Avenue/SR-71 Northbound Ramps and Grand Avenue (Cities of Chino and Caltrans)
- 55. Euclid Avenue (SR-83) and Merrill Avenue (Cities of Ontario and Chino and Caltrans)
- 58. Euclid Avenue (SR-83) and Pine Avenue (City of Chino and Caltrans)

The intersection of Euclid Avenue (SR-83) and Merrill Avenue operates below acceptable conditions under the standards set by the City of Chino but operates acceptably under the standards set by the City of Ontario.

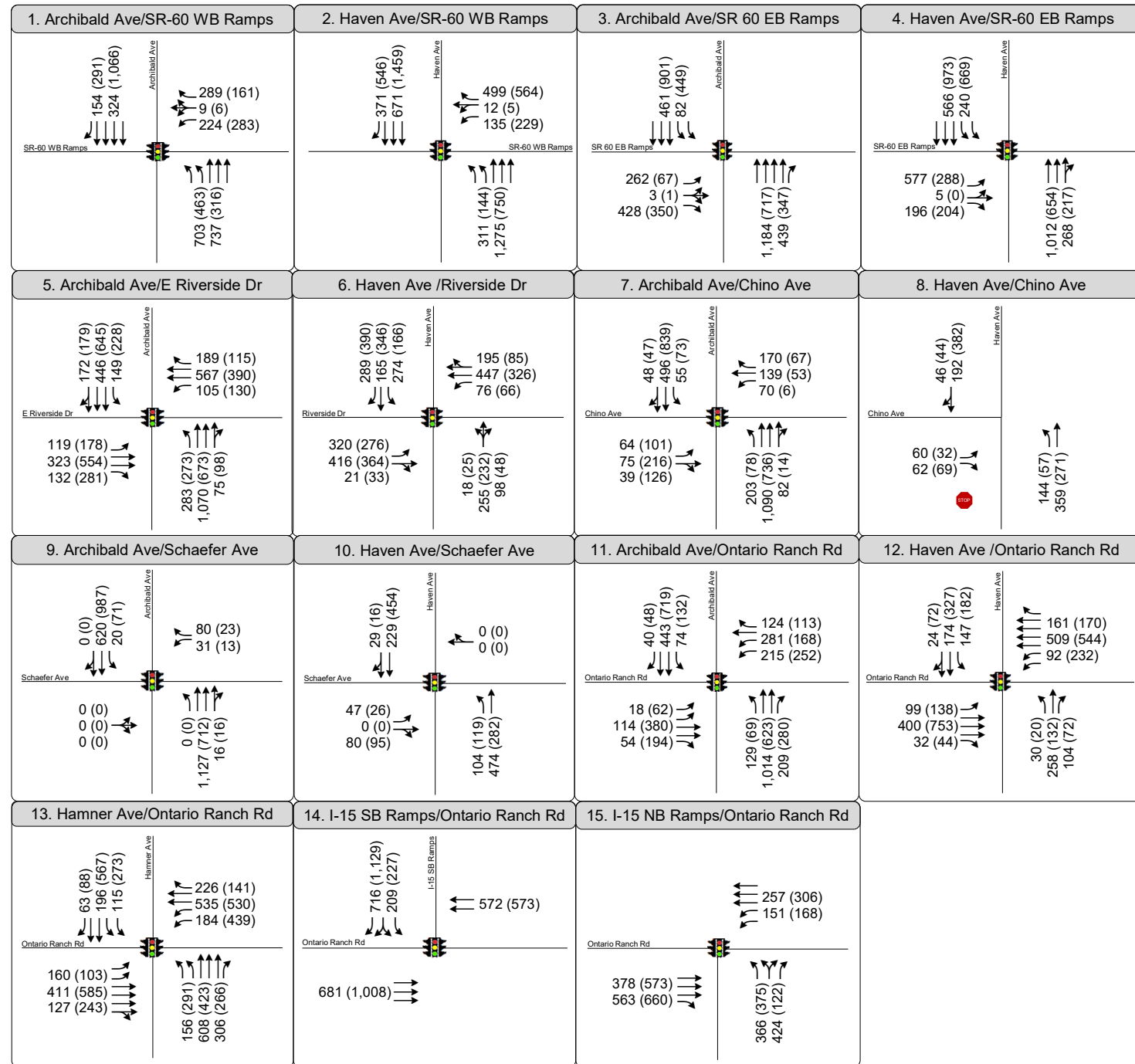




- Built PA
- Adopted (Unconstructed) PA



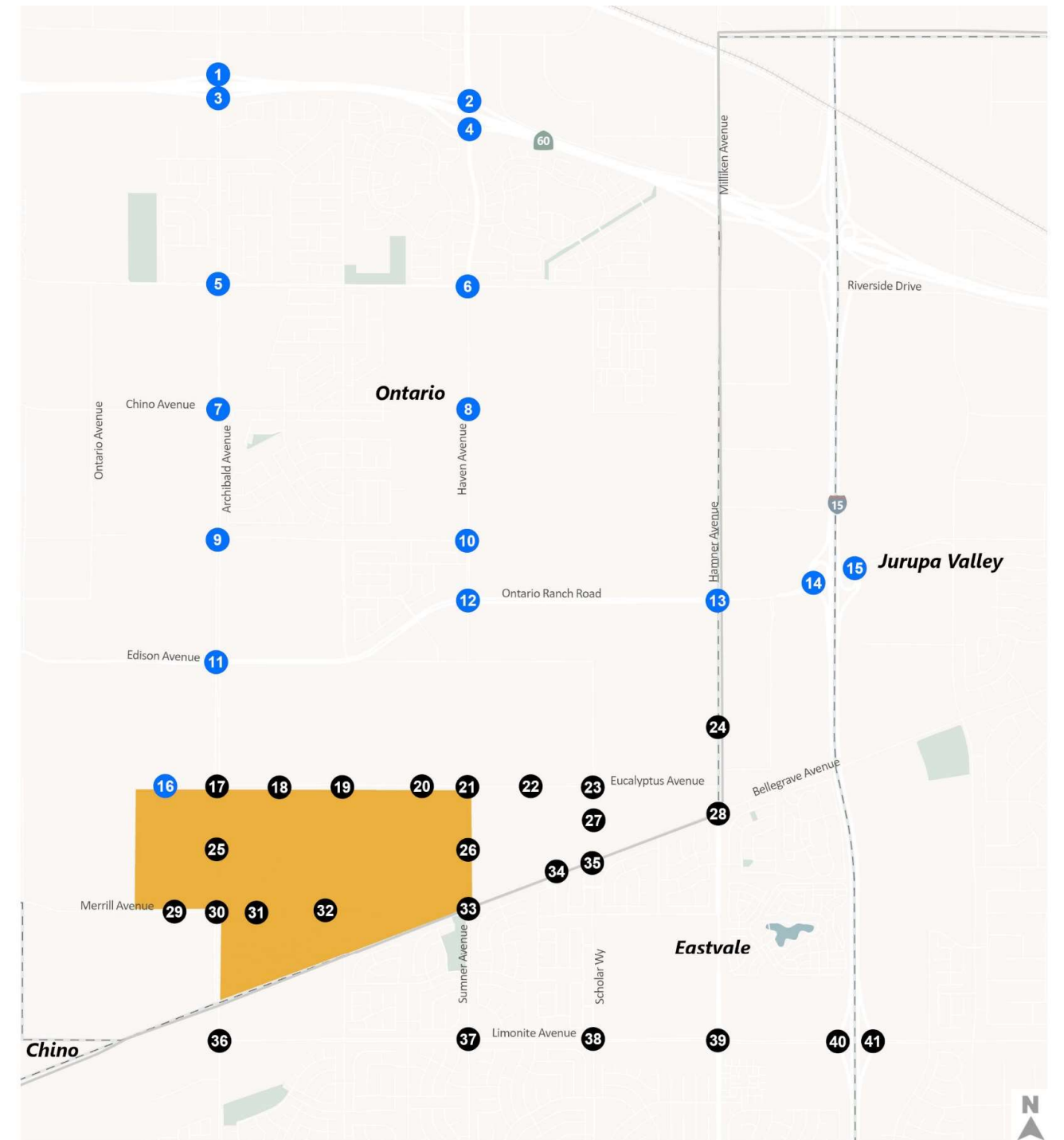
Figure 6  
 Subarea 29 Specific Plan  
 Existing (2021) Project Site Conditions



AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

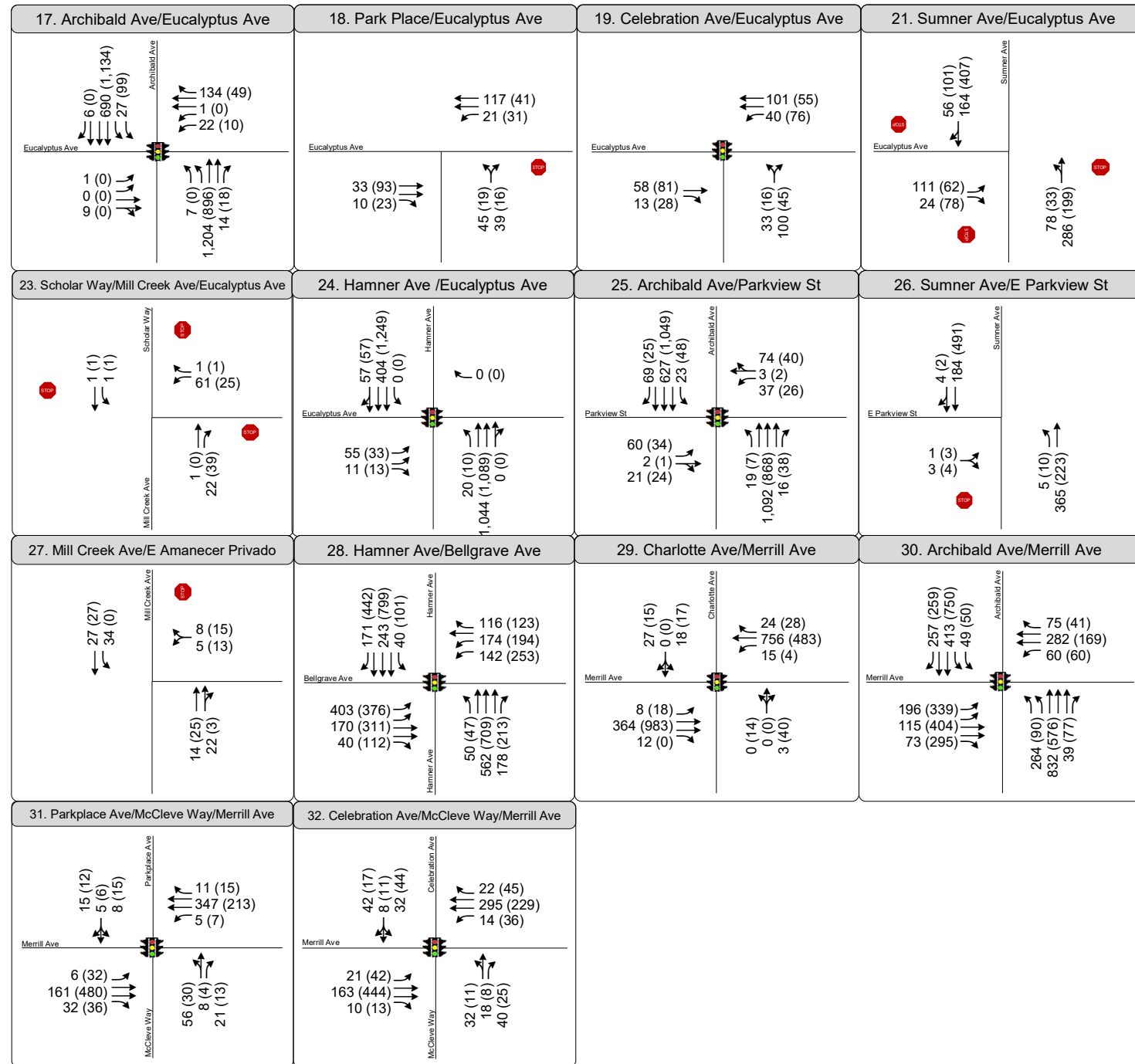
\*Intersection 16 does not exist in this scenario



- Approved Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 7A  
Peak Hour Traffic Volumes and Lane Configurations  
Existing (2021) Conditions





AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

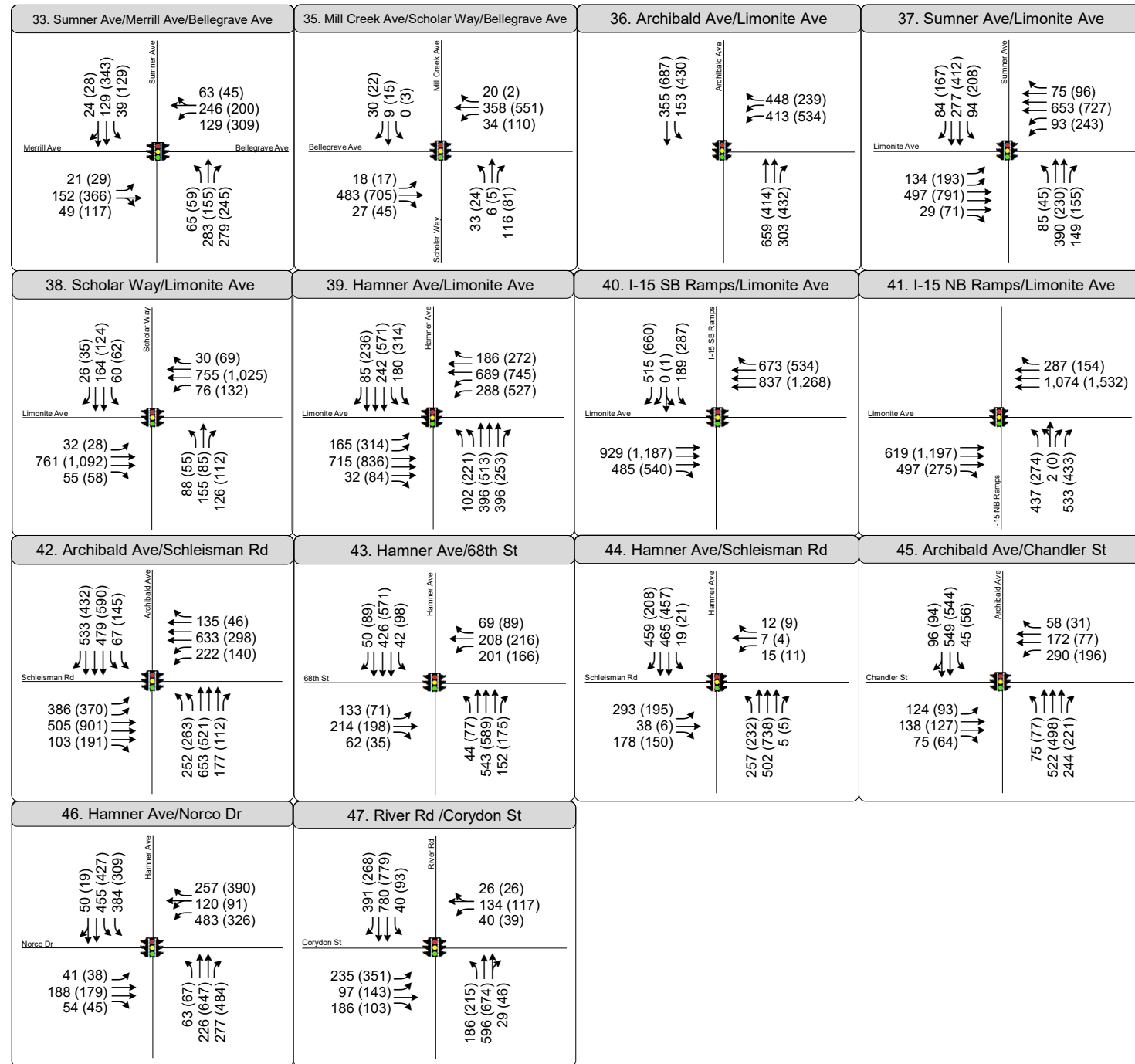


- Approved Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities



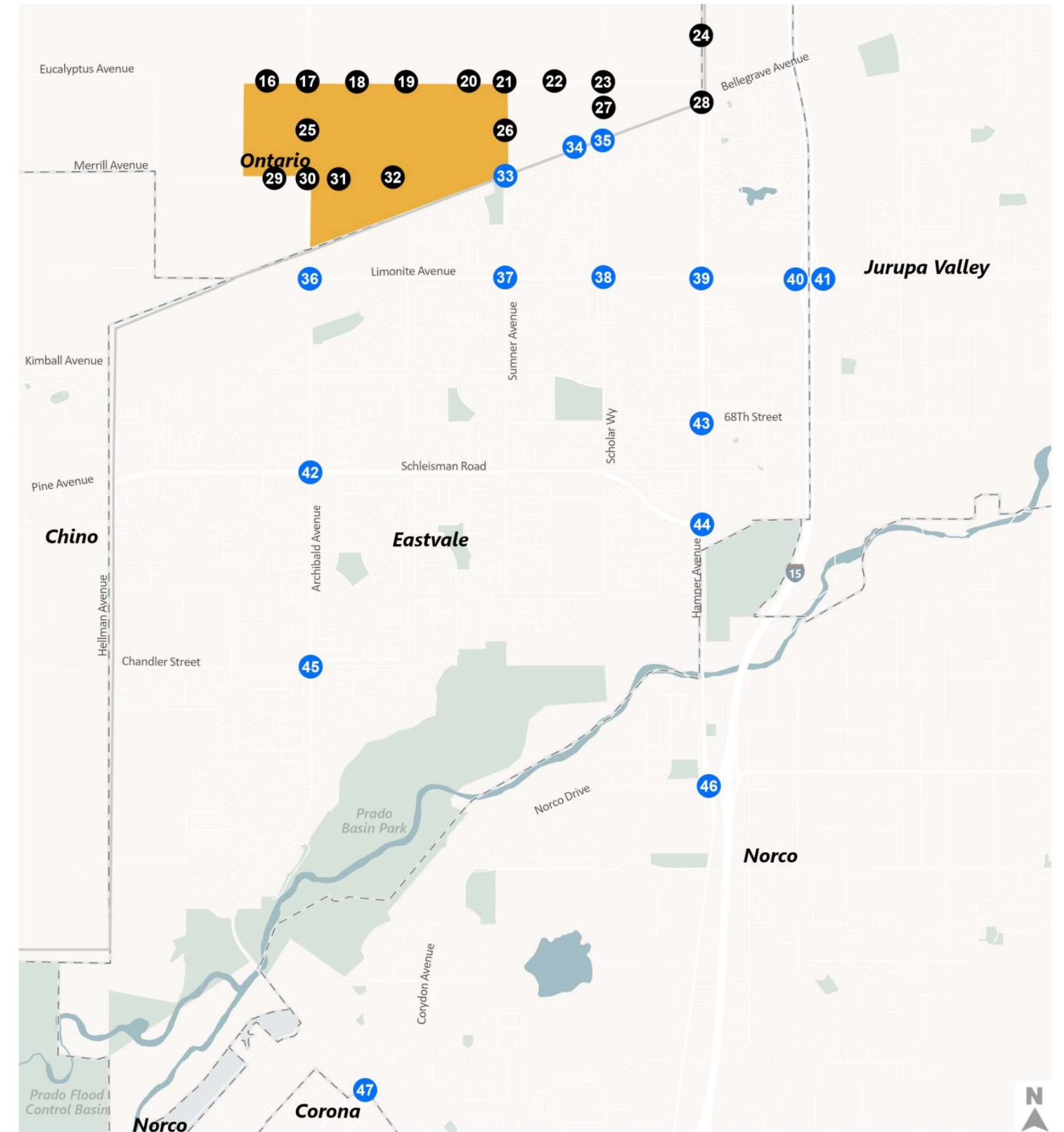
\*Intersections 20 and 22 do not exist in this scenario

Figure 7B  
Peak Hour Traffic Volumes and Lane Configurations  
Existing (2021) Conditions



AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

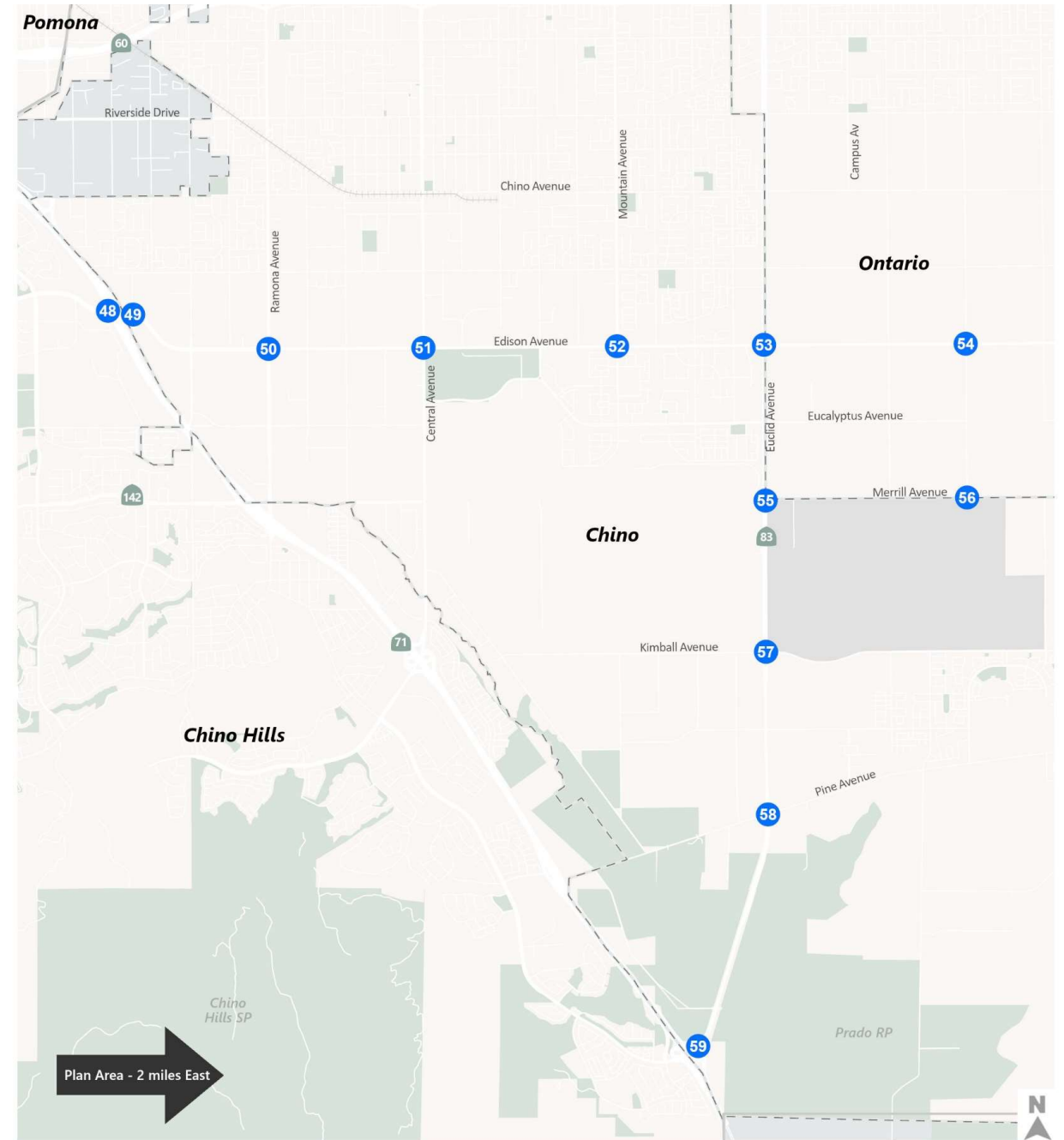
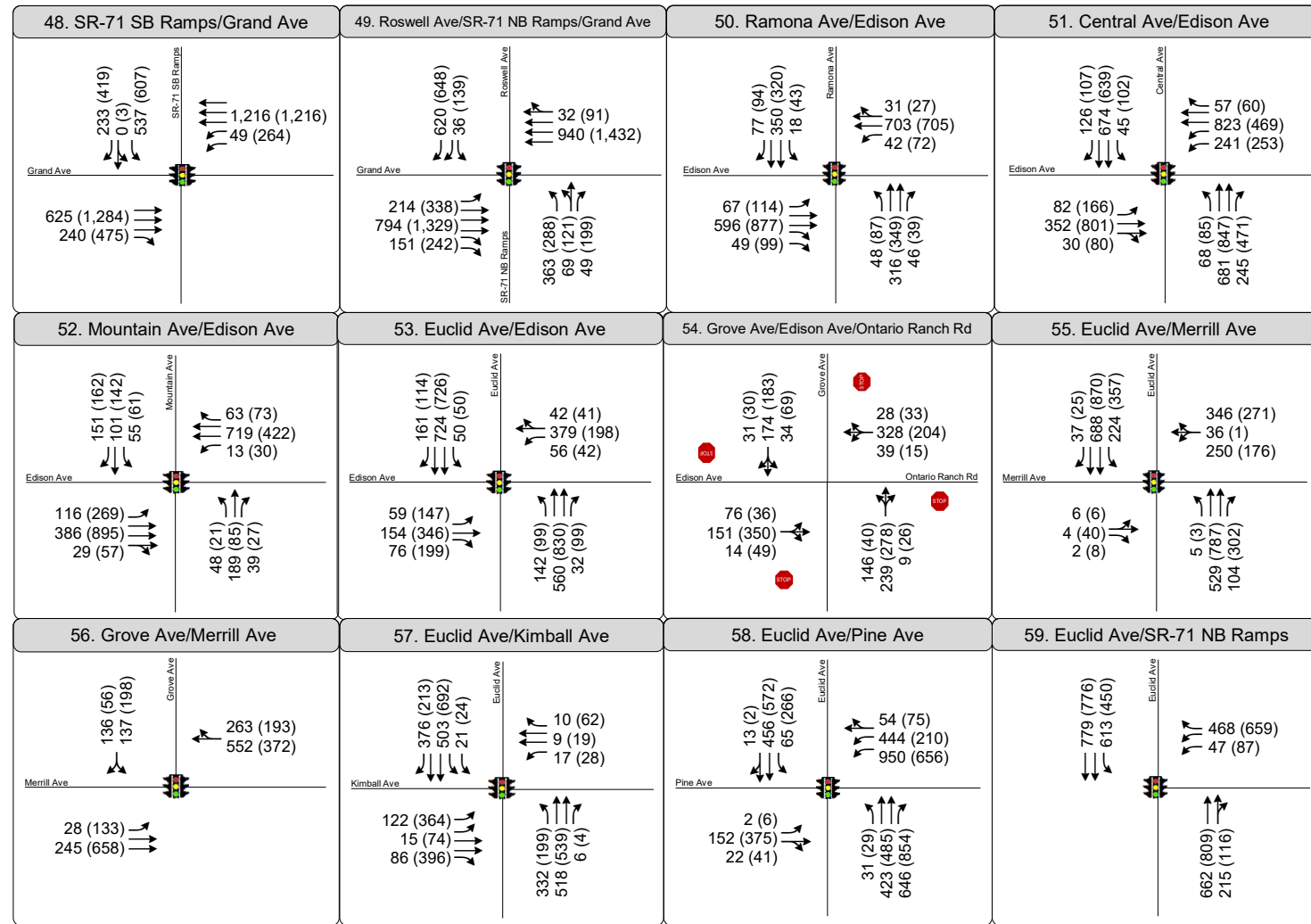


- Approved Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities



Figure 7C  
Peak Hour Traffic Volumes and Lane Configurations  
Existing (2021) Conditions





AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized



Figure 7D  
Peak Hour Traffic Volumes and Lane Configurations  
Existing (2021) Conditions

**Table 3: Existing (2021) Intersection Level of Service**

Intersection	Jurisdiction	Control	Existing (2021) Conditions	
			Peak Hour	LOS / Average Delay
1. Archibald Ave and SR-60 WB Ramps	City of Ontario and Caltrans	Signal	AM	C / 28
			PM	C / 23
2. Haven Ave and SR-60 WB Ramps	City of Ontario and Caltrans	Signal	AM	C / 33
			PM	C / 30
3. Archibald Ave and SR-60 EB Ramps	City of Ontario and Caltrans	Signal	AM	B / 13
			PM	B / 14
4. Haven Ave and SR-60 EB Ramps	City of Ontario and Caltrans	Signal	AM	B / 17
			PM	B / 19
5. Archibald Ave and Riverside Dr	City of Ontario	Signal	AM	C / 33
			PM	C / 34
6. Haven Ave and Riverside Dr	City of Ontario	Signal	AM	E / 78
			PM	D / 44
7. Archibald Ave and Chino Ave	City of Ontario	Signal	AM	C / 26
			PM	D / 45
8. Haven Ave and Chino Ave	City of Ontario	TWSC	AM	C / 22
			PM	C / 18
9. Archibald Ave and Schaefer Ave	City of Ontario	Signal	AM	A / 9
			PM	A / 8
10. Haven Ave and Schaefer Ave	City of Ontario	Signal	AM	B / 11
			PM	B / 13
11. Archibald Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	C / 23
			PM	C / 23
12. Haven Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	C / 25
			PM	C / 26
13. Hamner Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	C / 29
			PM	D / 39
	City of Eastvale	Signal	AM	C / 29
			PM	D / 39
14. I-15 SB Ramps and Ontario Ranch Rd	City of Eastvale and Caltrans	Signal	AM	A / 10
			PM	B / 15
15. I-15 NB Ramps and Ontario Ranch Rd	City of Jurupa Valley and Caltrans	Signal	AM	B / 14
			PM	B / 14
16. Ivy Ave and Eucalyptus Ave	City of Ontario	DNE <sup>3</sup>	AM	-
			PM	-
17. Archibald Ave and Eucalyptus Ave	City of Ontario	Signal	AM	B / 13
			PM	A / 6
18. Parkplace Ave and Eucalyptus Ave	City of Ontario	TWSC	AM	A / 10
			PM	A / 9
19. Celebration Ave and Eucalyptus Ave	City of Ontario	Signal	AM	B / 14
			PM	B / 14
20. Proposed Dwy A and Eucalyptus Ave	City of Ontario	DNE <sup>3</sup>	AM	-
			PM	-
21. Haven Ave/Sumner Ave and Eucalyptus Ave	City of Ontario	AWSC	AM	B / 12
			PM	B / 14
22. Proposed Dwy B and Eucalyptus Ave	City of Ontario	DNE <sup>3</sup>	AM	-
			PM	-



**Table 3: Existing (2021) Intersection Level of Service**

Intersection	Jurisdiction	Control	Existing (2021) Conditions	
			Peak Hour	LOS / Average Delay
23. Mill Creek Ave/Scholar Way and Eucalyptus Ave	City of Ontario	AWSC	AM	A / 8
			PM	A / 7
24. Hamner Ave and Eucalyptus Ave	City of Ontario	Signal	AM	A / 7
			PM	A / 6
	City of Eastvale	Signal	AM	A / 7
			PM	A / 6
25. Archibald Ave and Parkview St	City of Ontario	Signal	AM	B / 17
			PM	B / 15
26. Haven Ave/Sumner Ave and Parkview St	City of Ontario	TWSC	AM	B / 10
			PM	B / 12
27. Mill Creek Ave/Scholar Way and Proposed Dwy C	City of Ontario	TWSC	AM	A / 9
			PM	A / 9
28. Hamner Ave and Bellegrave Ave	City of Ontario	Signal	AM	C / 25
			PM	C / 27
	City of Eastvale	Signal	AM	C / 25
			PM	C / 27
29. Charlotte Ave and Merrill Ave	City of Ontario	Signal	AM	B / 12
			PM	A / 9
30. Archibald Ave and Merrill Ave	City of Ontario	Signal	AM	C / 28
			PM	C / 31
31. Parkplace Ave/McCleve Way and Merrill Ave	City of Ontario	Signal	AM	A / 10
			PM	A / 10
32. Celebration Ave/McCleve Way and Merrill Ave	City of Ontario	Signal	AM	B / 10
			PM	B / 11
33. Haven Ave/Sumner Ave and Merrill Ave/Bellegrave Ave	City of Ontario	Signal	AM	C / 22
			PM	D / 38
	City of Eastvale	Signal	AM	C / 22
			PM	D / 38
34. Proposed Dwy D and Bellegrave Ave	City of Ontario	DNE <sup>3</sup>	AM	-
			PM	-
	City of Eastvale	DNE <sup>3</sup>	AM	-
			PM	-
35. Mill Creek Ave/Scholar Way and Bellegrave Ave	City of Ontario	Signal	AM	B / 12
			PM	B / 12
	City of Eastvale	Signal	AM	B / 12
			PM	B / 12
36. Archibald Ave and Limonite Ave	City of Eastvale	Signal	AM	B / 18
			PM	B / 19
37. Sumner Ave and Limonite Ave	City of Eastvale	Signal	AM	B / 19
			PM	C / 22
38. Scholar Way and Limonite Ave	City of Eastvale	Signal	AM	B / 18
			PM	B / 17
39. Hamner Ave and Limonite Ave	City of Eastvale	Signal	AM	C / 33
			PM	D / 46
40. I-15 SB Ramps and Limonite Ave	City of Eastvale and Caltrans	Signal	AM	A / 6
			PM	A / 8
41. I-15 NB Ramps and Limonite Ave	City of Jurupa Valley and Caltrans	Signal	AM	A / 8
			PM	A / 7
42. Archibald Ave and Schleisman Rd	City of Eastvale	Signal	AM	C / 34
			PM	C / 27



**Table 3: Existing (2021) Intersection Level of Service**

Intersection	Jurisdiction	Control	Existing (2021) Conditions	
			Peak Hour	LOS / Average Delay
43. Hamner Ave and 68 <sup>th</sup> St	City of Eastvale	Signal	AM	C / 34
			PM	C / 32
44. Hamner Ave and Schleisman Rd	City of Eastvale	Signal	AM	C / 25
			PM	B / 15
45. Archibald Ave and Chandler St	City of Eastvale	Signal	AM	C / 24
			PM	B / 20
46. Hamner Ave and Norco Dr/Sixth St	City of Norco	Signal	AM	C / 31
			PM	C / 25
47. River Rd and Corydon St	City of Norco	Signal	AM	C / 22
			PM	C / 26
48. SR-71 SB Ramps and Grand Ave	City of Chino Hills and Caltrans	Signal	AM	C / 20
			PM	C / 27
49. Roswell Ave/SR-71 NB Ramps and Grand Ave	City of Chino and Caltrans	Signal	AM	D / 42
			PM	<b>E / 79</b>
50. Ramona Ave and Edison Ave	City of Chino	Signal	AM	B / 19
			PM	C / 23
51. Central Ave and Edison Ave	City of Chino	Signal	AM	C / 30
			PM	D / 37
52. Mountain Ave and Edison Ave	City of Chino	Signal	AM	C / 20
			PM	C / 21
53. Euclid Ave (SR-83) and Edison Ave	City of Ontario and Caltrans	Signal	AM	C / 26
			PM	C / 23
	City of Chino and Caltrans	Signal	AM	C / 26
			PM	C / 23
54. Grove Ave and Edison Ave/Ontario Ranch Rd	City of Ontario	AWSC	AM	D / 29
			PM	E / 47
55. Euclid Ave (SR-83) and Merrill Ave	City of Ontario and Caltrans	Signal	AM	D / 45
			PM	E / 66
	City of Chino and Caltrans	Signal	AM	D / 45
			PM	<b>E / 66</b>
56. Grove Ave and Merrill Ave	City of Ontario	Signal	AM	B / 19
			PM	B / 12
57. Euclid Ave (SR-83) and Kimball Ave	City of Chino and Caltrans	Signal	AM	C / 22
			PM	C / 22
58. Euclid Ave (SR-83) and Pine Ave	City of Chino and Caltrans	Signal	AM	C / 34
			PM	<b>F / 92</b>
59. SR-71 NB Ramps and Euclid Ave (SR-83)	City of Chino and Caltrans	Signal	AM	B / 18
			PM	B / 14

Notes:

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way-stop-controlled (AWSC). Worst lane delay reported for two-way-stop-controlled (TWSC) intersections.
2. Delay Operations were calculated using HCM 6th methodologies.
3. DNE = Does Not Exist. Ivy Avenue and Eucalyptus Avenue was not open to public access at the time of the traffic counts.
4. **Bolded** results operate below acceptable LOS standards.

Source: Fehr & Peers, 2022.



## 4. Project Characteristics

This chapter provides an overview of the proposed Project components and addresses the proposed Project's trip generation, distribution, and assignment characteristics, allowing for an evaluation of the Project effect on the surrounding roadway network. The amount of traffic associated with the Project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the Project site was estimated.
2. **Trip Distribution** – The *direction* trips would use to approach and depart the site was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

### 4.1 Project Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates for the Approved and Proposed Specific Plans were created for the daily condition and for the peak one-hour period during the morning (AM) and evening (PM) commute when traffic volumes on the adjacent streets are typically the highest.

The number of weekday AM and PM peak hour trips generated by the Approved and Proposed Specific Plans were estimated using methods published in *Trip Generation, 11th Edition (Institute of Transportation Engineers [ITE], 2021)*. The following ITE trip generation rates were chosen to estimate the Approved and Proposed Specific Plan land uses:

- Single-Family Detached Housing (ITE Code 210) for all residential uses
- Recreational Community Center (ITE Code 495) for the recreational facility
- Public Park (ITE Code 411) for the park use
- Elementary School (ITE Code 520) for the elementary school
- Middle School/Junior High School (ITE Code 522) for the middle school
- Shopping Plaza (40-150 KSF) without supermarket (ITE Code 821) for the retail use

**Table 4** and **5** show summaries of the trip generation estimates for the Approved and Proposed Specific Plans. Detailed trip generation estimates for the built out Specific Plans are provided in **Appendix D**. **Table 6** shows the net difference between the built out Specific Plans.

### 4.2 Trip Generation Reductions

#### Internalization

Given the mix of land uses of the fully built out Approved and Proposed Specific Plans, traffic will not be generated in a similar manner as to what is typically evaluated for most traffic studies. As such, the



analysis evaluates the combined effects of the mixed uses, regional location, demographics, and development scale that contribute to a reduction in off-site average weekday vehicle “trips” known as internalization, which accounts for trips beginning and ending on the project site. Note that not all internalized trips are assumed to be vehicle trips. A portion of the trips were assumed to be active transportation trips to account for residents using alternative modes of transportation to access non-residential land uses within the Specific Plan.

The Environmental Protection Agency’s (EPA’s) MXD (mixed-used development) methodology was used to determine the projected trip internalization. This method more accurately estimates reductions of project trips compared to the traditional Institute of Transportation Engineers’ (ITE) internalization methodology. The MXD model accounts for various attributes, such as density of the site, distance to transit, density of intersections, employment, household size, and variables that reduce vehicle trip-making behavior. Given the statistical robustness of the MXD method, the MXD model was used for estimating internalization of project trips. Fehr & Peers MXD+ tool (which incorporates the MXD methodology) was used to develop internalization under full buildout conditions. The internalization rates for the Approved and Proposed Specific Plans are shown in the trip generation estimates provided in **Appendix D**. Given that the site area is largely built out with a few PAs under construction, the reductions were applied, under the assumption that the PAs in the proposed amendment will be the last portion of the Specific Plan to be built out.

### Pass-by

Rates published in the *ITE Trip Generation Handbook, 3rd Edition* were referenced to estimate appropriate pass-by reductions for the Project land uses. Pass-by trips are assumed to be trips already traveling on Archibald Avenue that stop at a near-by/convenient commercial development and are not considered new trips on the road. The pass-by reductions for the commercial development are shown in the trip generation estimates provided in **Appendix D**.

## 4.3 Trip Generation Estimates

As shown in **Table 4**, the Approved Specific Plan is expected to generate approximately 27,087 net external daily trips, including approximately 1,888 net external trips (548 inbound/1,304 outbound) during the morning peak hour, and approximately 2,340 net external trips (1,450 inbound/890 outbound) during the afternoon peak hour. As shown in **Table 5**, the Proposed Specific Plan is expected to generate approximately 41,344 net external daily trips, including approximately 3,205 net external trips (1,028 inbound/2,177 outbound) during the morning peak hour, and approximately 3,697 net external trips (2,301 inbound/1,396 outbound) during the afternoon peak hour. As shown in **Table 6**, the Proposed Specific Plan Amendment is expected to generate 14,257 more net external daily trips, including approximately 1,317 more net external trips (444 inbound/873 outbound) during the morning peak hour, and approximately 1,357 more net external trips (851 inbound/506 outbound) during the afternoon peak hour.



**Table 4: Approved Specific Plan Trip Generation Estimates**

Trip Type	Daily	AM			PM		
		In	Out	Total	In	Out	Total
Total Project Trips <sup>1</sup>	30,922	872	1,592	2,464	1,730	1,161	2,891
Total Internalized Trips <sup>3</sup>	(3,835)	(288)	(288)	(576)	(223)	(223)	(446)
Total External Vehicle Trips	27,087	584	1,304	1,888	1,507	938	2,445
Pass-by <sup>2</sup>	-	-	-	-	(57)	(48)	(105)
Net External Vehicle Trips	27,087	584	1,304	1,888	1,450	890	2,340

Sources:

1. *Trip Generation, 11th Edition (Institute of Transportation Engineers, 2021).*
2. *Trip Generation Handbook 3rd Edition (Institute of Transportation Engineers, 2017).*
3. *MXD +, Fehr & Peers, 2022.*

**Table 5: Proposed Specific Plan Trip Generation Estimates**

Trip Type	Daily	AM			PM		
		In	Out	Total	In	Out	Total
Total Project Trips <sup>1</sup>	47,304	1,574	2,723	4,297	2,687	1,766	4,453
Total Internalized Trips <sup>3</sup>	(5,960)	(546)	(546)	(1,092)	(338)	(338)	(676)
Total External Vehicle Trips	41,344	1,028	2,177	3,205	2,349	1,428	3,777
Pass-by <sup>2</sup>	-	-	-	-	(48)	(32)	(80)
Net External Vehicle Trips	41,344	1,028	2,177	3,205	2,301	1,396	3,697

Sources:

1. *Trip Generation, 11th Edition (Institute of Transportation Engineers, 2021).*
2. *Trip Generation Handbook 3rd Edition (Institute of Transportation Engineers, 2017).*
3. *MXD +, Fehr & Peers, 2022.*

**Table 6: Approved and Proposed Specific Plan Trip Generation Comparison**

Trip Type	Daily	AM			PM		
		In	Out	Total	In	Out	Total
Proposed Full Buildout Net External Trips	41,344	1,028	2,177	3,205	2,301	1,396	3,697
Approved Full Buildout Net External Trips	27,087	584	1,304	1,888	1,450	890	2,340
Net Difference (Proposed – Approved)	14,257	444	873	1,317	851	506	1,357

Source: *Fehr & Peers, 2022.*



## 4.4 Trip Distribution and Assignment

### Trip Distribution

Project trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the project site. Local knowledge of the study area, travel pattern data and statistics (Census Longitudinal Employer-Household Dynamics Home-To-Work Data, as provided in **Appendix E**), and professional judgment were used to develop a project trip distribution for the project as shown in **Figure 8**.

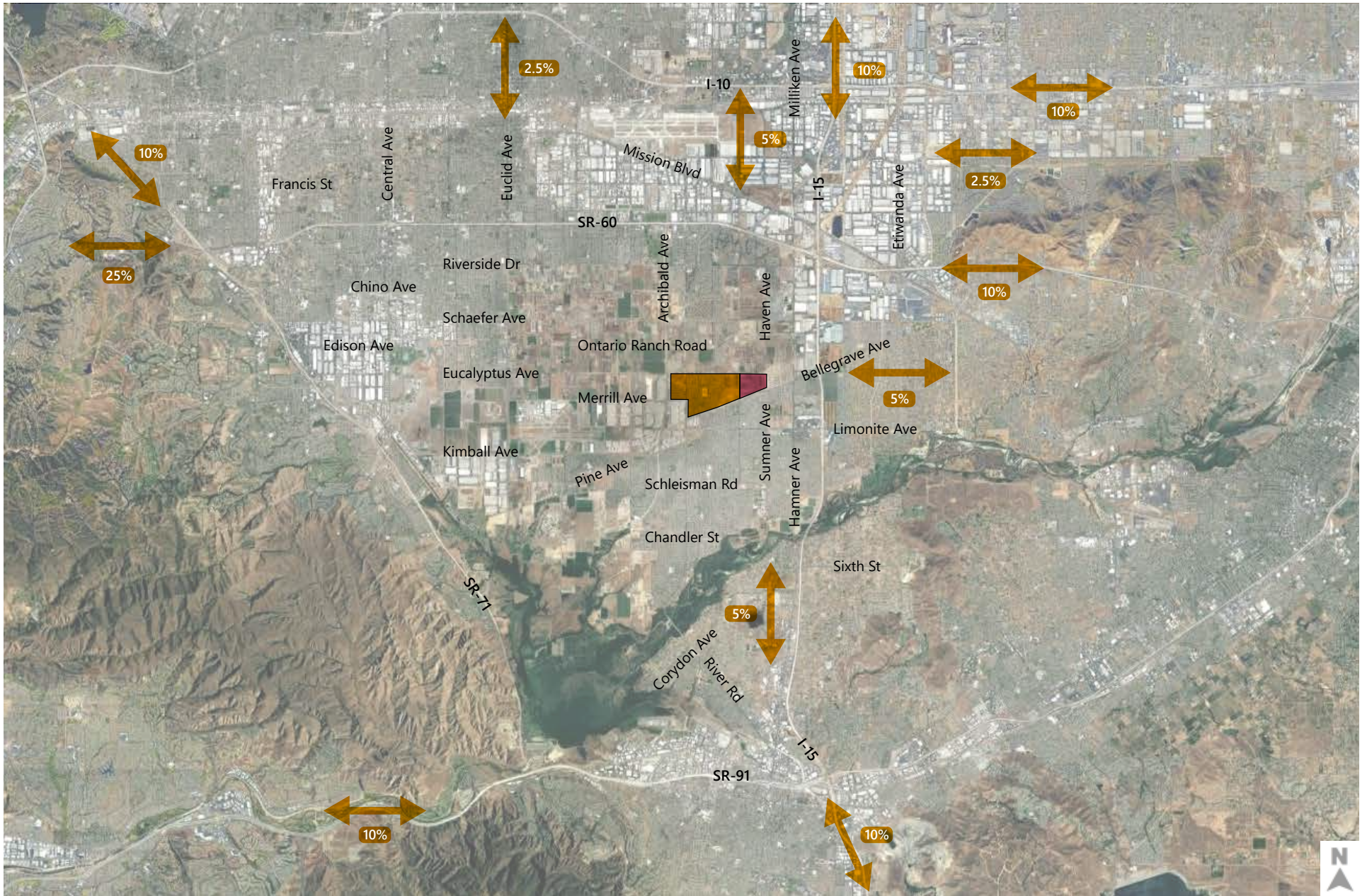
### Project Assignment

Based on the trip generation and trip distribution estimates developed and described above, Project trips were assigned to the study area roadway network. Internalized Project trips were assigned between Project residential uses and Project school and commercial uses on internal Project roadways.

Under cumulative conditions, the build out of the Adopted General Plan roadway network significantly increases capacity and connectivity in the in the Ranch area. This includes developing Edison Avenue/Ontario Ranch Road as an eight-lane principal arterial, which affected the project trip assignment under cumulative conditions.







- Approved Specific Plan Area
- Proposed Amended Specific Plan Area
- Project Trips

Figure 8  
Project Trip Distribution

# 5. Opening Year (2025) Conditions

This chapter summarizes the Opening Year (2025) Conditions and Opening Year (2025) Plus Project Conditions as outlined in Chapter 1.

## 5.1 Pending and Approved Development Projects

Fehr & Peers coordinated with the City of Ontario and surrounding cities to obtain a list of pending and approved development projects within three miles of the project site that are anticipated to affect peak hour intersection operations. The list consists of 55 development projects and can be found in **Appendix A**. Trip generation rates were applied for each project from *Trip Generation, 11th Edition* (Institute of Transportation Engineers [ITE], 2021), and the trips were assigned to the study area based on professional judgement and knowledge of the land uses and their typical peak hour travel patterns. **Table 7** shows a summary of the pending and approved development projects' total trip generation estimates. All pending and approved development projects provided by the City of Ontario were assumed to be in operation by Opening Year (2025).

**Table 7: Total Pending and Approved Project Trips**

Pending and Approved Projects	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Total Trips	9,690	7,837	17,527	9,422	11,558	20,980

Source: *Trip Generation, 11th Edition* (Institute of Transportation Engineers, 2021)

Below is a summary of the intersection improvements that were assumed due to the construction of the development projects listed in **Appendix A**.

Rich Haven Specific Plan (Development ID 63 in **Appendix A**) is roughly bounded by Ontario Ranch Road to the south, Riverside Drive to the north, Haven Avenue to west, and Mill Creek Avenue (future roadway extension) the east. Development of this project includes widening of Haven Avenue from two to four lanes between Ontario Ranch Road and Riverside Drive. The widening affects the intersections of Haven Avenue and Chino Avenue, and Haven Avenue and Schaefer Avenue. The following assumptions were applied for opening year analysis scenarios, consistent with assumptions in the Rich Haven Specific Plan:

### Haven Avenue and Chino Avenue

- Eastbound approach: one left-turn lane and a shared through/right-turn lane
  - Relative to existing conditions, the approach requires re-striping of the right-turn lane into a shared through/right-turn lane





- Westbound approach: one left-turn lane and a shared through/right-turn lane
  - This approach does not exist in existing conditions
- Northbound approach: one left-turn lane, one through lane, and a shared through/right lane
  - Relative to existing conditions, the approach contains an additional through lane
- Southbound approach: one left-turn lane, one through lane, and a shared through/right lane
  - Relative to existing conditions, the approach contains an additional through lane and a left-turn lane
- The intersection is signalized
  - This intersection meets the peak hour traffic signal warrant under Opening Year (2025) conditions and was assumed to be signalized, consistent with the Rich Haven Specific Plan. Peak hour traffic signal warrants<sup>3</sup> for Opening Year (2025) Plus Project Conditions are provided in **Appendix F**.

#### Haven Avenue and Schaefer Avenue

- Northbound approach: one left-turn lane, two through lanes
  - Relative to existing conditions, the approach contains an additional through lane

Goodman-Commerce Center (Development ID 70 in **Appendix A**) is planned to be developed east of the intersection of Hamner Avenue and Eucalyptus Avenue. The following assumptions were applied for opening year analysis scenarios, consistent with assumptions in Goodman-Commerce Center:

- Eastbound approach: two left-turn lanes and a shared through/right lane
  - Relative to existing conditions, the approach restripes the right-turn lane into a shared through/right lane
- Westbound approach: one left-turn lane a shared through/right lane
  - This approach does not exist in existing conditions

---

<sup>3</sup> This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. San Bernardino County and the City of Colton should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



Homestead (Development ID 69 in **Appendix A**) is planned to be developed west of the intersection of Archibald Avenue and Limonite Avenue. The following assumptions were applied for opening year analysis scenarios, consistent with assumptions in Homestead:

- Eastbound approach: one left-turn lane, two through lanes, and a right-turn lane
  - These lane configurations are consistent with improvements checked in the field June 2022
  - This approach does not exist in existing conditions
- Westbound approach: two left-turn lanes, one through lane, and a right-turn lane
  - These lane configurations are consistent with improvements checked in the field June 2022
  - Relative to existing conditions, the approach contains an additional through lane
- Northbound approach: one left-turn lane, two through lanes, and a right-turn lane
  - These lane configurations are consistent with improvements checked in the field June 2022
  - Relative to existing conditions, the approach contains a left-turn lane
- Southbound approach: one left-turn lane, two through lanes, and a right-turn lane
  - Relative to existing conditions, the approach contains an additional through lane and a right-turn lane

## 5.2 Opening Year (2025) Conditions Planned Roadway Improvements

As the Ranch area continues to be redeveloped, roadway improvements are planned to help satisfy the needs of the community. To accurately model the Opening Year (2025) Conditions roadway network in the study area, Fehr & Peers referenced the 2020 SCAG RTP/SCS and verified the improvements and their completion years with the appropriate jurisdictions. Fehr & Peers also reached out to the appropriate jurisdictions to obtain information regarding roadway improvements not listed in the 2020 RTP/SCS.

**Figure 9** shows all the 2020 RTP/SCS and non-2020 RTP/SCS roadway improvements assumed to be constructed and in operation under Opening Year (2025) Conditions.



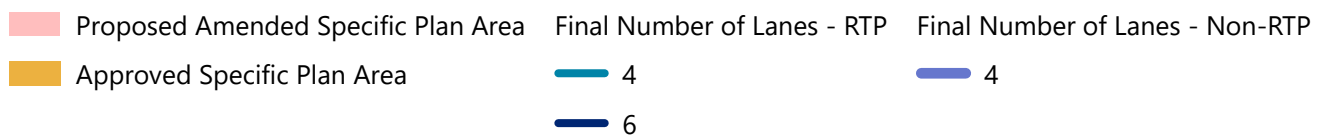
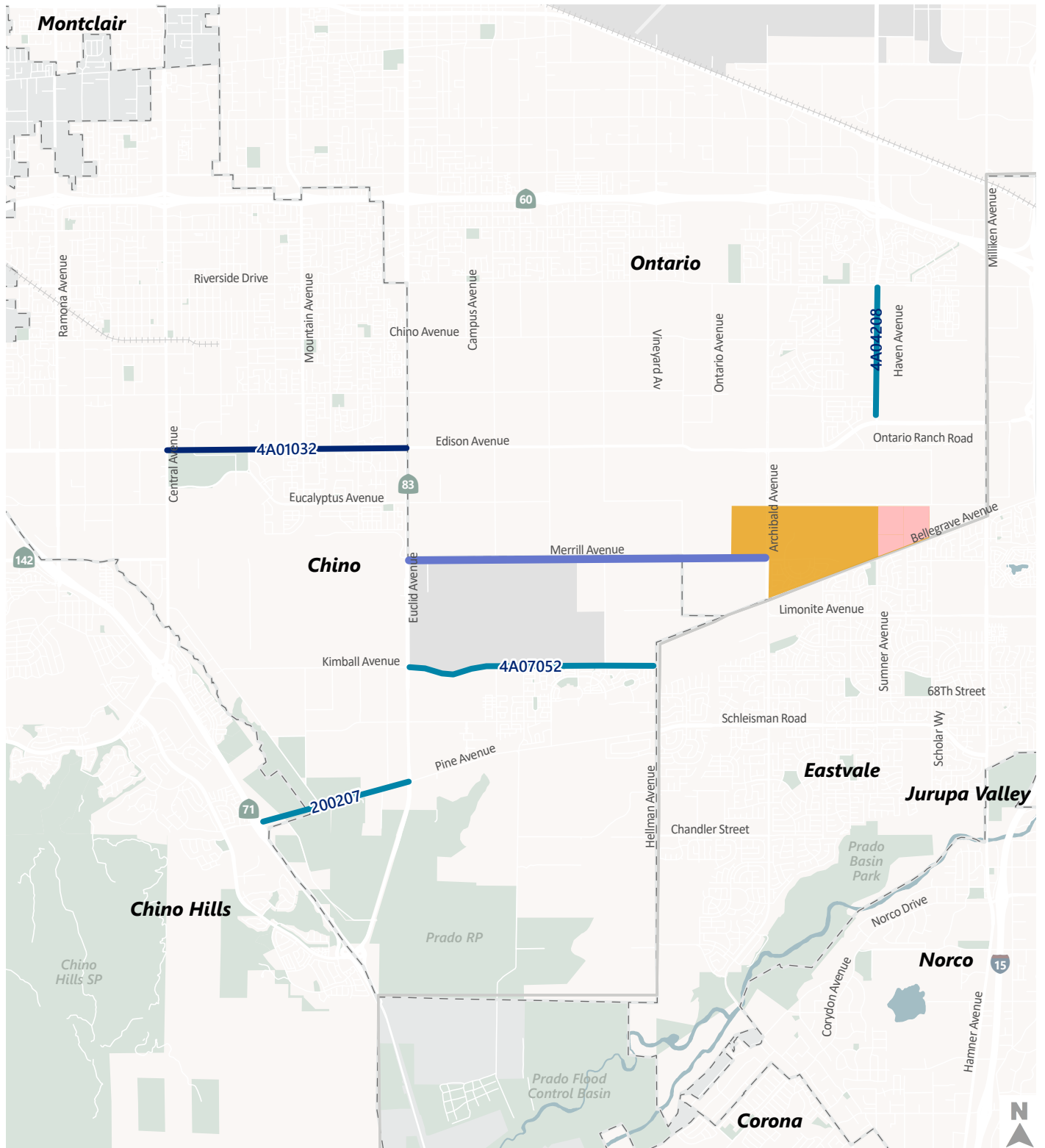


Figure 9

## Roadway Improvements Opening Year (2025) Conditions



### 5.3 Opening Year (2025) Specific Plan Site Conditions

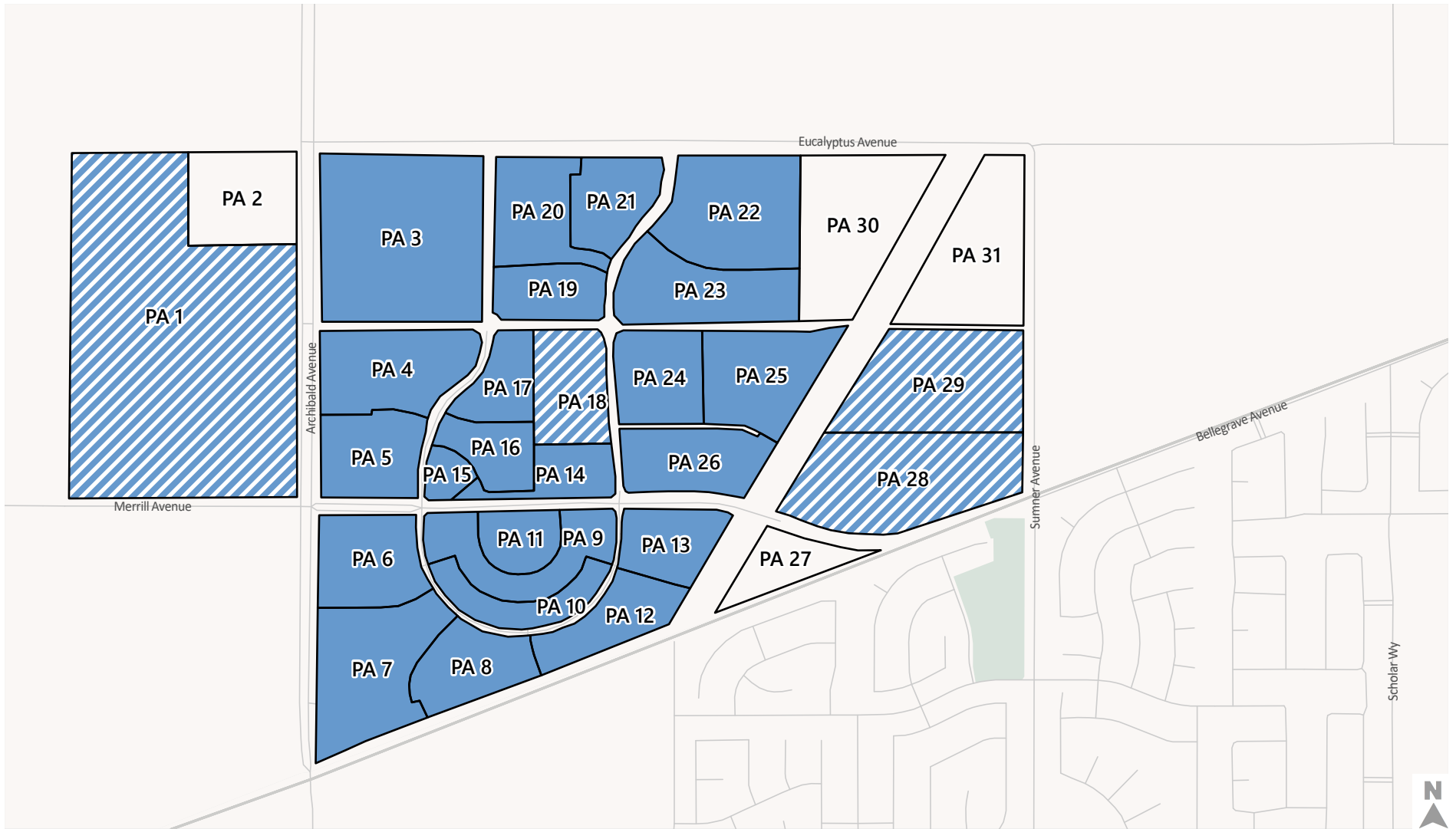
As described in Chapter 3, PAs 1, 18, 28, and 29 of the Approved Specific Plan are currently under construction and these PAs were assumed to be occupied and in operation by Opening Year (2025).

**Figure 10** shows a summary of the PAs assumed to be completed under Opening Year (2025) Conditions.

### 5.4 Opening Year (2025) Conditions Traffic Volumes

As discussed in Chapters 1 and 2, traffic volumes for this scenario consist of traffic from pending and approved development projects in the City, including project PAs currently under construction in the Specific Plan, in addition to Existing (2021) Conditions traffic volumes grown by ambient growth rates, which were determined using the County of San Bernardino's travel demand model, SBTAM. Opening Year (2025) Conditions traffic volume are presented on **Figure 11** along with lane configurations and traffic control.



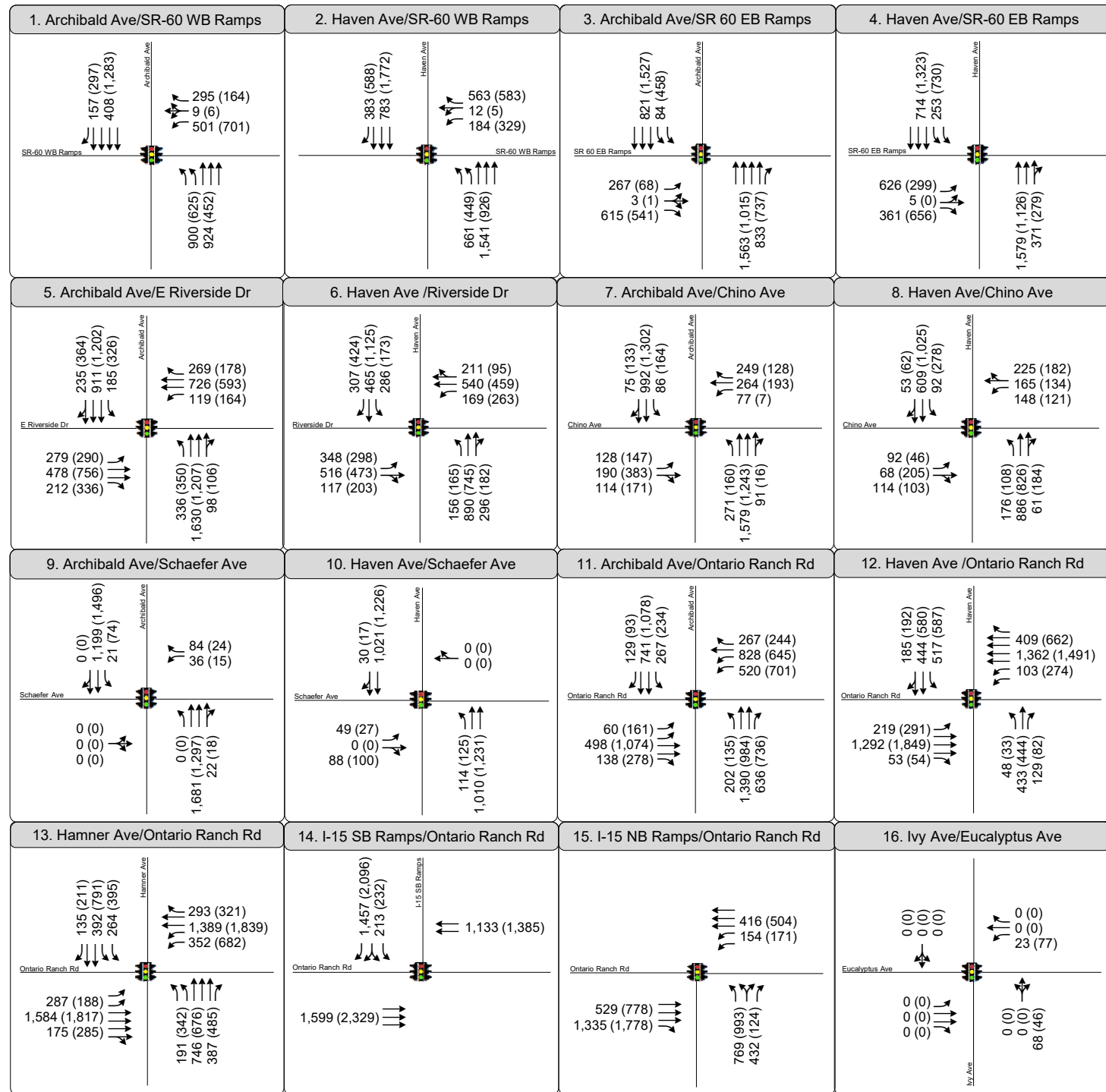


- Built PA
- Adopted (Newly Operational) PA
- Adopted (Unconstructed) PA



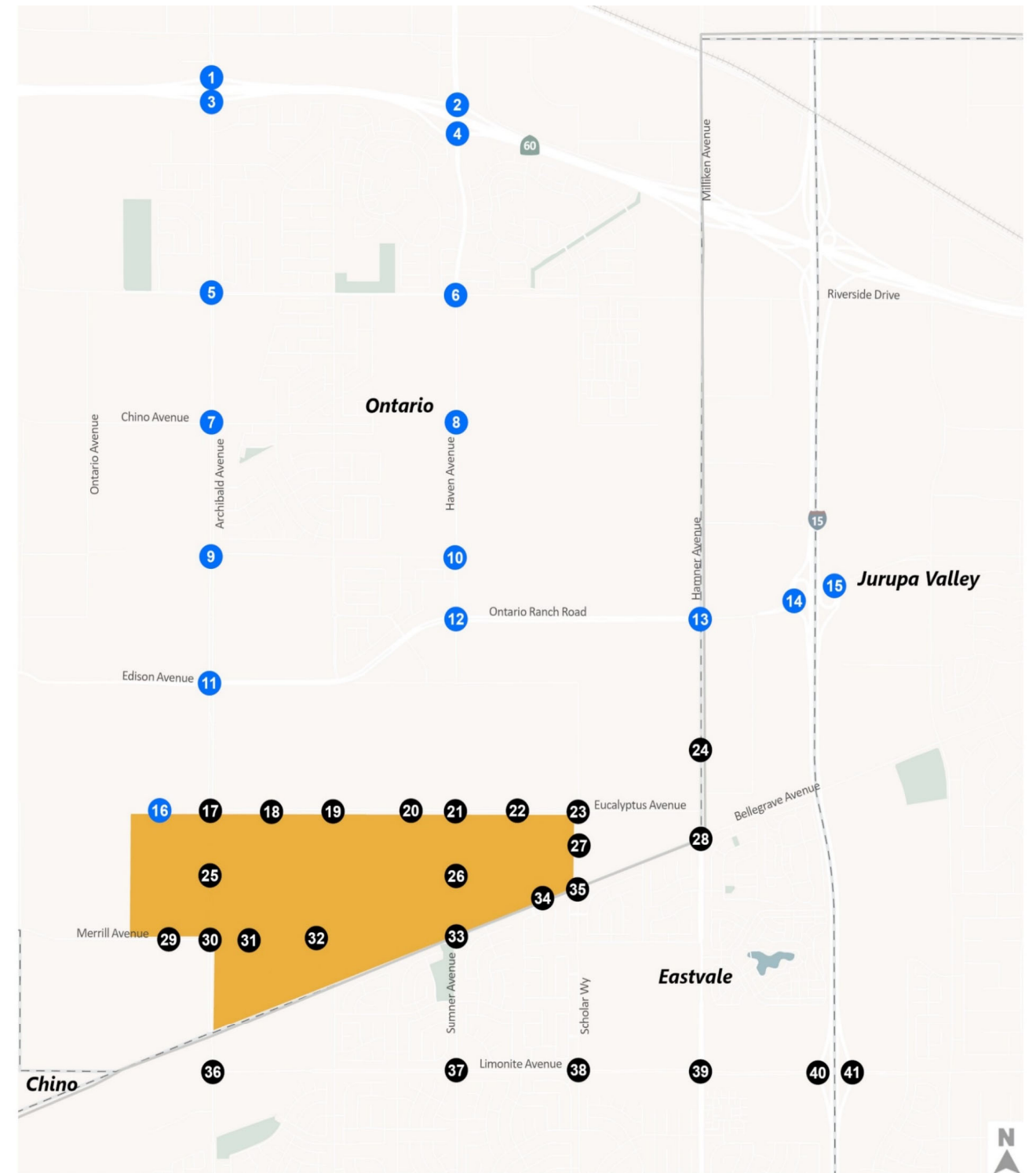
Figure 10

Subarea 29 Specific Plan  
Opening Year (2025) Specific Plan Site Conditions



AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

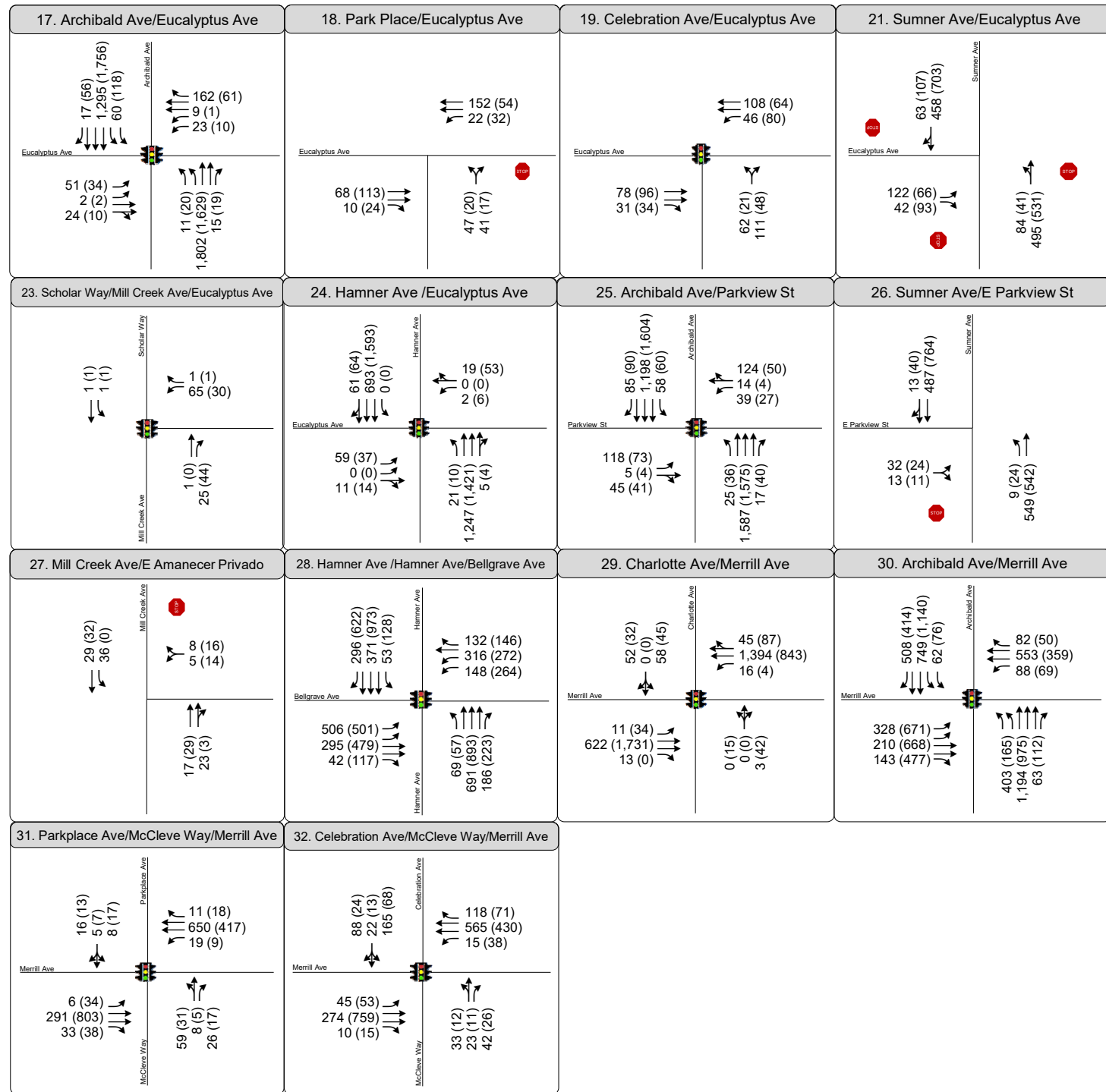


- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 11A  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Conditions

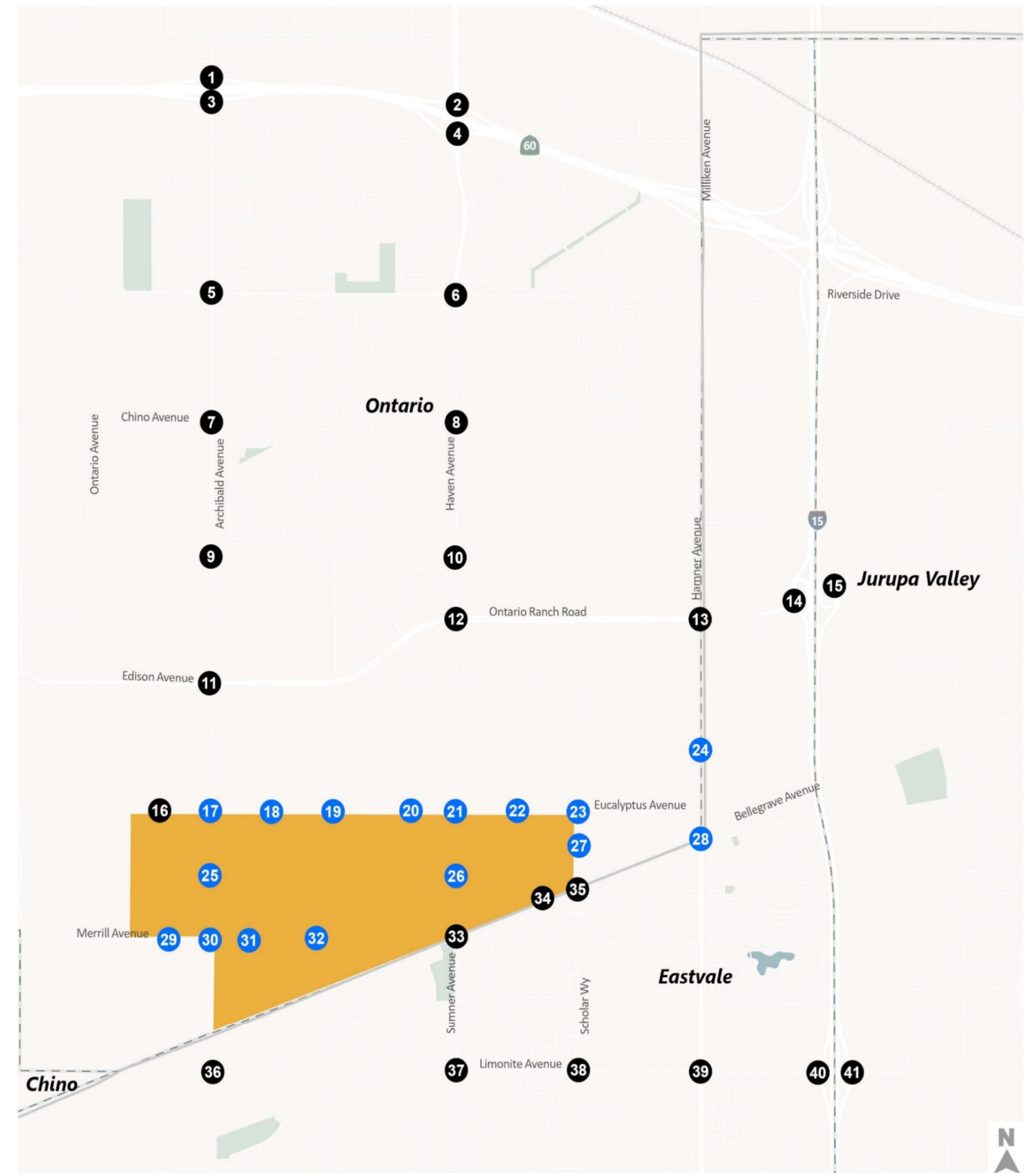






AM (PM) Peak Hour Traffic Volume

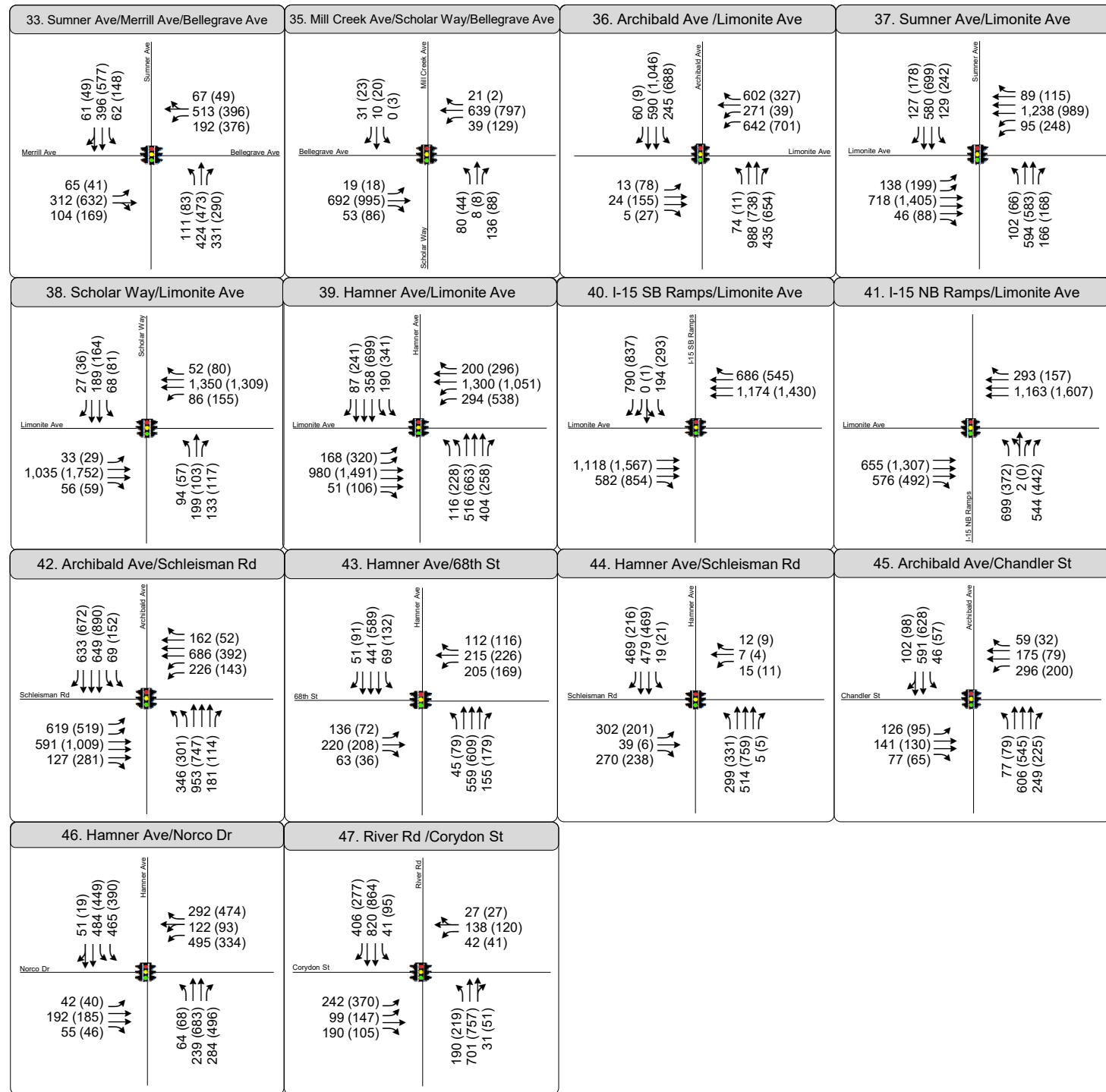
- Lane Configuration
- Stop Sign
- Signalized



- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 11B  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Conditions

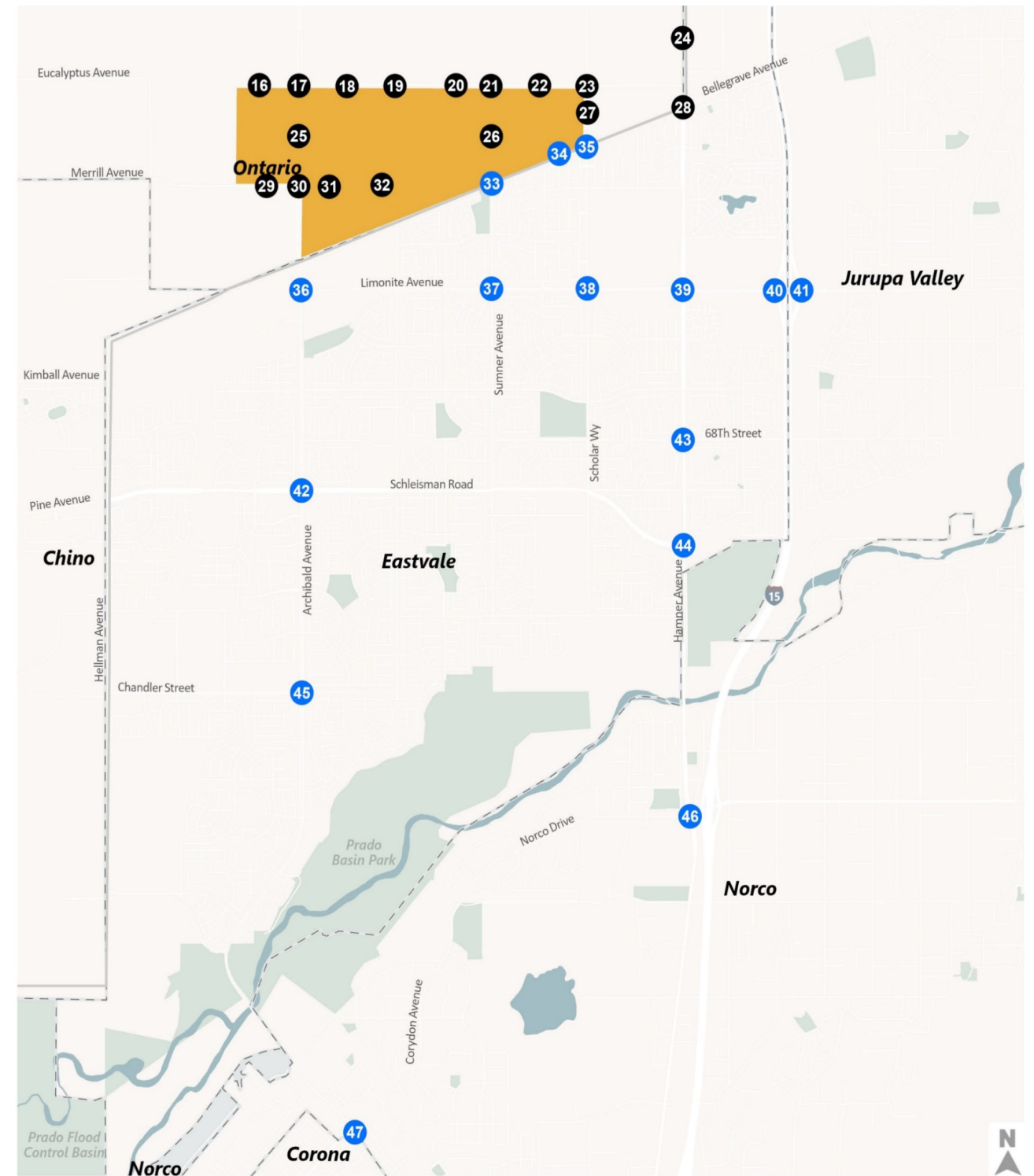




AM (PM) Peak Hour Traffic Volume

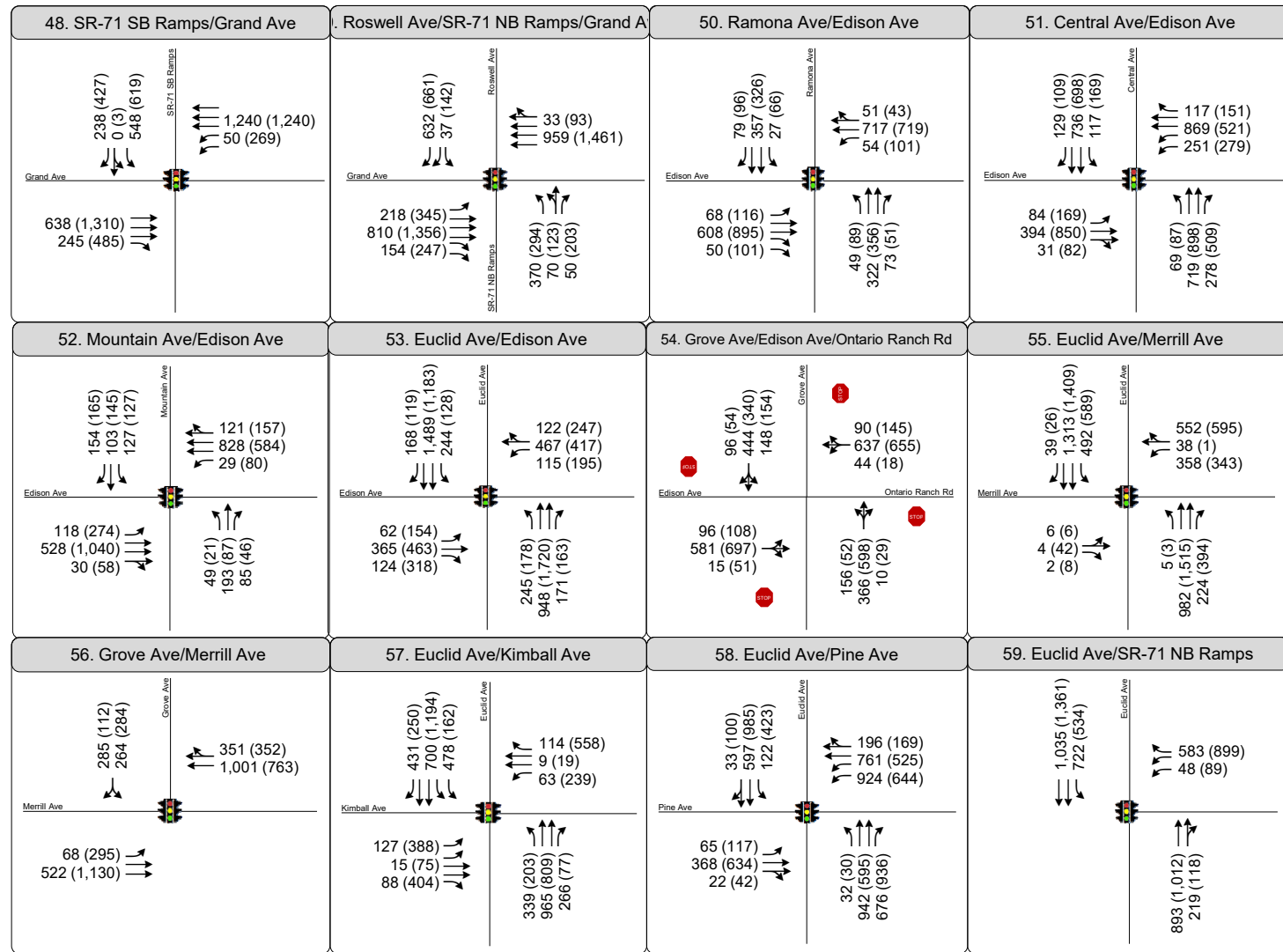
- Lane Configuration
- Stop Sign
- Signalized

\*Intersection 34 does not exist in this scenario



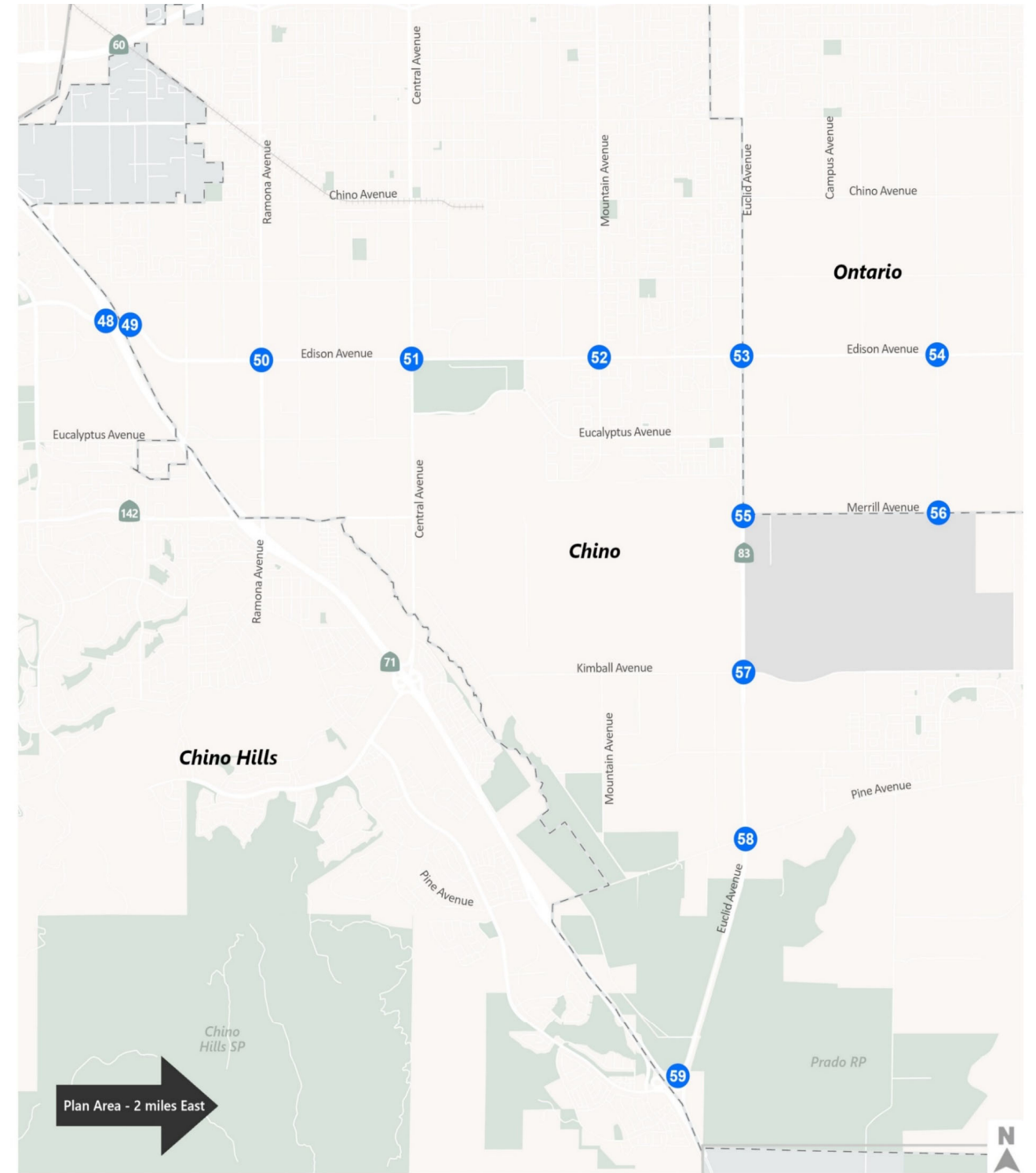
- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 11C  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Conditions



AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized



- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 11D  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Conditions



## 5.5 Opening Year (2025) Conditions Intersection Operations

Opening Year (2025) Conditions lane configurations and traffic volumes were used to evaluate operations at the study intersections under peak hour conditions. The results are summarized in **Table 8** and detailed LOS worksheets are provided in **Appendix C**.

The intersections of Ivy Avenue and Eucalyptus Avenue, and Mill Creek Avenue/Scholar Way and Eucalyptus Avenue are under construction in Existing (2021) Conditions and are planned signalized intersections. These intersections are assumed to be operating as signalized intersections under Opening Year (2025) conditions and all remaining analysis scenarios.

As shown in **Table 8**, the following 19 intersections operate below acceptable standards under Opening Year (2025) Conditions:

4. Haven Avenue and SR-60 Eastbound Ramps (City of Ontario and Caltrans)
5. Archibald Avenue and Riverside Drive (City of Ontario)
6. Haven Avenue and Riverside Drive (City of Ontario)
7. Archibald Avenue and Chino Avenue (City of Ontario)
11. Archibald Avenue and Ontario Ranch Road (City of Ontario)
12. Haven Avenue and Ontario Ranch Road (City of Ontario)
13. Hamner Avenue and Ontario Ranch Road (Cities of Ontario and Eastvale)
14. I-15 Southbound Ramps and Ontario Ranch Road (City of Eastvale and Caltrans)
15. I-15 Northbound Ramps and Ontario Ranch Road (City of Jurupa Valley and Caltrans)
21. Haven Avenue/Sumner Avenue and Eucalyptus Avenue (City of Ontario)
33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue (Cities of Ontario and Eastvale)
36. Archibald Avenue and Limonite Avenue (City of Eastvale)
42. Archibald Avenue and Schleisman Road (City of Eastvale)
49. Roswell Avenue/SR-71 Northbound Ramps and Grand Avenue (City of Chino and Caltrans)
53. Euclid Avenue (SR-83) and Edison Avenue (Cities of Ontario and Chino and Caltrans)
54. Grove Avenue and Edison Avenue/Ontario Ranch Road (City of Ontario)
55. Euclid Avenue (SR-83) and Merrill Avenue (Cities of Ontario and Chino and Caltrans)
57. Euclid Avenue (SR-83) and Kimball Avenue (City of Chino and Caltrans)
58. Euclid Avenue (SR-83) and Pine Avenue (City of Chino and Caltrans)





## 5.6 Opening Year (2025) Plus Project Conditions Roadway Improvements

All the roadway improvements and corresponding intersection improvements shown in **Figure 9** were assumed to be in operation under Opening Year (2025) Plus Project Conditions. The following Project roadway improvements were assumed to be constructed under full buildout of the Specific Plan, as shown on **Figure 2**, consistent with the SCAG RTP/SCS:

- Extension of Eucalyptus Avenue from Haven Avenue/Sumner Avenue to Mill Creek Avenue/Scholar Way as a four-lane facility
  - The Project would install the south half improvements, median and one westbound lane. The final westbound lane on the north side would be installed by the Great Park project.
- Widening of Merrill Avenue/Bellegrave Avenue from two to four lanes between Haven Avenue/Sumner Avenue to Mill Creek Avenue/Scholar
- Widening of Haven Avenue/Sumner Avenue from two/three to four lanes between Eucalyptus Avenue and Merrill Avenue/Bellegrave Avenue
- Widening of Mill Creek Avenue/Scholar Way from three to four lanes between Eucalyptus Avenue and Merrill Avenue/Bellegrave Avenue

## 5.7 Opening Year (2025) Plus Project Specific Plan Site Conditions

As described in Chapter 1, this scenario assumes the buildout of the Proposed Specific Plan, including the PAs that are added or altered with the proposed amendment. The fully built out specific plan is shown on **Figure 2**.

## 5.8 Opening Year (2025) Plus Project Conditions Traffic Volumes

As discussed in Chapter 1, traffic volumes for this scenario consist of traffic from Opening Year (2025) Conditions plus traffic generated by the proposed amendment. Opening Year (2025) Plus Project Conditions traffic volumes are presented on **Figure 12** along with lane configurations and traffic control.



## 5.9 Opening Year (2025) Plus Project Conditions Traffic Signal Warrant Analysis

The Project proposes to signalize the following intersections under full buildout of the Proposed Specific Plan:

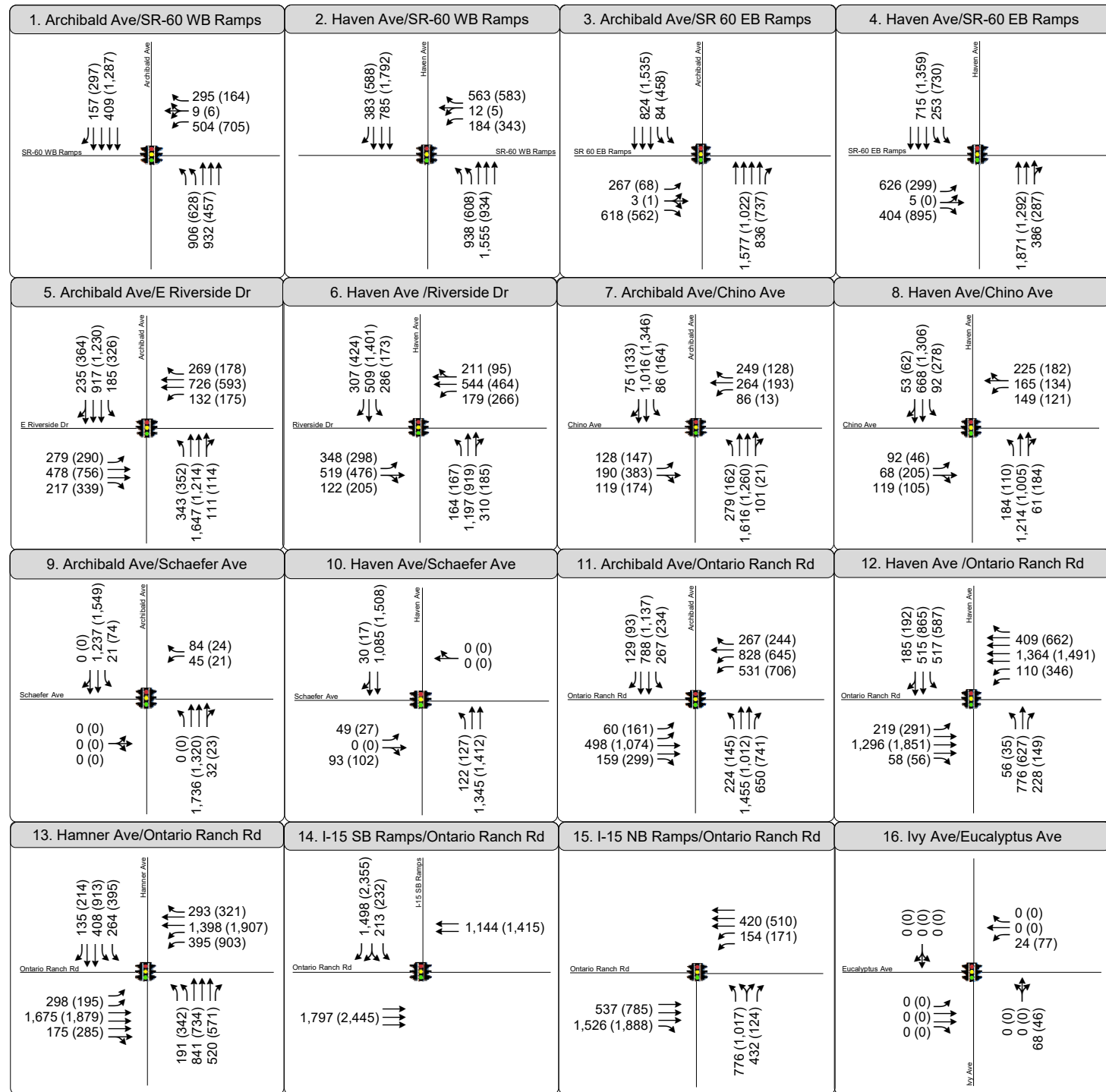
21. Haven Avenue/Sumner Avenue and Eucalyptus Avenue (City of Ontario)
26. Haven Avenue/Sumner Avenue and Parkview Street (City of Ontario)
34. Proposed Driveway D and Bellegrave Avenue (Cities of Ontario and Eastvale)

These intersections meet peak hour traffic signal warrants under Opening Year (2025) Plus Project Conditions and/or Cumulative Year (2040) Plus Project Conditions and were assumed to be signalized. Peak hour traffic signal warrants<sup>4</sup> for Opening Year (2025) Plus Project Conditions are provided in **Appendix F**.

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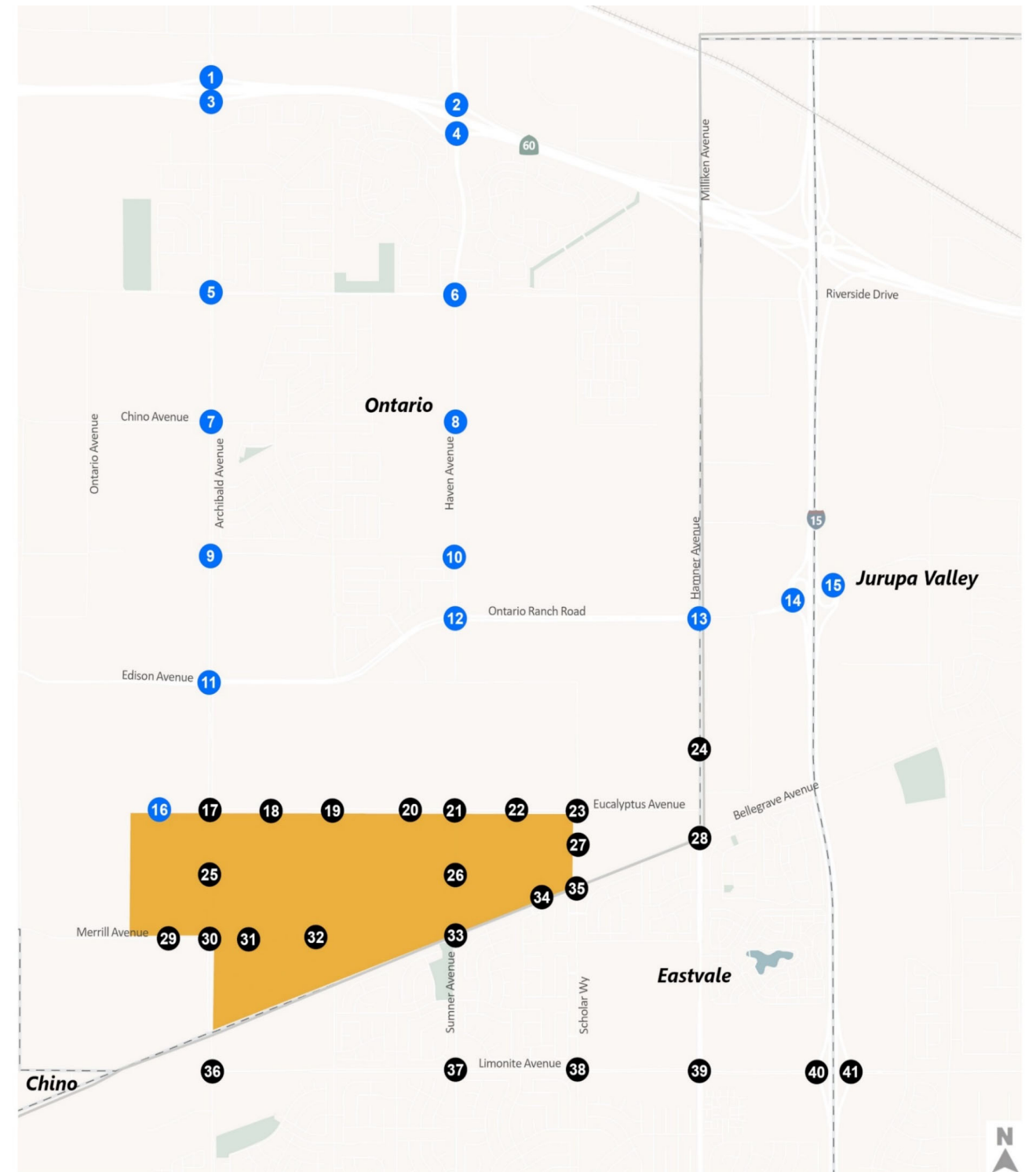
<sup>4</sup> This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. San Bernardino County and the City of Colton should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.





AM (PM) Peak Hour Traffic Volume

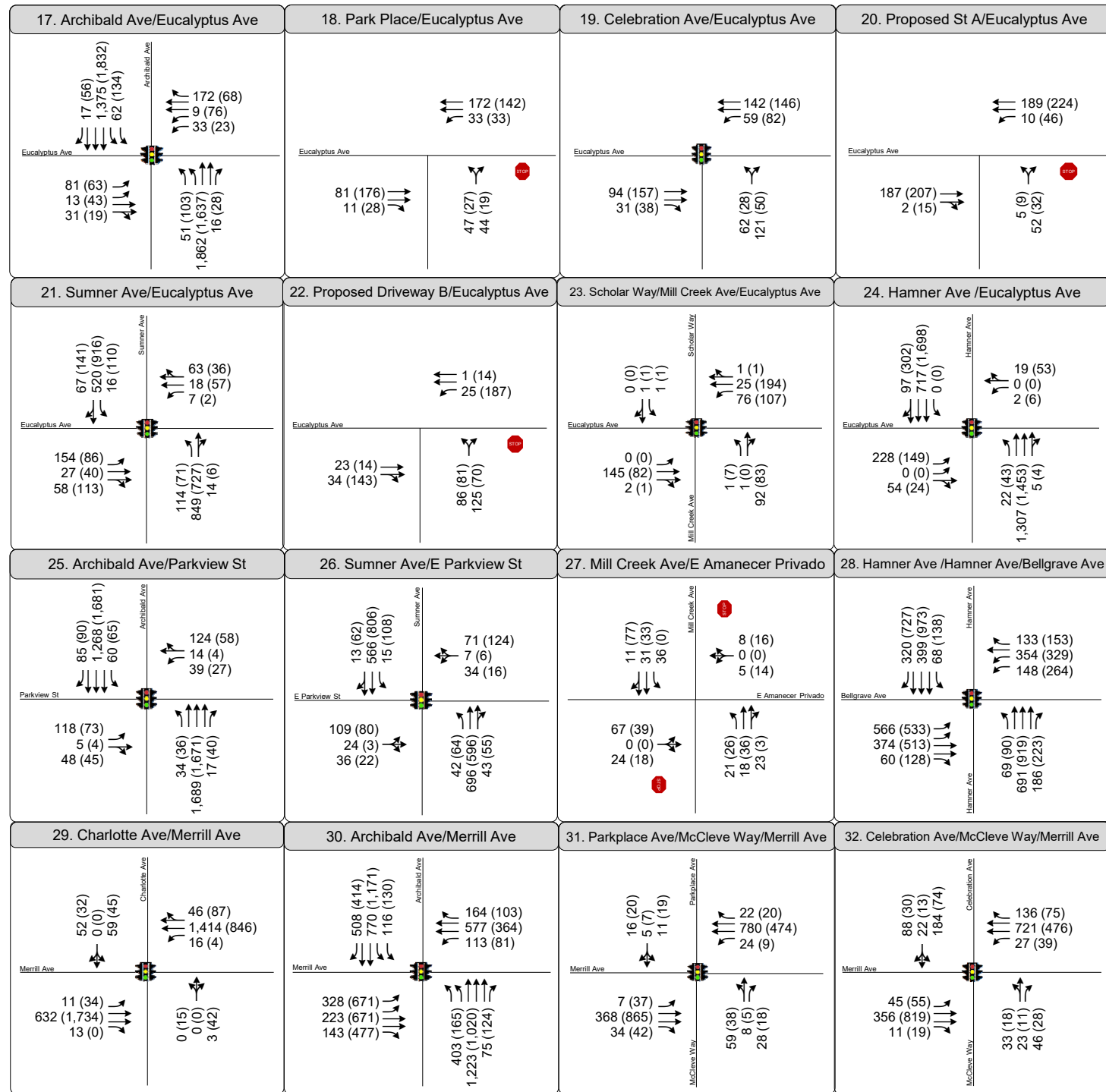
- Lane Configuration
- Stop Sign
- Signalized



- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

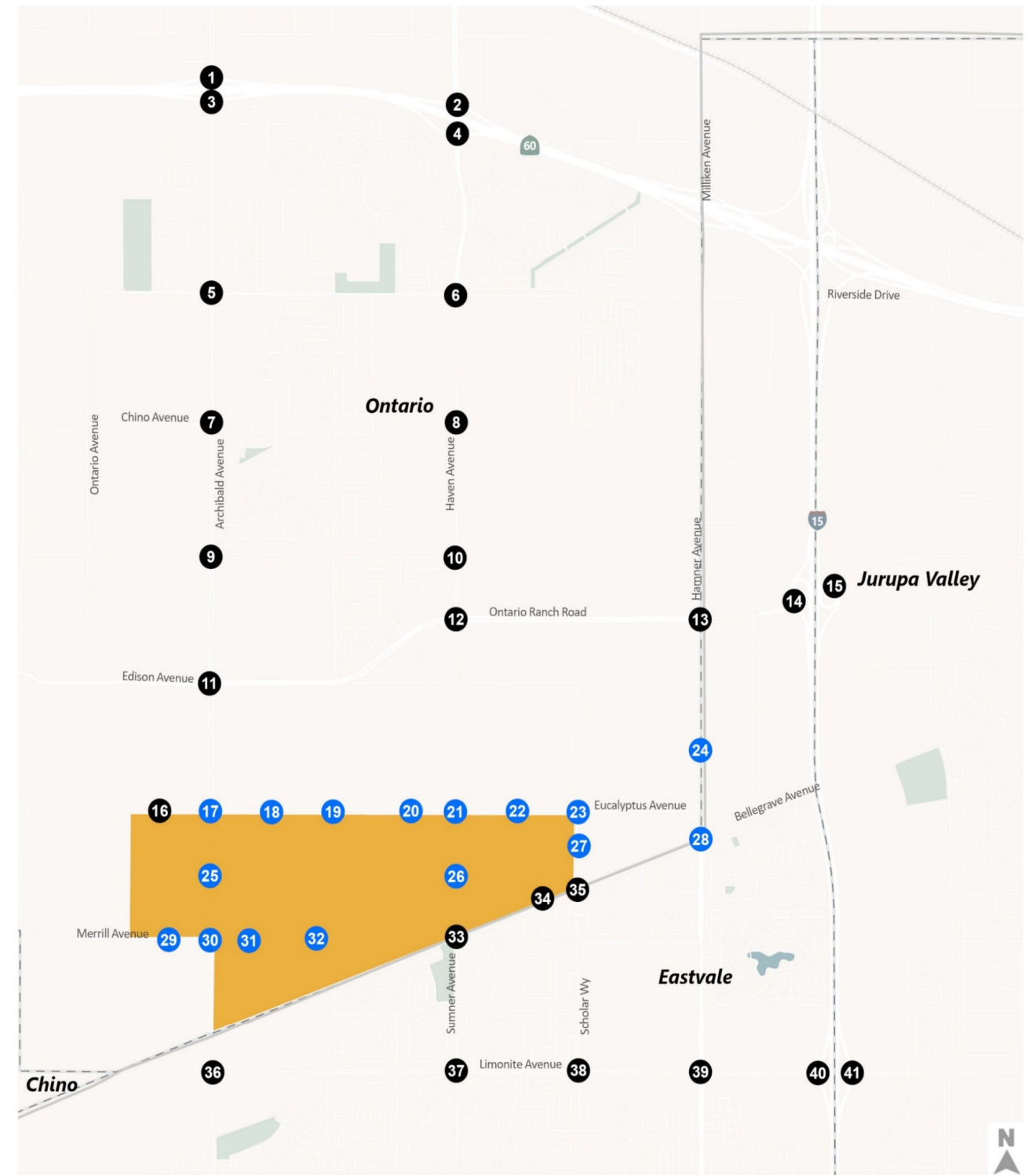
Figure 12A  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Plus Project Conditions





AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

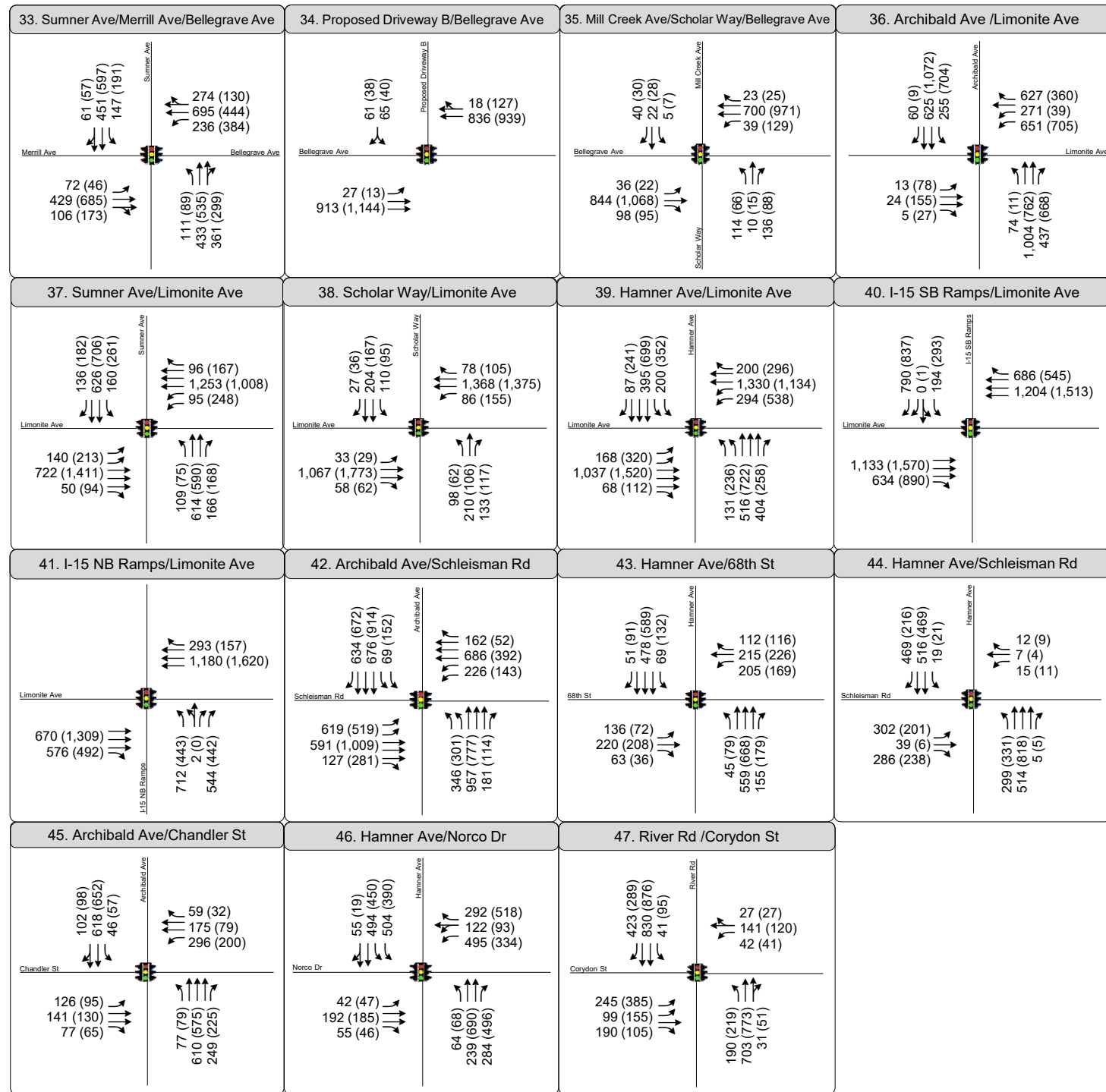


- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 12B  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Plus Project Conditions







AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

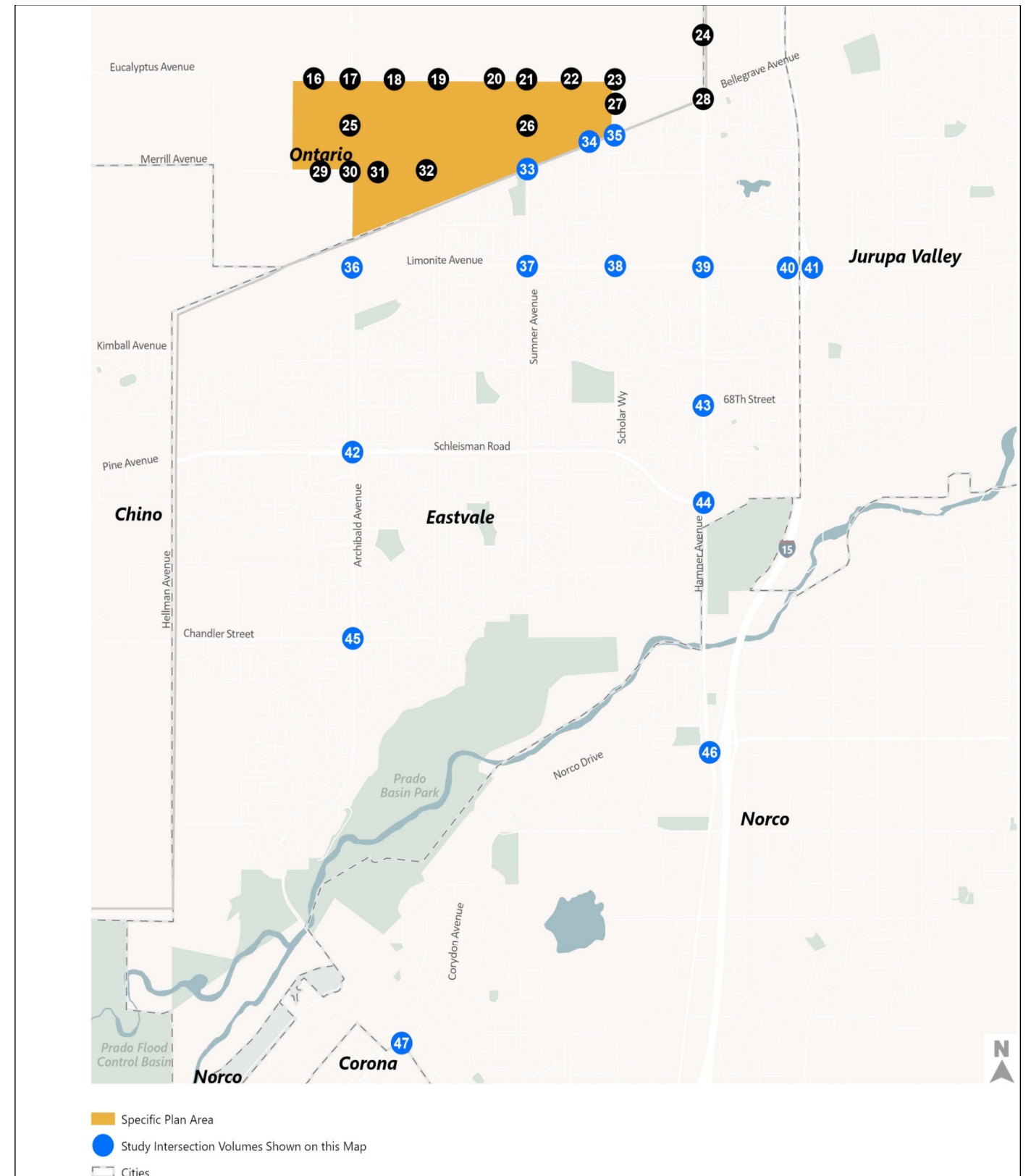
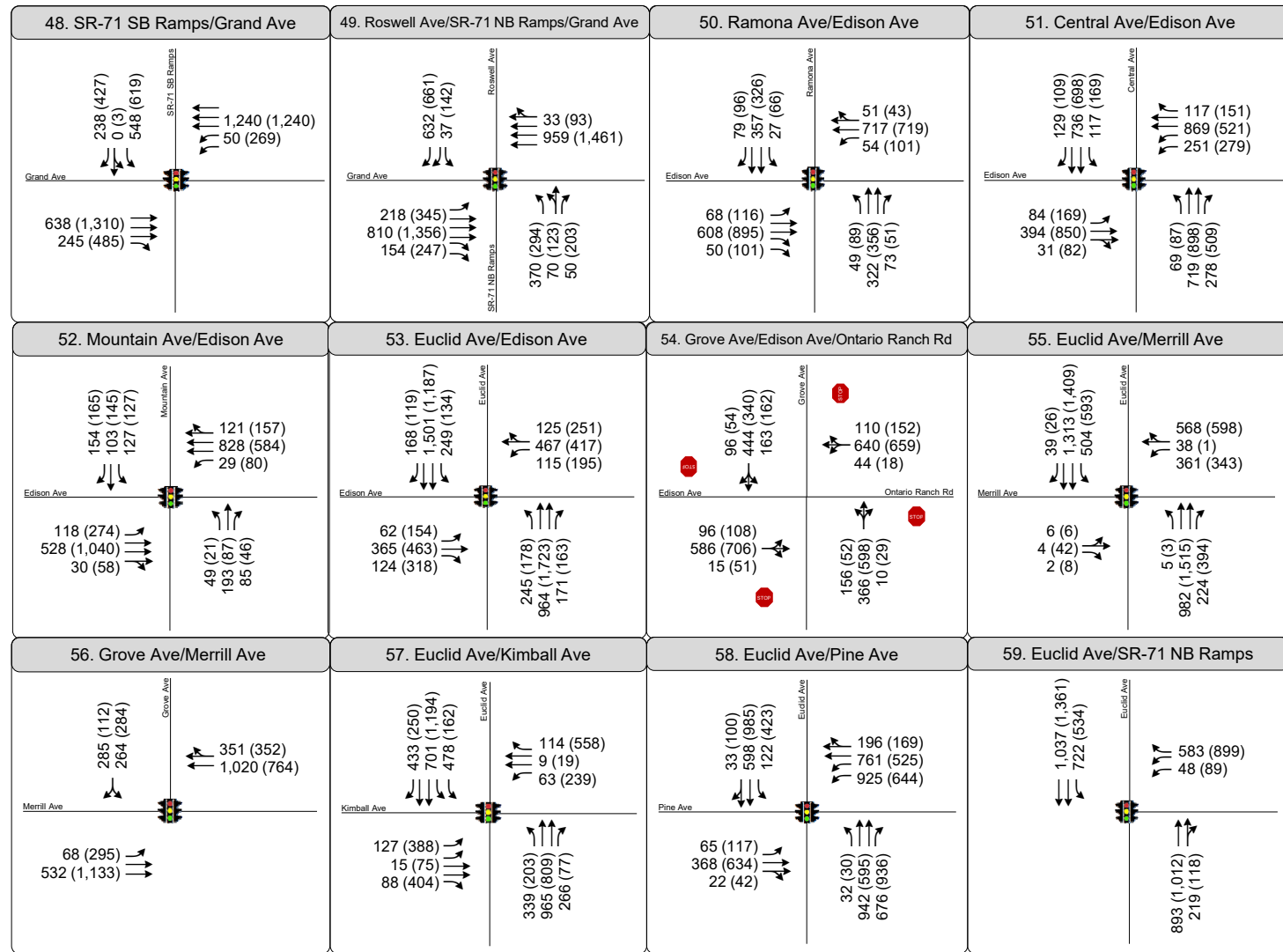


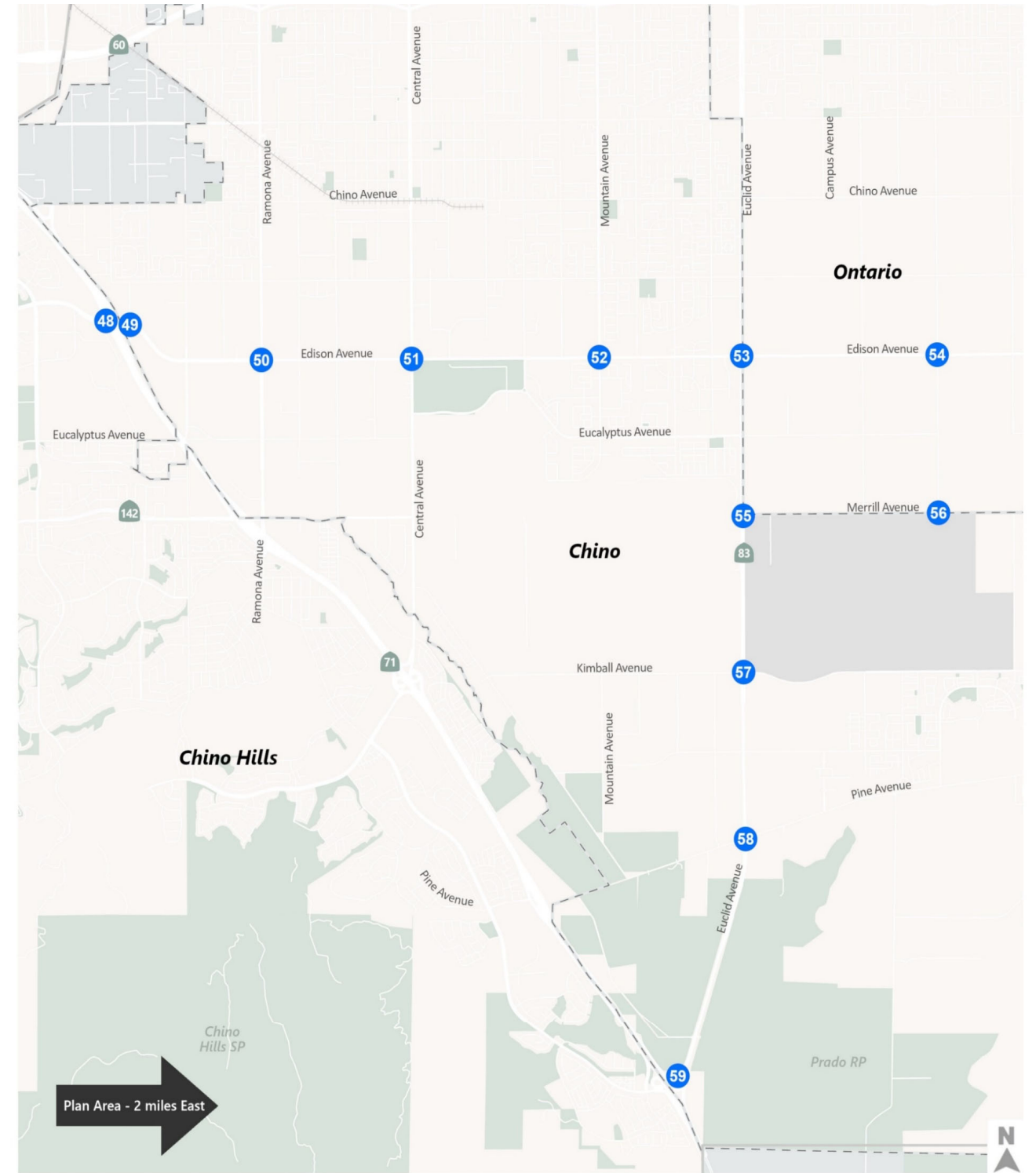
Figure 12C  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Plus Project Conditions





AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized



- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities



Figure 12D  
Peak Hour Traffic Volumes and Lane Configurations  
Opening Year (2025) Plus Project Conditions

## 5.10 Opening Year (2025) Plus Project Conditions Intersection Operations

Opening Year (2025) Plus Project Conditions lane configurations and traffic volumes were used to evaluate operations at the study intersections under peak hour conditions. The results are summarized in **Table 8** and detailed LOS worksheets are provided in **Appendix C**. Consistent with Opening Year (2025) Conditions, the following 18 intersections continue to operate below acceptable standards under the buildout of the Proposed Specific Plan:

4. Haven Avenue and SR-60 Eastbound Ramps (City of Ontario and Caltrans)
5. Archibald Avenue and Riverside Drive (City of Ontario)
6. Haven Avenue and Riverside Drive (City of Ontario)
7. Archibald Avenue and Chino Avenue (City of Ontario)
11. Archibald Avenue and Ontario Ranch Road (City of Ontario)
12. Haven Avenue and Ontario Ranch Road (City of Ontario)
13. Hamner Avenue and Ontario Ranch Road (Cities of Ontario and Eastvale)
14. I-15 Southbound Ramps and Ontario Ranch Road (City of Eastvale and Caltrans)
15. I-15 Northbound Ramps and Ontario Ranch Road (City of Jurupa Valley and Caltrans)
33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue (Cities of Ontario and Eastvale)
36. Archibald Avenue and Limonite Avenue (City of Eastvale)
42. Archibald Avenue and Schleisman Road (City of Eastvale)
49. Roswell Avenue/SR-71 Northbound Ramps and Grand Avenue (City of Chino and Caltrans)
53. Euclid Avenue (SR-83) and Edison Avenue (Cities of Ontario and Chino and Caltrans)
54. Grove Avenue and Edison Avenue/Ontario Ranch Road (City of Ontario)
55. Euclid Avenue (SR-83) and Merrill Avenue (Cities of Ontario and Chino and Caltrans)
57. Euclid Avenue (SR-83) and Kimball Avenue (City of Chino and Caltrans)
58. Euclid Avenue (SR-83) and Pine Avenue (City of Chino and Caltrans)

In addition to the above intersections, the following three intersections operate below acceptable standards under the buildout of the Proposed Specific Plan:

25. Archibald Avenue and Parkview Street (City of Ontario)
28. Hamner Avenue and Bellegrave Avenue (Cities of Ontario and Eastvale)
46. Hamner Avenue and Norco Drive/Sixth Street (City of Norco)

The intersections of Hamner Avenue and Bellegrave Avenue and Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue do not operate acceptably under City of Eastvale standards but do operate acceptably under City of Ontario standards. Due to intersection improvements proposed by the Project, the following intersection no longer operates below acceptable standards with the implementation of the Proposed Specific Plan:

21. Haven Avenue/Sumner Avenue and Eucalyptus Avenue (City of Ontario)



**Table 8: Opening Year (2025) and Opening Year (2025) Plus Project Intersection Level of Service**

Intersection	Jurisdiction	Opening Year (2025) Conditions			Opening Year (2025) Plus Project Conditions		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
1. Archibald Ave and SR-60 WB Ramps	City of Ontario and Caltrans	Signal	AM	C / 33	Signal	AM	C / 33
			PM	C / 33		PM	C / 33
2. Haven Ave and SR-60 WB Ramps	City of Ontario and Caltrans	Signal	AM	D / 43	Signal	AM	E / 70
			PM	D / 45		PM	D / 51
3. Archibald Ave and SR-60 EB Ramps	City of Ontario and Caltrans	Signal	AM	B / 16	Signal	AM	B / 16
			PM	B / 15		PM	B / 16
4. Haven Ave and SR-60 EB Ramps	City of Ontario and Caltrans	Signal	AM	C / 23	Signal	AM	D / 37
			PM	<b>F / 107</b>		PM	<b>F / 180</b>
5. Archibald Ave and Riverside Dr	City of Ontario	Signal	AM	<b>F / 89</b>	Signal	AM	<b>F / 92</b>
			PM	<b>F / 99</b>		PM	<b>F / 103</b>
6. Haven Ave and Riverside Dr	City of Ontario	Signal	AM	<b>F / 185</b>	Signal	AM	<b>F / 234</b>
			PM	<b>F / 214</b>		PM	<b>F / 268</b>
7. Archibald Ave and Chino Ave	City of Ontario	Signal	AM	E / 72	Signal	AM	E / 77
			PM	<b>F / 139</b>		PM	<b>F / 147</b>
8. Haven Ave and Chino Ave	City of Ontario	TWSC	AM	C / 28	TWSC	AM	D / 47
			PM	D / 46		PM	E / 71
9. Archibald Ave and Schaefer Ave	City of Ontario	Signal	AM	B / 11	Signal	AM	B / 12
			PM	A / 9		PM	A / 10
10. Haven Ave and Schaefer Ave	City of Ontario	Signal	AM	B / 14	Signal	AM	B / 14
			PM	B / 16		PM	C / 31
11. Archibald Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	<b>F / 164</b>	Signal	AM	<b>F / 178</b>
			PM	<b>F / 116</b>		PM	<b>F / 125</b>
12. Haven Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	<b>F / 112</b>	Signal	AM	<b>F / 143</b>
			PM	<b>F / 163</b>		PM	<b>F / 197</b>
13. Hamner Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	<b>F / 95</b>	Signal	AM	<b>F / 107</b>
			PM	<b>F / 183</b>		PM	<b>F / 208</b>
	City of Eastvale	Signal	AM	<b>F / 95</b>	Signal	AM	<b>F / 107</b>
			PM	<b>F / 183</b>		PM	<b>F / 208</b>
14. I-15 SB Ramps and Ontario Ranch Rd	City of Eastvale and Caltrans	Signal	AM	<b>E / 65</b>	Signal	AM	<b>E / 76</b>
			PM	<b>F / 192</b>		PM	<b>F / 246</b>
15. I-15 NB Ramps and Ontario Ranch Rd	City of Jurupa Valley and Caltrans	Signal	AM	<b>E / 69</b>	Signal	AM	<b>F / 110</b>
			PM	<b>F / 139</b>		PM	<b>F / 163</b>
16. Ivy Ave and Eucalyptus Ave	City of Ontario	Signal	AM	A / 8	Signal	AM	A / 7
			PM	A / 6		PM	A / 6
17. Archibald Ave and Eucalyptus Ave	City of Ontario	Signal	AM	E / 59	Signal	AM	E / 75
			PM	C / 27		PM	D / 42
18. Parkplace Ave and Eucalyptus Ave	City of Ontario	TWSC	AM	A / 10	TWSC	AM	B / 10
			PM	A / 10		PM	B / 11
19. Celebration Ave and Eucalyptus Ave	City of Ontario	Signal	AM	B / 13	Signal	AM	B / 13
			PM	B / 12		PM	B / 11
20. Proposed Dwy A and Eucalyptus Ave	City of Ontario	DNE <sup>3</sup>	AM	-	TWSC	AM	A / 9
			PM	-		PM	A / 10
21. Haven Ave/Sumner Ave and Eucalyptus Ave	City of Ontario	AWSC	AM	E / 45	Signal	AM	C / 30
			PM	<b>F / 100</b>		PM	D / 51
22. Proposed Dwy B and Eucalyptus Ave	City of Ontario	DNE <sup>3</sup>	AM	-	TWSC	AM	B / 10
			PM	-		PM	C / 17





**Table 8: Opening Year (2025) and Opening Year (2025) Plus Project Intersection Level of Service**

Intersection	Jurisdiction	Opening Year (2025) Conditions			Opening Year (2025) Plus Project Conditions		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
23. Mill Creek Ave/Scholar Way and Eucalyptus Ave	City of Ontario	Signal	AM	A / 6	Signal	AM	B / 11
			PM	A / 6		PM	A / 9
24. Hamner Ave and Eucalyptus Ave	City of Ontario	Signal	AM	A / 7	Signal	AM	A / 9
			PM	A / 8		PM	B / 13
	City of Eastvale	Signal	AM	A / 7	Signal	AM	A / 9
			PM	A / 8		PM	B / 13
25. Archibald Ave and Parkview St	City of Ontario	Signal	AM	E / 70	Signal	AM	<b>F / 90</b>
			PM	E / 79		PM	<b>F / 102</b>
26. Haven Ave/Sumner Ave and Parkview St	City of Ontario	TWSC	AM	C / 25	Signal	AM	A / 10
			PM	D / 32		PM	A / 10
27. Mill Creek Ave/Scholar Way and Proposed Dwy C	City of Ontario	TWSC	AM	A / 9	TWSC	AM	A / 6
			PM	A / 9		PM	A / 4
28. Hamner Ave and Bellegrave Ave	City of Ontario	Signal	AM	D / 35	Signal	AM	D / 47
			PM	D / 38		PM	E / 56
	City of Eastvale	Signal	AM	D / 35	Signal	AM	D / 47
			PM	D / 38		PM	<b>E / 56</b>
29. Charlotte Ave and Merrill Ave	City of Ontario	Signal	AM	B / 12	Signal	AM	B / 13
			PM	B / 13		PM	B / 13
30. Archibald Ave and Merrill Ave	City of Ontario	Signal	AM	D / 49	Signal	AM	D / 52
			PM	E / 61		PM	E / 63
31. Parkplace Ave/McCleve Way and Merrill Ave	City of Ontario	Signal	AM	B / 10	Signal	AM	B / 11
			PM	B / 10		PM	B / 11
32. Celebration Ave/McCleve Way and Merrill Ave	City of Ontario	Signal	AM	B / 14	Signal	AM	B / 15
			PM	B / 12		PM	B / 12
33. Haven Ave/Sumner Ave and Merrill Ave/Bellegrave Ave	City of Ontario	Signal	AM	D / 46	Signal	AM	D / 51
			PM	<b>F / 148</b>		PM	E / 75
	City of Eastvale	Signal	AM	D / 46	Signal	AM	D / 51
			PM	<b>F / 148</b>		PM	<b>E / 75</b>
34. Proposed Dwy D and Bellegrave Ave	City of Ontario	DNE <sup>3</sup>	AM	-	Signal	AM	A / 6
			PM	-		PM	A / 5
	City of Eastvale	DNE <sup>3</sup>	AM	-	Signal	AM	A / 6
			PM	-		PM	A / 5
35. Mill Creek Ave/Scholar Way and Bellegrave Ave	City of Ontario	Signal	AM	B / 16	Signal	AM	B / 19
			PM	D / 42		PM	B / 20
	City of Eastvale	Signal	AM	B / 16	Signal	AM	B / 19
			PM	D / 42		PM	B / 20
36. Archibald Ave and Limonite Ave	City of Eastvale	Signal	AM	D / 38	Signal	AM	D / 41
			PM	<b>F / 81</b>		PM	<b>F / 83</b>
37. Sumner Ave and Limonite Ave	City of Eastvale	Signal	AM	C / 29	Signal	AM	C / 33
			PM	D / 37		PM	D / 38
38. Scholar Way and Limonite Ave	City of Eastvale	Signal	AM	C / 25	Signal	AM	C / 29
			PM	C / 34		PM	D / 38
39. Hamner Ave and Limonite Ave	City of Eastvale	Signal	AM	C / 35	Signal	AM	D / 35
			PM	D / 47		PM	D / 48
40. I-15 SB Ramps and Limonite Ave	City of Eastvale and Caltrans	Signal	AM	A / 9	Signal	AM	A / 9
			PM	A / 10		PM	A / 10
41. I-15 NB Ramps and Limonite Ave	City of Jurupa Valley and Caltrans	Signal	AM	A / 10	Signal	AM	A / 10
			PM	A / 7		PM	A / 7
42. Archibald Ave and Schleisman Rd	City of Eastvale	Signal	AM	<b>E / 57</b>	Signal	AM	<b>E / 58</b>
			PM	D / 37		PM	D / 37



**Table 8: Opening Year (2025) and Opening Year (2025) Plus Project Intersection Level of Service**

Intersection	Jurisdiction	Opening Year (2025) Conditions			Opening Year (2025) Plus Project Conditions		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
43. Hamner Ave and 68 <sup>th</sup> St	City of Eastvale	Signal	AM	D / 36	Signal	AM	D / 36
			PM	C / 35		PM	C / 35
44. Hamner Ave and Schleisman Rd	City of Eastvale	Signal	AM	C / 29	Signal	AM	C / 31
			PM	B / 17		PM	B / 17
45. Archibald Ave and Chandler St	City of Eastvale	Signal	AM	C / 25	Signal	AM	C / 26
			PM	C / 20		PM	C / 21
46. Hamner Ave and Norco Dr/Sixth St	City of Norco	Signal	AM	D / 50	Signal	AM	<b>E / 65</b>
			PM	D / 43		PM	D / 49
47. River Rd and Corydon St	City of Norco	Signal	AM	C / 23	Signal	AM	C / 24
			PM	C / 29		PM	C / 30
48. SR-71 SB Ramps and Grand Ave	City of Chino Hills and Caltrans	Signal	AM	C / 20	Signal	AM	C / 20
			PM	C / 28		PM	C / 28
49. Roswell Ave/SR-71 NB Ramps and Grand Ave	City of Chino and Caltrans	Signal	AM	D / 43	Signal	AM	D / 43
			PM	<b>F / 81</b>		PM	F / 81
50. Ramona Ave and Edison Ave	City of Chino	Signal	AM	B / 20	Signal	AM	B / 20
			PM	C / 24		PM	C / 24
51. Central Ave and Edison Ave	City of Chino	Signal	AM	C / 34	Signal	AM	C / 34
			PM	D / 49		PM	D / 49
52. Mountain Ave and Edison Ave	City of Chino	Signal	AM	C / 24	Signal	AM	C / 24
			PM	D / 36		PM	D / 36
53. Euclid Ave (SR-83) and Edison Ave	City of Ontario and Caltrans	Signal	AM	<b>F / 105</b>	Signal	AM	<b>F / 107</b>
			PM	<b>F / 139</b>		PM	<b>F / 142</b>
	City of Chino and Caltrans	Signal	AM	<b>F / 105</b>	Signal	AM	<b>F / 107</b>
			PM	<b>F / 139</b>		PM	<b>F / 142</b>
54. Grove Ave and Edison Ave/Ontario Ranch Rd	City of Ontario	AWSC	AM	<b>F / 457</b>	AWSC	AM	<b>F / 473</b>
			PM	<b>F / 575</b>		PM	<b>F / 585</b>
55. Euclid Ave (SR-83) and Merrill Ave	City of Ontario and Caltrans	Signal	AM	E / 78	Signal	AM	<b>F / 82</b>
			PM	<b>F / 129</b>		PM	<b>F / 130</b>
	City of Chino and Caltrans	Signal	AM	<b>E / 78</b>	Signal	AM	<b>F / 82</b>
			PM	<b>F / 129</b>		PM	<b>F / 130</b>
56. Grove Ave and Merrill Ave	City of Ontario	Signal	AM	D / 39	Signal	AM	D / 40
			PM	C / 31		PM	C / 31
57. Euclid Ave (SR-83) and Kimball Ave	City of Chino and Caltrans	Signal	AM	C / 32	Signal	AM	C / 32
			PM	<b>E / 77</b>		PM	<b>E / 77</b>
58. Euclid Ave (SR-83) and Pine Ave	City of Chino and Caltrans	Signal	AM	<b>E / 55</b>	Signal	AM	<b>E / 55</b>
			PM	<b>F / 114</b>		PM	<b>F / 114</b>
59. SR-71 NB Ramps and Euclid Ave (SR-83)	City of Chino and Caltrans	Signal	AM	D / 39	Signal	AM	D / 41
			PM	B / 19		PM	B / 19

Notes:  
 1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way-stop-controlled (AWSC). Worst lane delay reported for two-way-stop-controlled (TWSC) intersections.  
 2. Delay Operations were calculated using HCM 6th methodologies.  
 3. DNE = Does Not Exist.  
 4. **Bolded** results operate below acceptable LOS standards.

Source: Fehr & Peers, 2022.



# 6. Cumulative Year (2040) Conditions

This chapter summarizes the Cumulative Year (2040) No Project Conditions and Cumulative Year (2040) Plus Project Conditions as outlined in Chapter 1.

## 6.1 Cumulative Year (2040) No Project Conditions Planned Roadway Improvements

As stated in Chapter 5, there are many roadway improvements planned to help satisfy the needs of the Ranch community. To accurately model the Cumulative Year (2040) No Project Conditions roadway network in the study area, Fehr & Peers referenced the 2020 SCAG RTP/SCS and verified the improvements and their opening years with the appropriate jurisdictions. **Figure 13** shows all the roadway improvements assumed to be constructed and in operation under Cumulative Year (2040) No Project Conditions, as well as all the Opening Year (2025) roadway improvements shown on **Figure 9**. Note all the roadway improvements on or within the City of Ontario's borders are included in the *City's Development Impact Fee (DIF) Calculation and Nexus Update Report, (2019)*. Both the 2020 SCAG RTP/SCS and DIF Calculation and Nexus Update Report provide high level descriptions of the assumed roadway improvements. Fehr & Peers used the high-level information provided, existing right-of-way (ROW), and engineering judgment to estimate the Cumulative Year (2040) No Project roadway network, which is shown in **Figure 15**.

## 6.2 Cumulative Year (2040) No Project Specific Plan Site Conditions

As described in Chapter 1, this scenario assumes the buildout of the Approved Specific Plan. This scenario also accounts for the adopted general plan land use assumptions, including 326 single-family dwelling units and a 451-student school in the area where PAs 32-34 of the Proposed Specific Plan are located. **Figure 14** shows a summary of the newly operational PAs relative to Opening Year (2025) Conditions.

## 6.3 Cumulative Year (2040) No Project Traffic Volumes

Traffic volumes for this scenario consist of existing counts plus the growth derived from SBTAM using the adopted general plan land use assumptions. The Cumulative Year (2040) No Project traffic volumes are shown on **Figure 15** along with lane configurations and traffic control. Although the intersections within the study area generally experience an increase in total traffic relative to the Opening Year (2025) Conditions traffic volumes, shown on **Figure 12**, some intersection turning movements do decrease. These decreases are a result of the numerous roadway extensions planned in the Ranch area, resulting in increased capacity for north/south and east/west access.



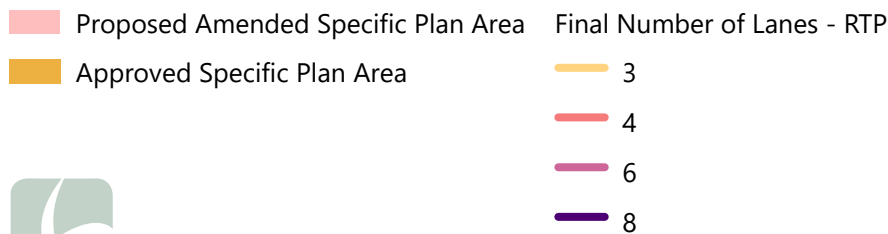
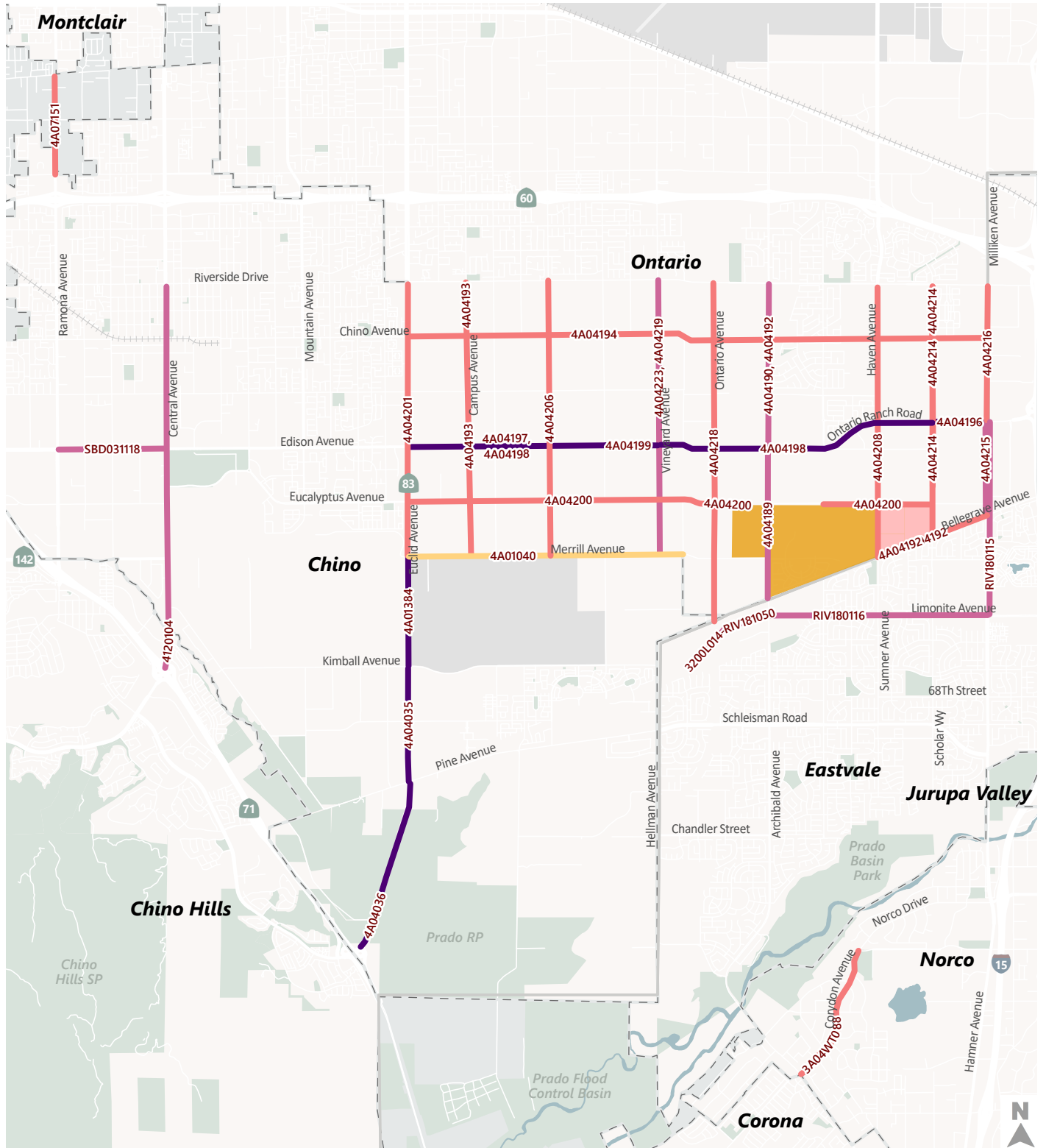
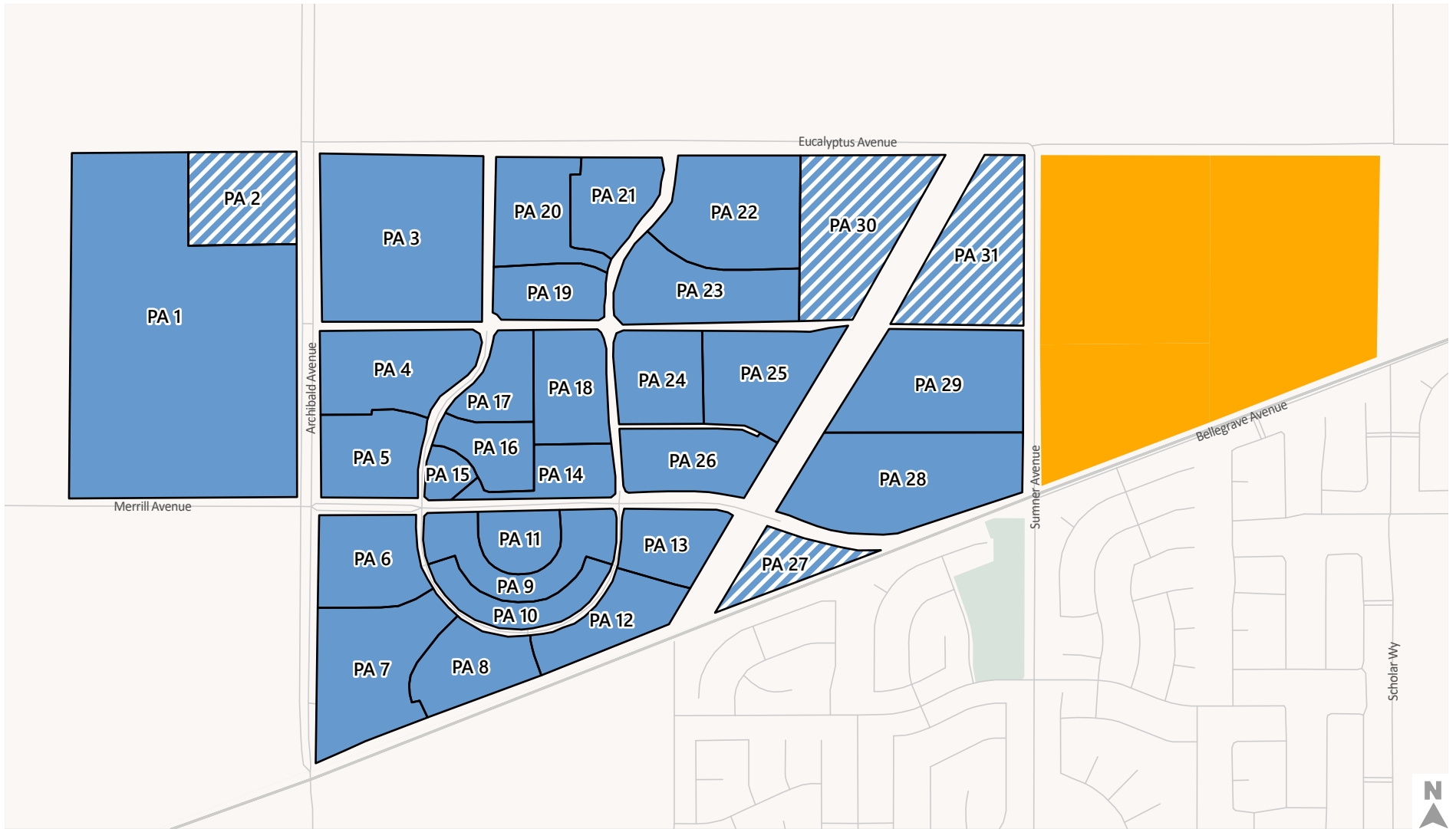


Figure 13

## Roadway Improvements Cumulative Year (2040) Conditions





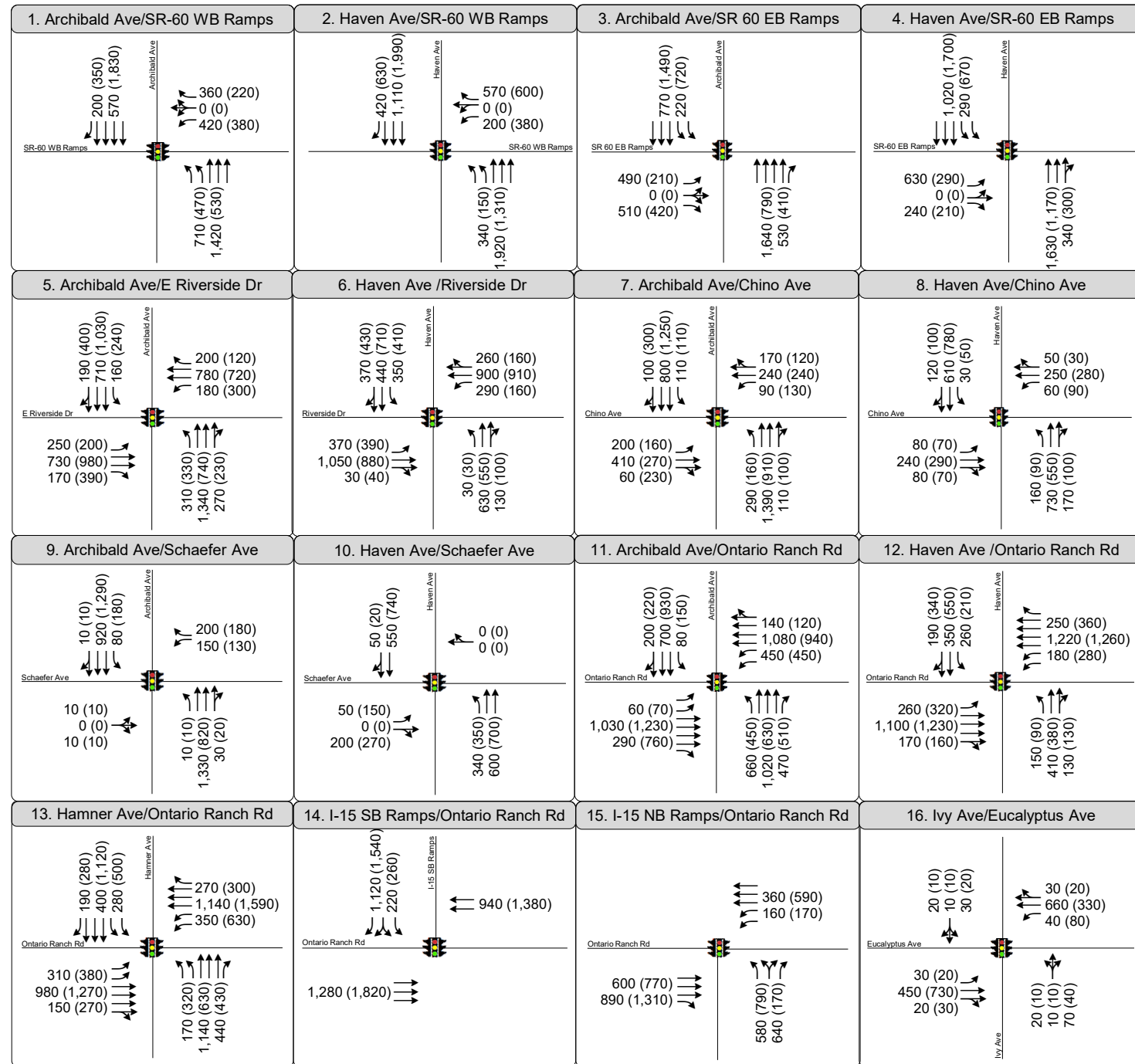


- Built PA
- Adopted (Newly Operational) PA
- General Plan Land Use



Figure 14

Subarea 29 Specific Plan  
 Cumulative Year (2040) No Project Specific Plan Site Conditions



AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

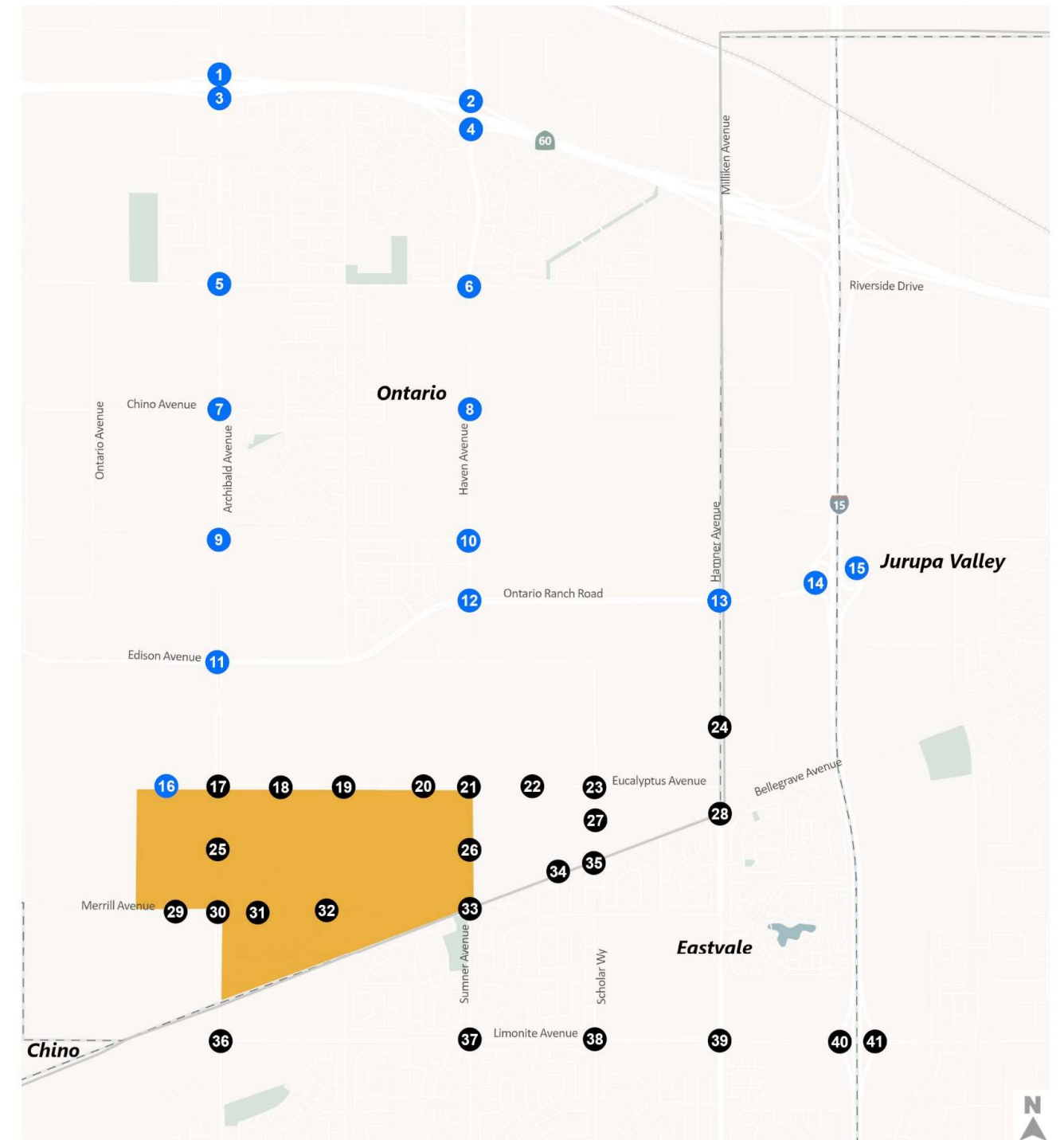


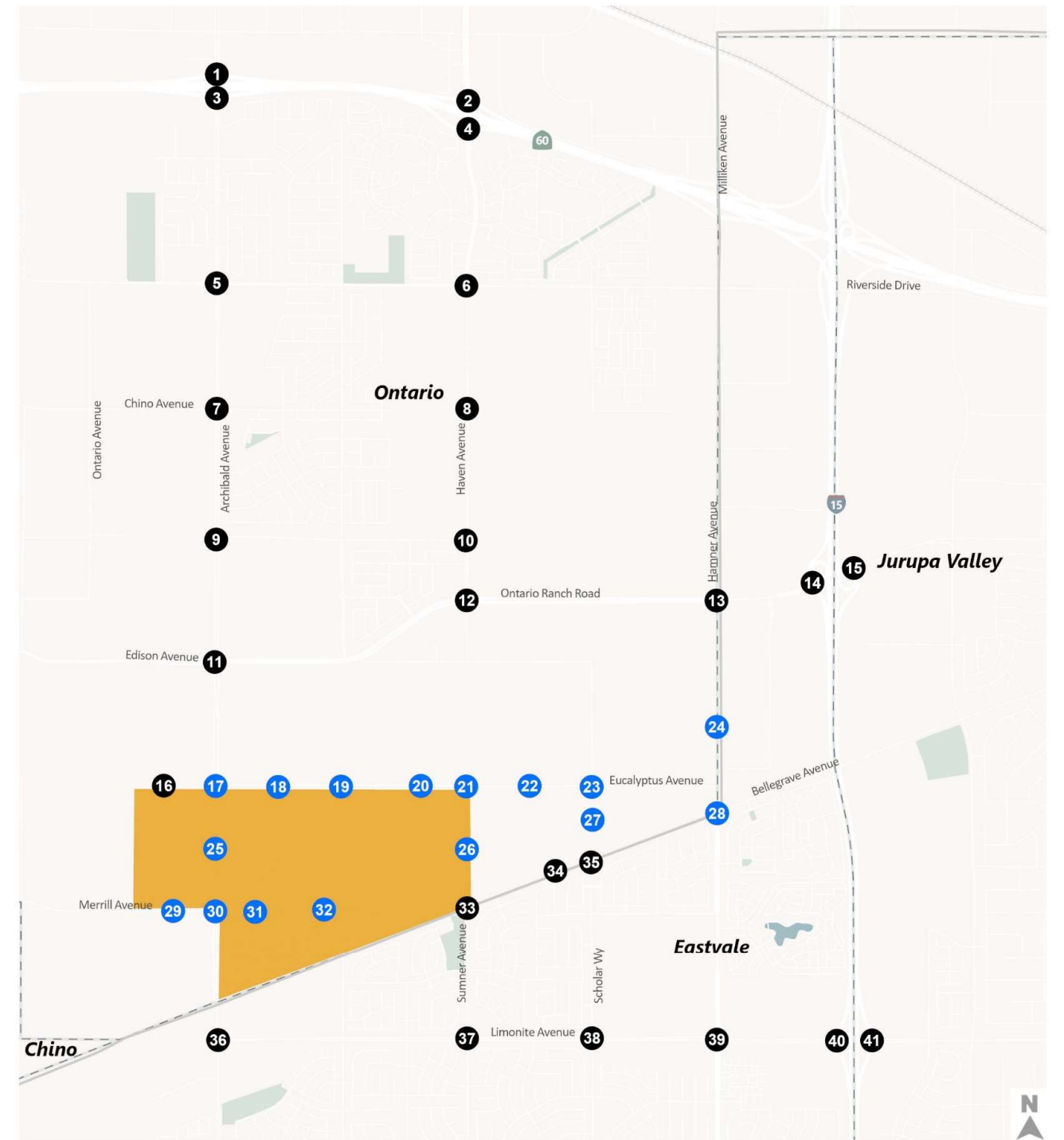
Figure 15A  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) No Project Conditions



<p>17. Archibald Ave/Eucalyptus Ave</p>	<p>18. Park Place/Eucalyptus Ave</p>	<p>19. Celebration Ave/Eucalyptus Ave</p>	<p>20. Proposed St A/Eucalyptus Ave</p>
<p>21. Sumner Ave/Eucalyptus Ave</p>	<p>22. Proposed Driveway B/Eucalyptus Ave</p>	<p>23. Scholar Way/Mill Creek Ave/Eucalyptus Ave</p>	<p>24. Hamner Ave /Eucalyptus Ave</p>
<p>25. Archibald Ave/Parkview St</p>	<p>26. Sumner Ave/E Parkview St</p>	<p>27. Mill Creek Ave/E Amanecer Privado</p>	<p>28. Hamner Ave/Bellgrave Ave</p>
<p>29. Charlotte Ave/Merrill Ave</p>	<p>30. Archibald Ave/Merrill Ave</p>	<p>31. Parkplace Ave/McCleve Way/Merrill Ave</p>	<p>32. Celebration Ave/McCleve Way/Merrill Ave</p>

AM (PM) Peak Hour Traffic Volume

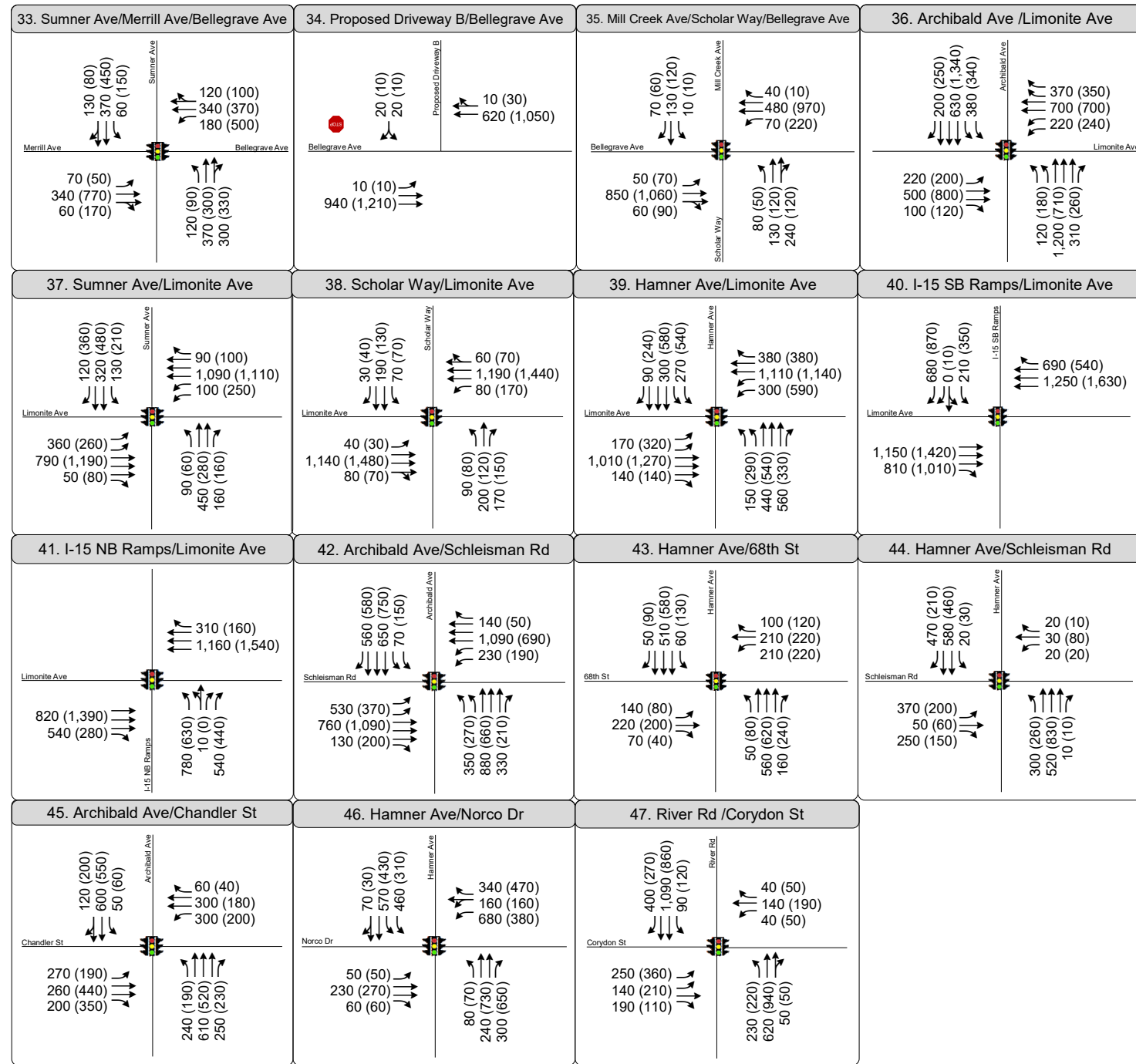
- Lane Configuration
- Stop Sign
- Signalized



- Approved Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

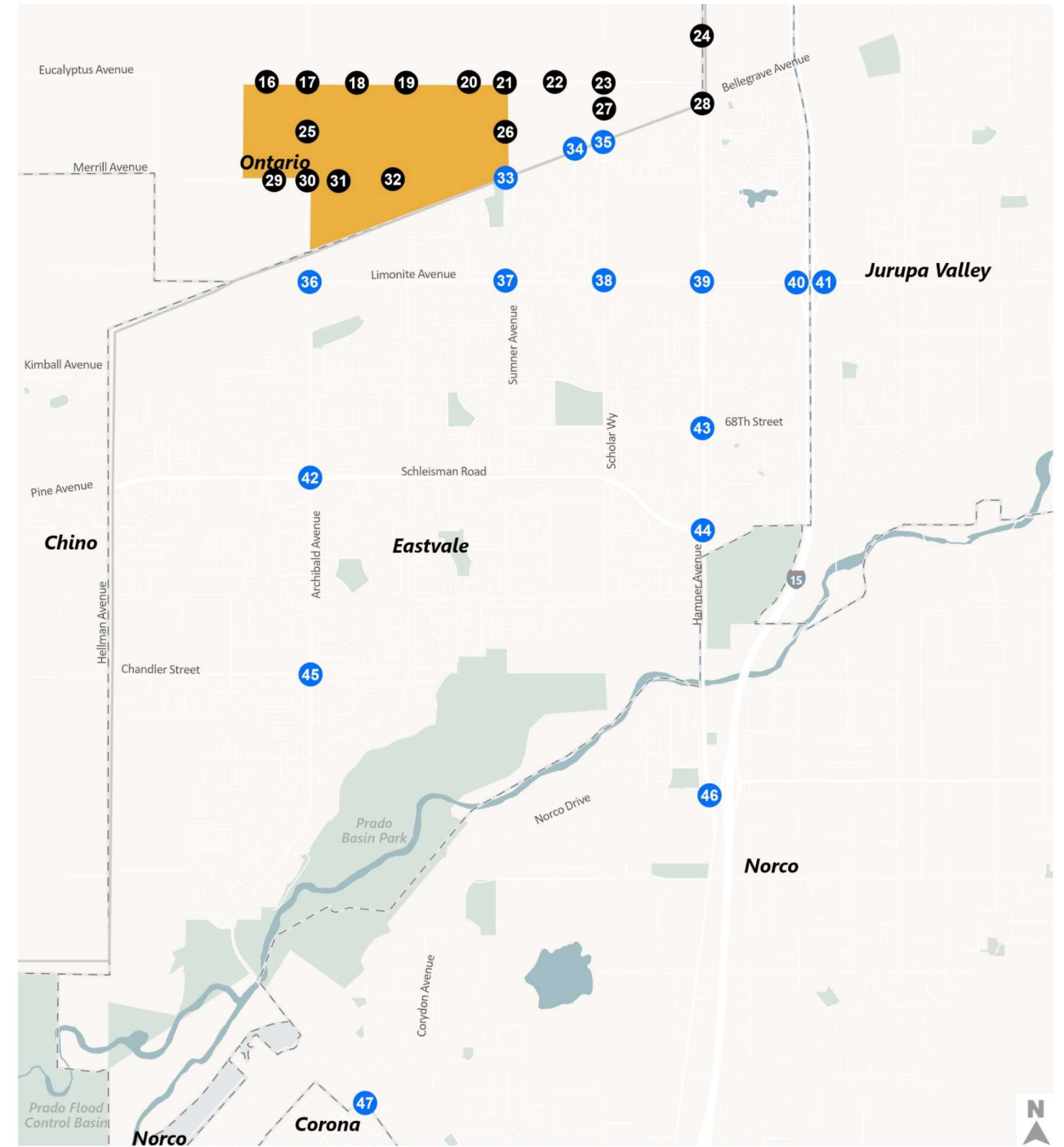
Figure 15B  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) No Project Conditions





AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

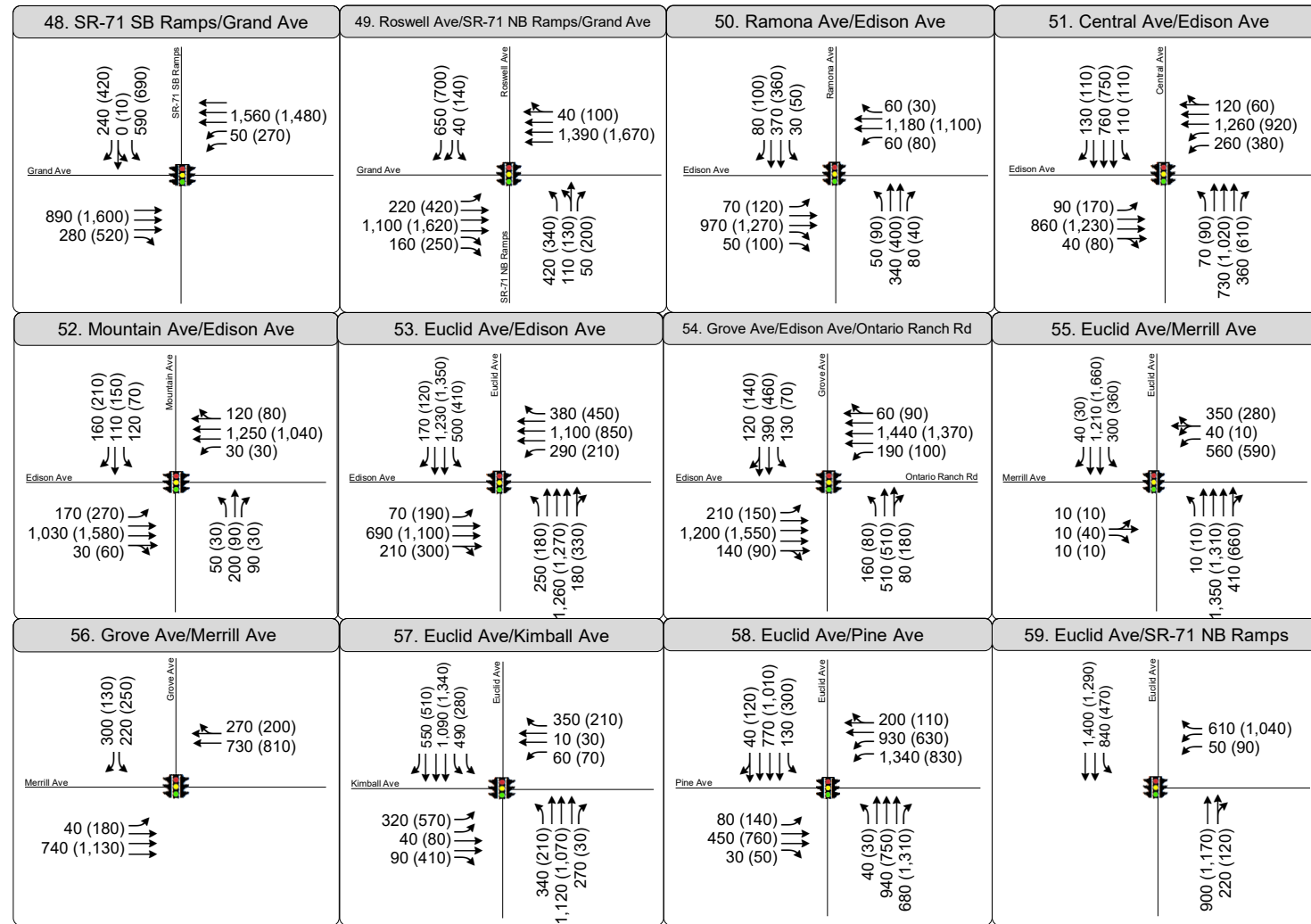


- Approved Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities



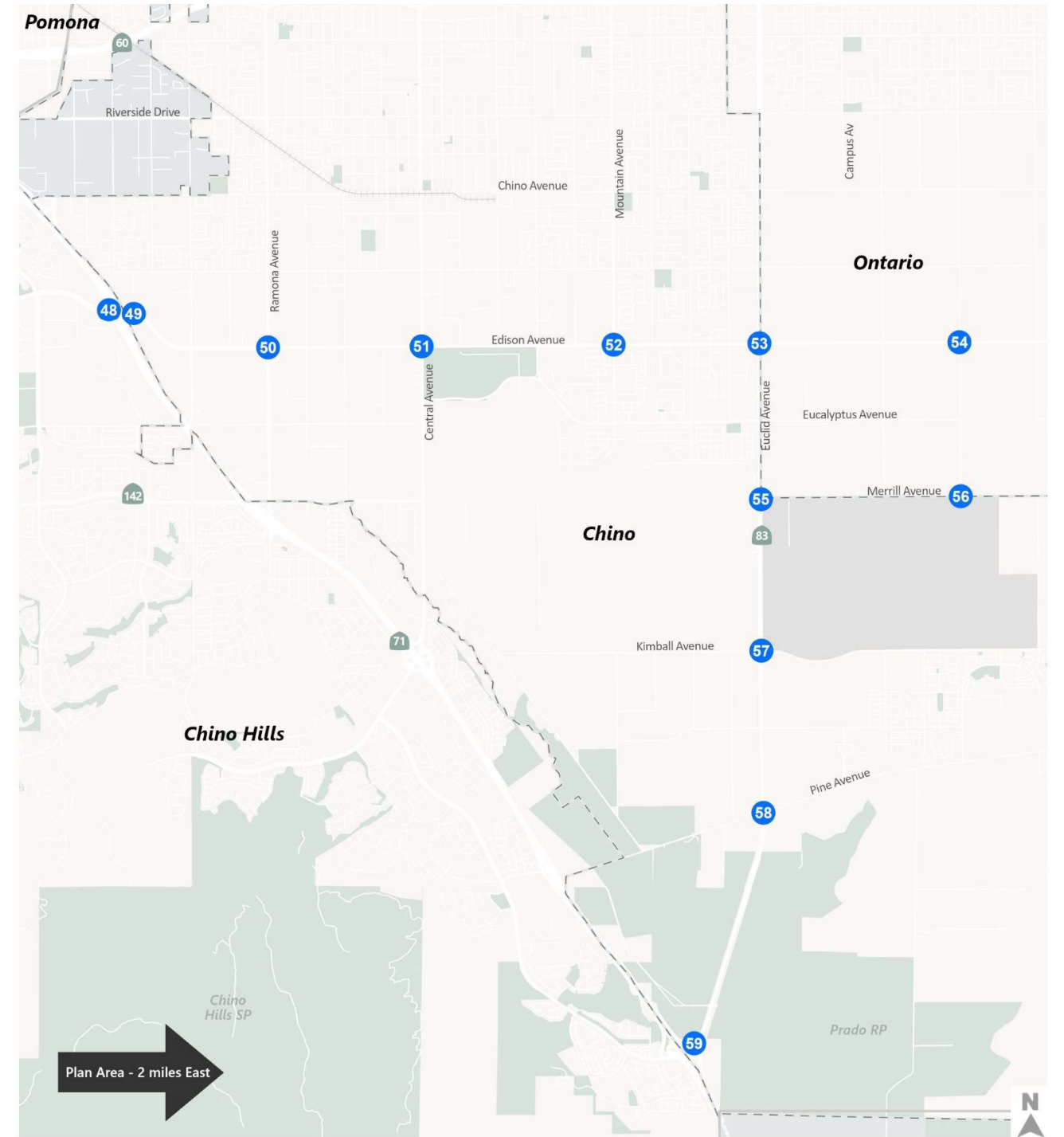
Figure 15C  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) No Project Conditions





AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized



- Study Intersection Volumes Shown on this Map
- Cities



Figure 15D  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) No Project Conditions

## 6.4 Cumulative Year (2040) No Project Conditions Traffic Signal Warrant Analysis

Peak hour traffic signal warrants<sup>5</sup> for Cumulative Year (2040) No Project Conditions are provided in **Appendix F**. The following unsignalized intersections are affected by planned roadway improvements, meet peak hour traffic signal warrants, and were assumed to be signalized:

8. Haven Avenue and Chino Avenue (City of Ontario)
21. Haven Avenue/Sumner Avenue and Eucalyptus Avenue (City of Ontario)
54. Grove Avenue and Merrill Avenue (City of Ontario)

## 6.5 Cumulative Year (2040) No Project Conditions Intersection Operations

Cumulative Year (2040) No Project Conditions lane configurations and traffic volumes were used to evaluate operations at the study intersections under peak hour conditions. The results are summarized in **Table 9**, and detailed LOS worksheets are provided in **Appendix C**. As shown in **Table 9**, the following eight intersections operate below acceptable standards under Cumulative Year (2040) No Project Conditions:

6. Haven Avenue and Riverside Drive (City of Ontario)
13. Hamner Avenue and Ontario Ranch Road (Cities of Ontario and Eastvale)
14. I-15 Southbound Ramps and Ontario Ranch Road (City of Eastvale and Caltrans)
15. I-15 Northbound Ramps and Ontario Ranch Road (City of Jurupa Valley and Caltrans)
33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue (Cities of Ontario and Eastvale)
53. Euclid Avenue (SR-83) and Edison Avenue (Cities of Ontario and Chino and Caltrans)
55. Euclid Avenue (SR-83) and Merrill Avenue (Cities of Ontario and Chino and Caltrans)
58. Euclid Avenue (SR-83) and Pine Avenue (City of Chino and Caltrans)

The intersections of Hamner Avenue and Ontario Ranch Road and Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue do not operate acceptably City of Eastvale standards but do operate acceptably under City of Ontario standards.

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<sup>5</sup> This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. San Bernardino County and the City of Colton should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



## 6.6 Cumulative Year (2040) Plus Project Conditions Planned Roadway Improvements

This scenario's roadway network is consistent with the roadway improvements shown in **Figure 13** and is identical to the Cumulative Year (2040) No Project Conditions roadway network.

## 6.7 Cumulative Year (2040) Plus Project Specific Plan Site Conditions

As described in Chapter 1, this scenario assumes the buildout of the Proposed Specific Plan, including the PAs that are added or altered with the proposed amendment. The fully built out specific plan is shown in **Figure 2**.

## 6.8 Cumulative Year (2040) Plus Project Conditions Traffic Volumes

As discussed in Chapter 1, traffic volumes for this scenario consist of traffic from Cumulative Year (2040) No Project Conditions plus traffic generated by the proposed amendment. Cumulative Year (2040) Plus Project Conditions traffic volumes are presented in **Figure 16** along with lane configurations and traffic control.

## 6.9 Cumulative Year (2040) Plus Project Conditions Traffic Signal Warrant Analysis

The following intersections meet peak hour signal warrants under Cumulative Year (2040) No Project Conditions and were assumed to be signalized under Cumulative Year (2040) Plus Project Conditions. Peak hour traffic signal warrants<sup>6</sup> for Cumulative Year (2040) Plus Project Conditions are provided in **Appendix F**.

8. Haven Avenue and Chino Avenue (City of Ontario)
21. Haven Avenue/Sumner Avenue and Eucalyptus Avenue (City of Ontario)
54. Grove Avenue and Merrill Avenue (City of Ontario)

The Project proposes to signalize the following intersections under full buildout of the Proposed Specific Plan, which meet peak hour traffic signal warrants under Cumulative Year (2040) Plus Project Conditions.

26. Haven Avenue/Sumner Avenue and Parkview Street (City of Ontario)
34. Proposed Driveway D and Bellegrave Avenue (Cities of Ontario and Eastvale)

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<sup>6</sup> This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. San Bernardino County and the City of Colton should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



## 6.10 Cumulative Year (2040) Plus Project Conditions Intersection Operations

Cumulative Year (2040) Plus Project Conditions lane configurations and traffic volumes were used to evaluate operations at the study intersections under peak hour conditions. The results are summarized in **Table 9** and detailed LOS worksheets are provided in **Appendix C**.

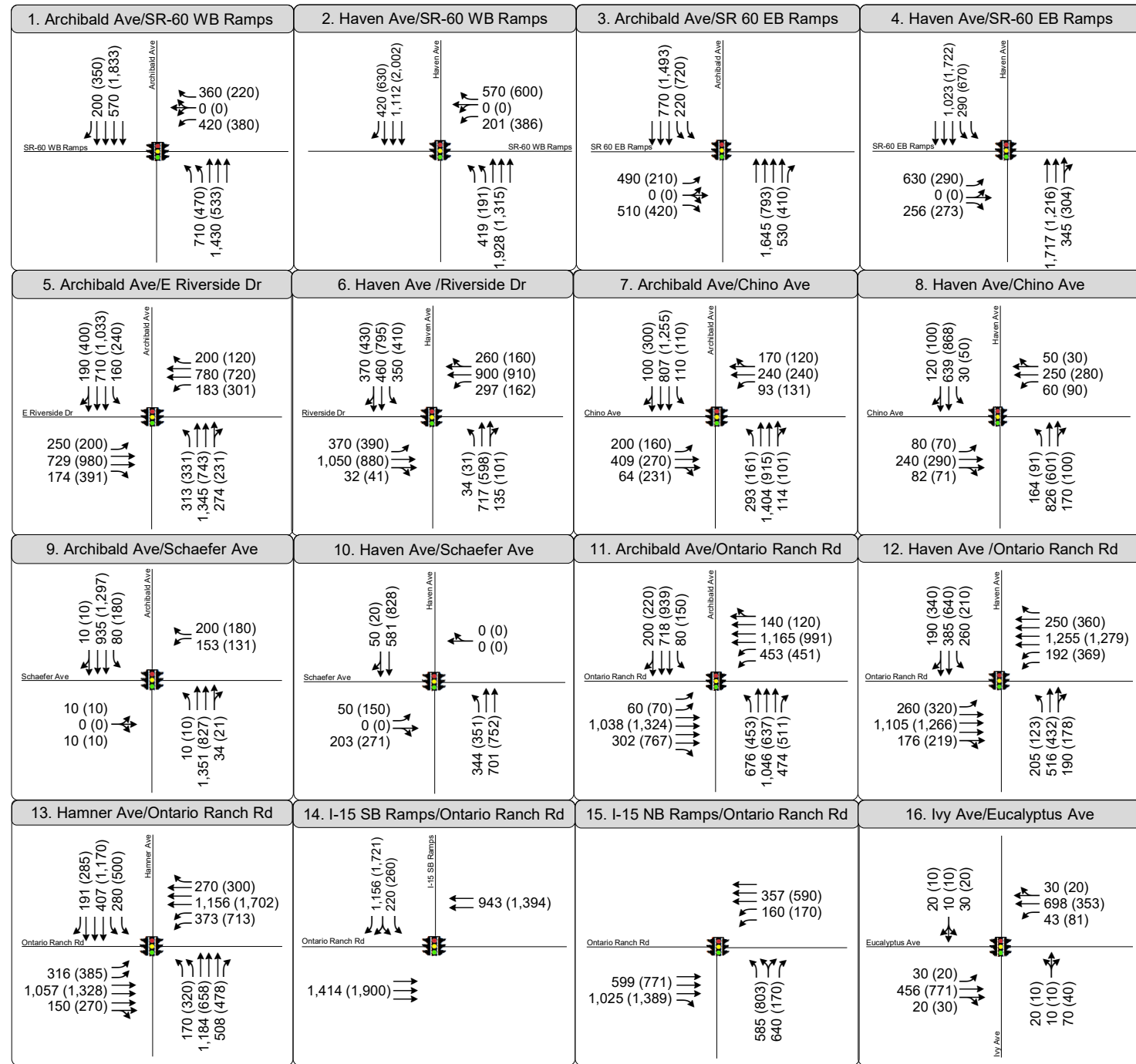
Consistent with Cumulative Year (2040) Plus Project, the following eight intersections continue to operate below acceptable standards with the addition of the proposed amendment:

6. Haven Avenue and Riverside Drive (City of Ontario)
13. Hamner Avenue and Ontario Ranch Road (Cities of Ontario and Eastvale)
14. I-15 Southbound Ramps and Ontario Ranch Road (City of Eastvale and Caltrans)
15. I-15 Northbound Ramps and Ontario Ranch Road (City of Jurupa Valley and Caltrans)
33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue (Cities of Ontario and Eastvale)
53. Euclid Avenue (SR-83) and Edison Avenue (Cities of Ontario and Chino and Caltrans)
55. Euclid Avenue (SR-83) and Merrill Avenue (Cities of Ontario and Chino and Caltrans)
58. Euclid Avenue (SR-83) and Pine Avenue (City of Chino and Caltrans)

The Project does not cause any additional intersections from the No Project Condition to operate below acceptable standards. Due to the additional roadway capacity and connectivity in the 2040 condition, the Project is not anticipated to add traffic to or worsen conditions at the intersection of Euclid Avenue (SR-83) and Pine Avenue.

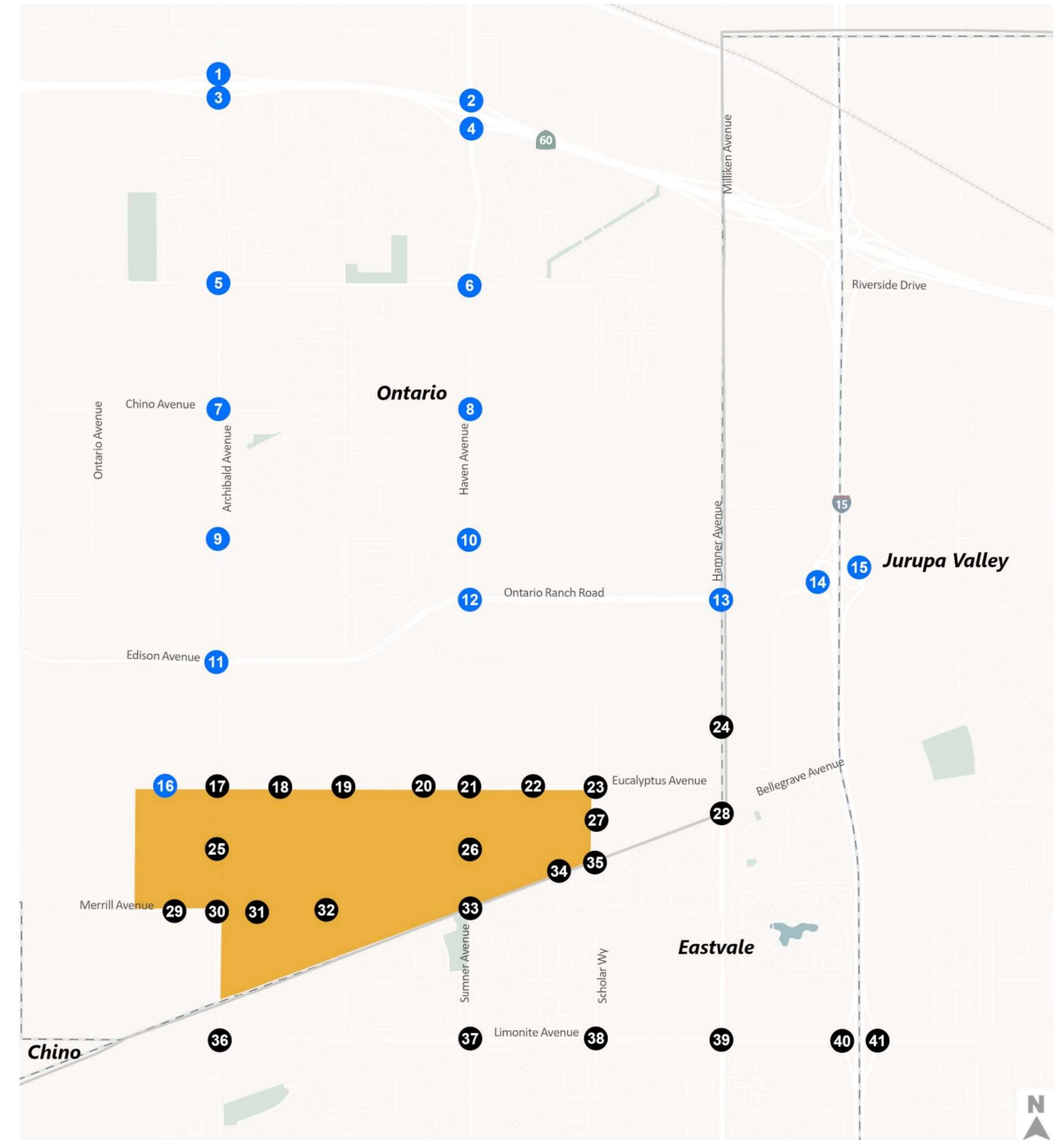






AM (PM) Peak Hour Traffic Volume

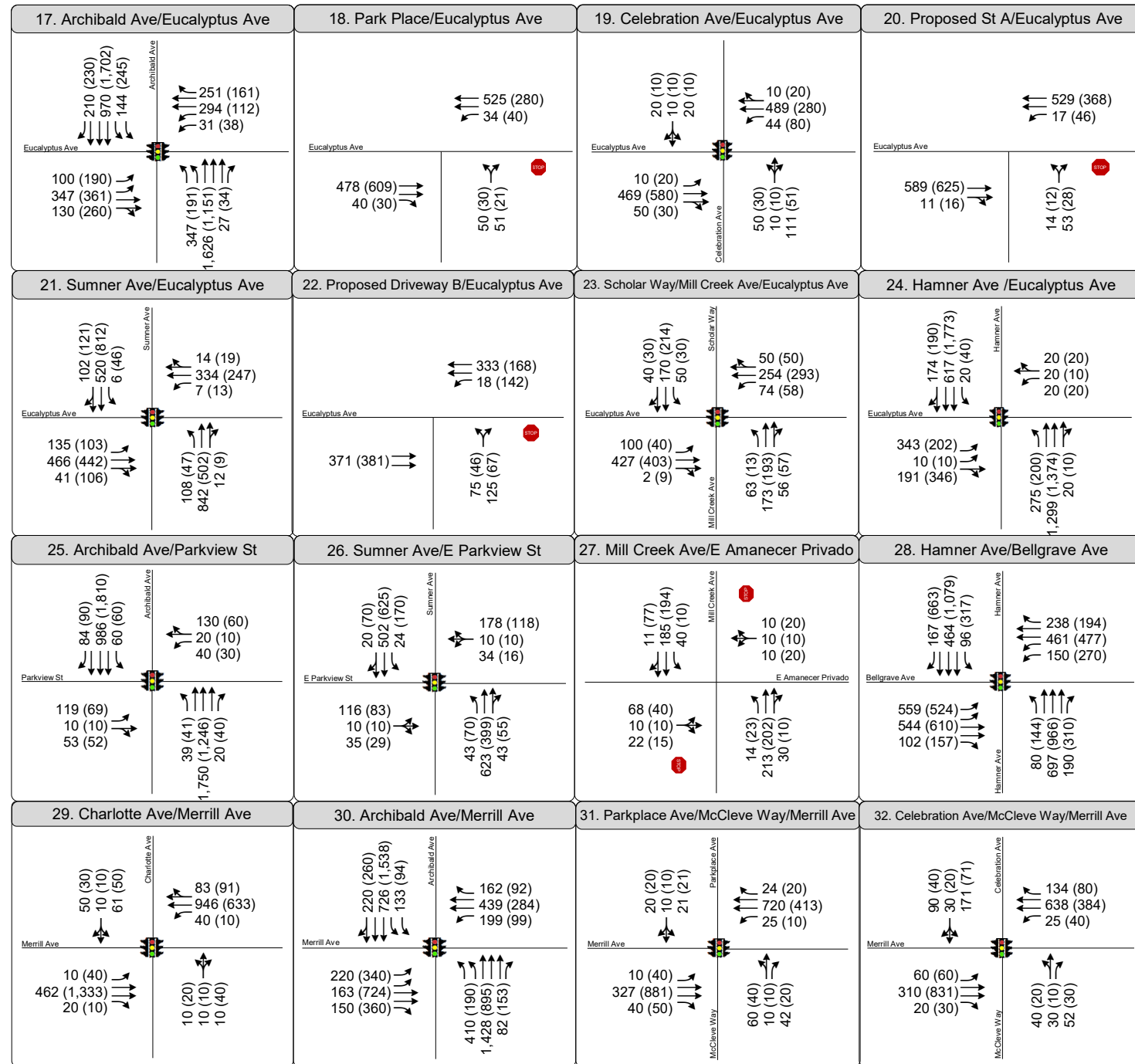
- Lane Configuration
- Stop Sign
- Signalized



- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 16A  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) Plus Project Conditions





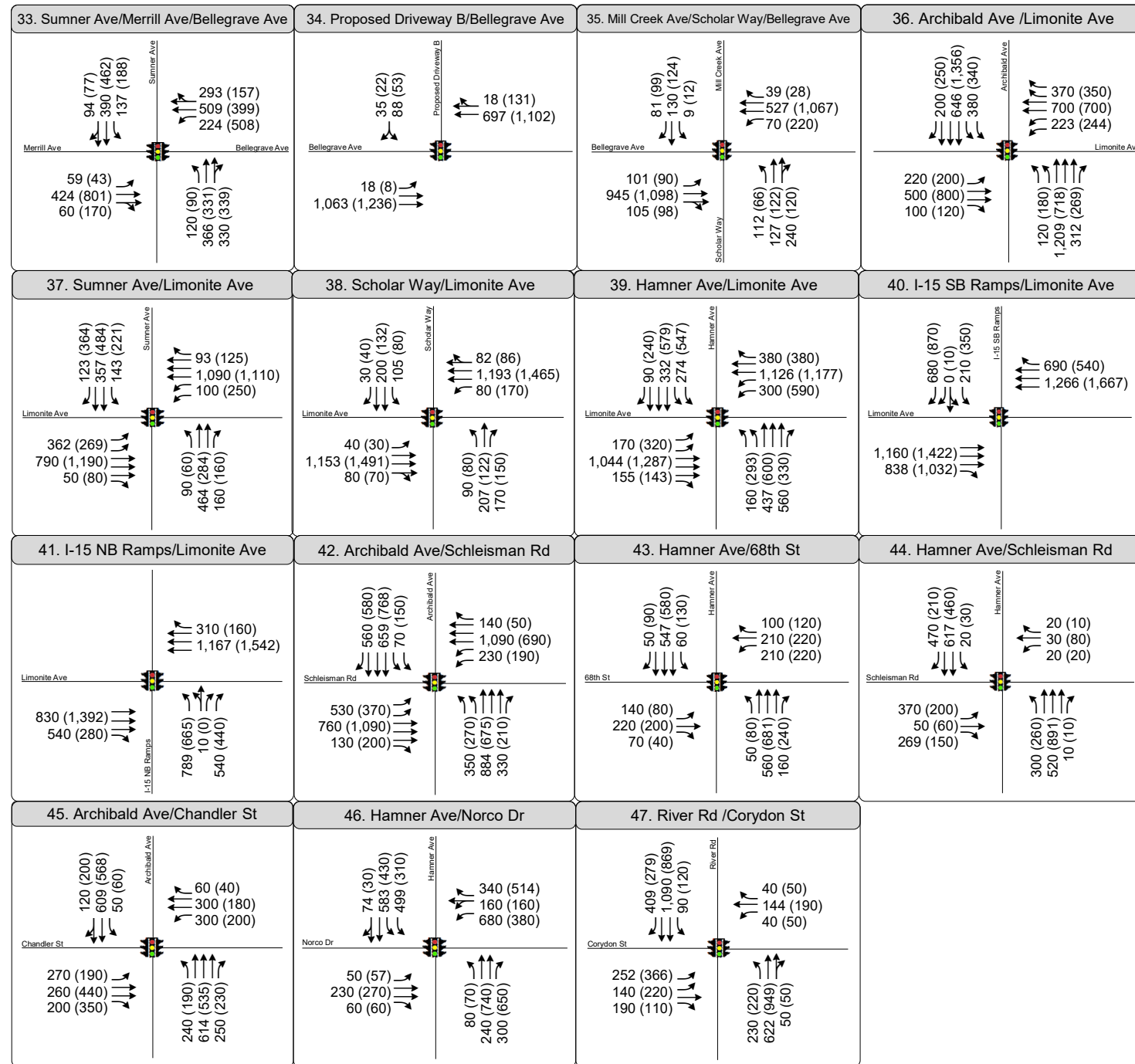
AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized



Figure 16B  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) Plus Project Conditions





AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized

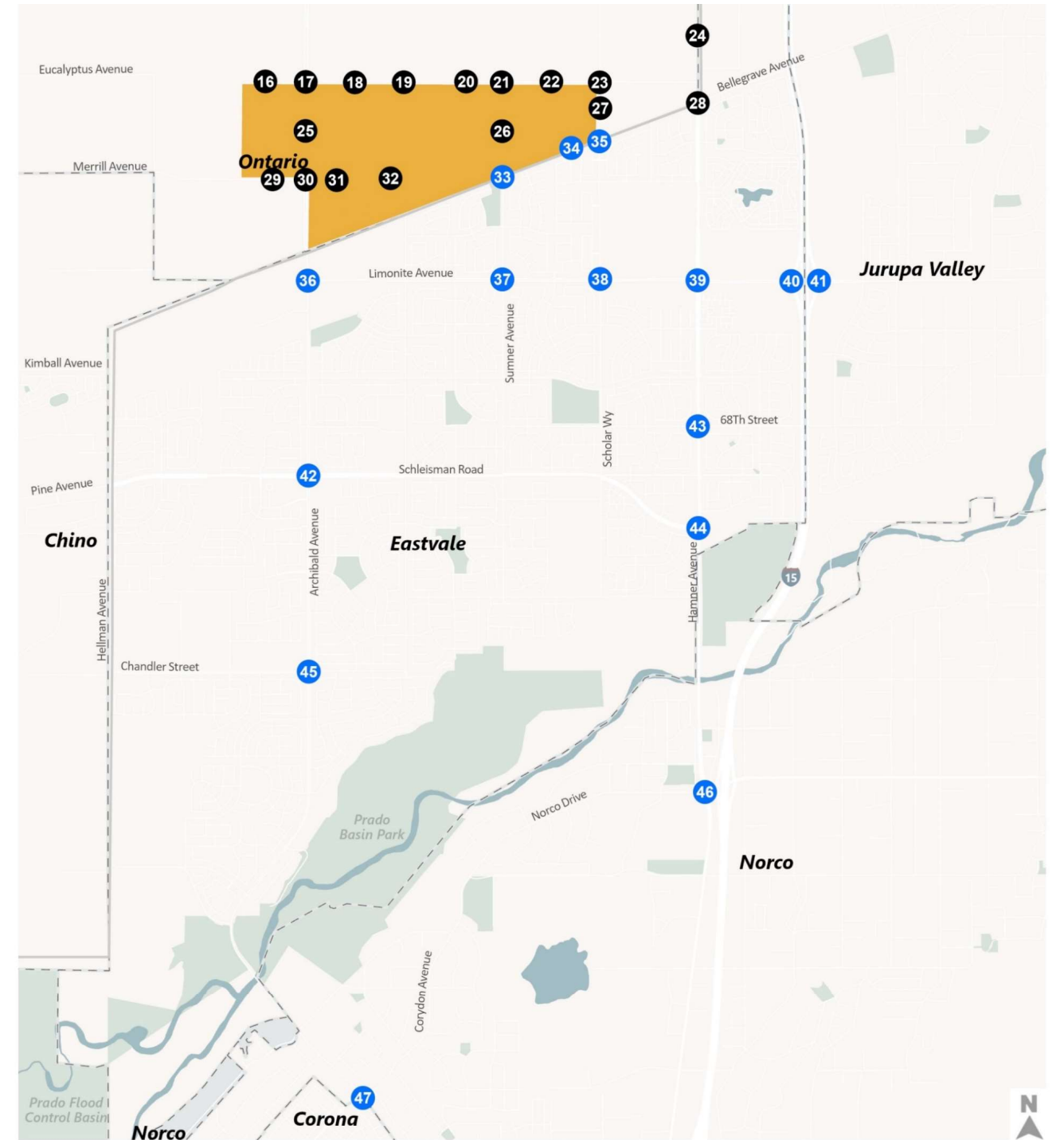
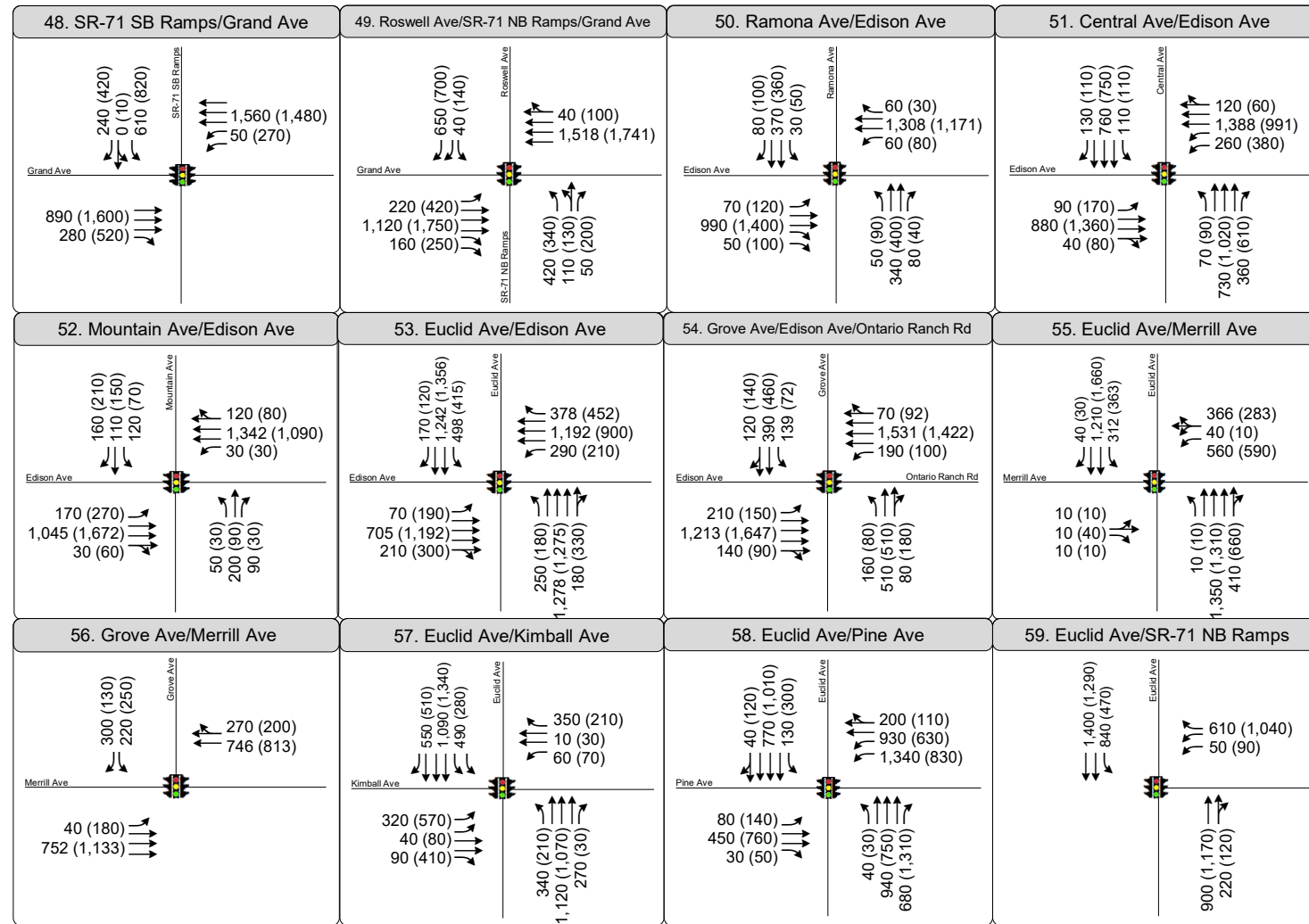


Figure 16C  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) Plus Project Conditions

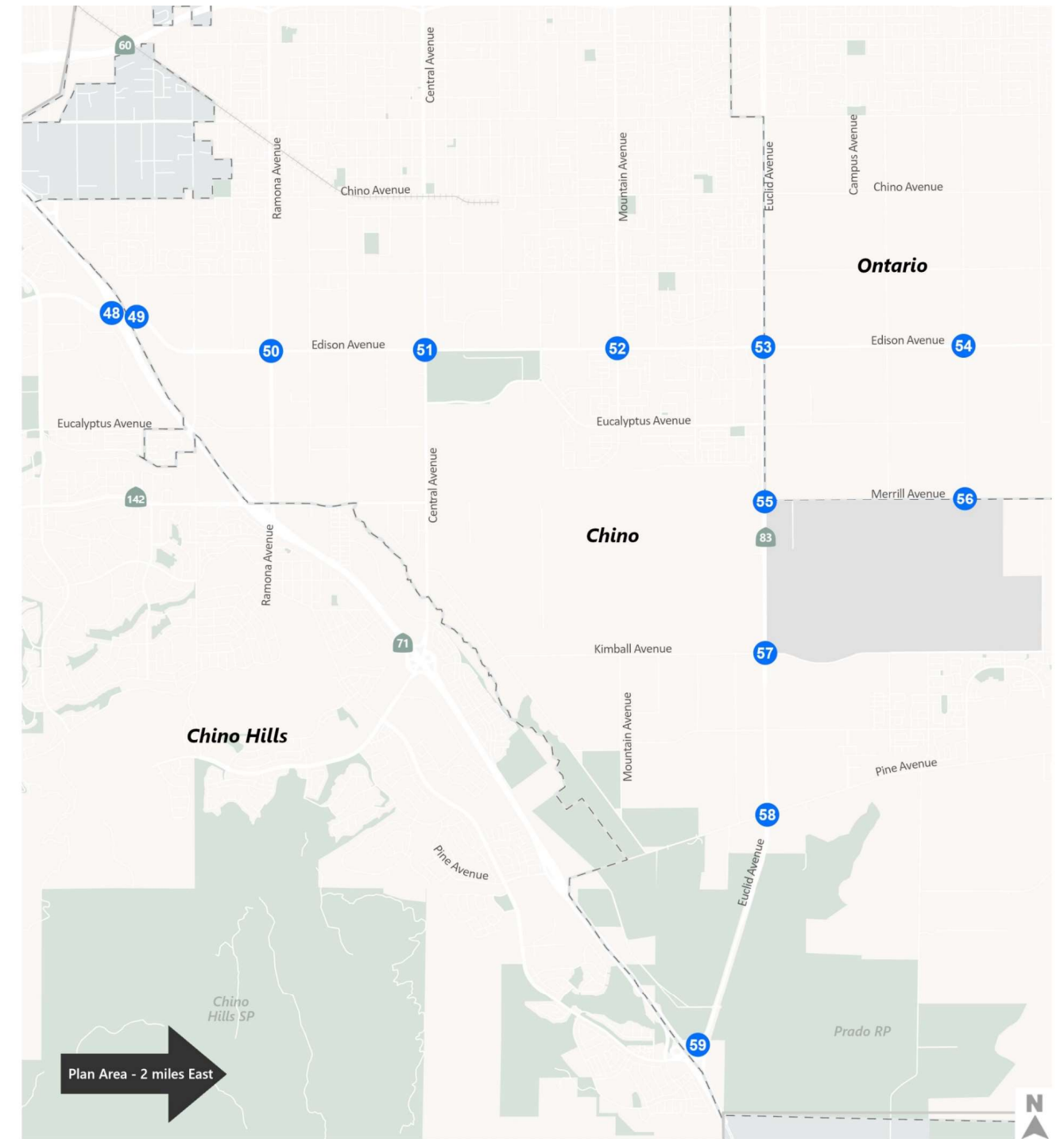






AM (PM) Peak Hour Traffic Volume

- Lane Configuration
- Stop Sign
- Signalized



- Specific Plan Area
- Study Intersection Volumes Shown on this Map
- Cities

Figure 16D  
Peak Hour Traffic Volumes and Lane Configurations  
Cumulative Year (2040) Plus Project Conditions



**Table 9: Cumulative Year (2040) No Project and Cumulative Year (2040) Plus Project Intersection Level of Service**

Intersection	Jurisdiction	Cumulative Year (2040) No Project Conditions			Cumulative Year (2040) Plus Project Conditions		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
1. Archibald Ave and SR-60 WB Ramps	City of Ontario and Caltrans	Signal	AM	C / 27	Signal	AM	C / 27
			PM	B / 18		PM	B / 18
2. Haven Ave and SR-60 WB Ramps	City of Ontario and Caltrans	Signal	AM	C / 27	Signal	AM	C / 30
			PM	C / 30		PM	C / 32
3. Archibald Ave and SR-60 EB Ramps	City of Ontario and Caltrans	Signal	AM	B / 19	Signal	AM	B / 19
			PM	B / 20		PM	B / 20
4. Haven Ave and SR-60 EB Ramps	City of Ontario and Caltrans	Signal	AM	C / 26	Signal	AM	C / 27
			PM	B / 16		PM	B / 19
5. Archibald Ave and Riverside Dr	City of Ontario	Signal	AM	D / 54	Signal	AM	D / 55
			PM	E / 78		PM	E / 78
6. Haven Ave and Riverside Dr	City of Ontario	Signal	AM	<b>F / 216</b>	Signal	AM	<b>F / 246</b>
			PM	<b>F / 163</b>		PM	<b>F / 170</b>
7. Archibald Ave and Chino Ave	City of Ontario	Signal	AM	D / 42	Signal	AM	D / 43
			PM	D / 41		PM	D / 41
8. Haven Ave and Chino Ave	City of Ontario	Signal	AM	B / 19	Signal	AM	B / 20
			PM	B / 20		PM	C / 21
9. Archibald Ave and Schaefer Ave	City of Ontario	Signal	AM	B / 11	Signal	AM	B / 11
			PM	B / 12		PM	B / 12
10. Haven Ave and Schaefer Ave	City of Ontario	Signal	AM	C / 21	Signal	AM	C / 21
			PM	C / 27		PM	C / 29
11. Archibald Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	E / 68	Signal	AM	E / 71
			PM	E / 57		PM	E / 61
12. Haven Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	D / 47	Signal	AM	D / 55
			PM	D / 50		PM	E / 62
13. Hamner Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	D / 53	Signal	AM	D / 54
			PM	E / 78		PM	<b>F / 87</b>
	City of Eastvale	Signal	AM	D / 53	Signal	AM	D / 54
			PM	<b>E / 78</b>		PM	<b>F / 87</b>
14. I-15 SB Ramps and Ontario Ranch Rd	City of Eastvale and Caltrans	Signal	AM	C / 21	Signal	AM	C / 24
			PM	<b>E / 64</b>		PM	<b>F / 85</b>
15. I-15 NB Ramps and Ontario Ranch Rd	City of Jurupa Valley and Caltrans	Signal	AM	C / 23	Signal	AM	C / 32
			PM	<b>E / 57</b>		PM	<b>E / 68</b>
16. Ivy Ave and Eucalyptus Ave	City of Ontario	Signal	AM	A / 8	Signal	AM	A / 8
			PM	A / 8		PM	A / 8
17. Archibald Ave and Eucalyptus Ave	City of Ontario	Signal	AM	C / 30	Signal	AM	C / 30
			PM	C / 30		PM	C / 32
18. Parkplace Ave and Eucalyptus Ave	City of Ontario	TWSC	AM	C / 16	TWSC	AM	C / 17
			PM	C / 16		PM	C / 17
19. Celebration Ave and Eucalyptus Ave	City of Ontario	Signal	AM	B / 15	Signal	AM	B / 15
			PM	B / 16		PM	B / 16
20. Proposed Dwy A and Eucalyptus Ave	City of Ontario	TWSC	AM	B / 13	TWSC	AM	B / 13
			PM	B / 13		PM	B / 14
21. Haven Ave/Sumner Ave and Eucalyptus Ave	City of Ontario	Signal	AM	B / 18	Signal	AM	B / 19
			PM	B / 16		PM	B / 20
22. Proposed Dwy B and Eucalyptus Ave	City of Ontario	DNE <sup>3</sup>	AM	-	TWSC	AM	B / 14
			PM	-		PM	C / 17



**Table 9: Cumulative Year (2040) No Project and Cumulative Year (2040) Plus Project Intersection Level of Service**

Intersection	Jurisdiction	Cumulative Year (2040) No Project Conditions			Cumulative Year (2040) Plus Project Conditions		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
23. Mill Creek Ave/Scholar Way and Eucalyptus Ave	City of Ontario	Signal	AM	B / 15	Signal	AM	B / 15
			PM	B / 13		PM	B / 14
24. Hamner Ave and Eucalyptus Ave	City of Ontario	Signal	AM	C / 24	Signal	AM	C / 26
			PM	C / 22		PM	C / 27
	City of Eastvale	Signal	AM	C / 24	Signal	AM	C / 26
			PM	C / 22		PM	C / 27
25. Archibald Ave and Parkview St	City of Ontario	Signal	AM	B / 19	Signal	AM	B / 20
			PM	B / 18		PM	B / 18
26. Haven Ave/Sumner Ave and Parkview St	City of Ontario	TWSC	AM	D / 31	Signal	AM	A / 9
			PM	E / 41		PM	B / 11
27. Mill Creek Ave/Scholar Way and Proposed Dwy C	City of Ontario	DNE <sup>3</sup>	AM	-	TWSC	AM	B / 14
			PM	-		PM	B / 13
28. Hamner Ave and Bellegrave Ave	City of Ontario	Signal	AM	C / 32	Signal	AM	C / 34
			PM	D / 47		PM	D / 48
	City of Eastvale	Signal	AM	C / 32	Signal	AM	C / 34
			PM	D / 47		PM	D / 48
29. Charlotte Ave and Merrill Ave	City of Ontario	Signal	AM	B / 13	Signal	AM	B / 13
			PM	B / 12		PM	B / 12
30. Archibald Ave and Merrill Ave	City of Ontario	Signal	AM	D / 42	Signal	AM	D / 45
			PM	D / 52		PM	D / 52
31. Parkplace Ave/McCleve Way and Merrill Ave	City of Ontario	Signal	AM	B / 11	Signal	AM	B / 11
			PM	B / 11		PM	B / 11
32. Celebration Ave/McCleve Way and Merrill Ave	City of Ontario	Signal	AM	B / 14	Signal	AM	B / 15
			PM	B / 13		PM	B / 13
33. Haven Ave/Sumner Ave and Merrill Ave/Bellegrave Ave	City of Ontario	Signal	AM	C / 25	Signal	AM	C / 30
			PM	E / 70		PM	<b>F / 84</b>
	City of Eastvale	Signal	AM	C / 25	Signal	AM	C / 30
			PM	<b>E / 70</b>		PM	<b>F / 84</b>
34. Proposed Dwy D and Bellegrave Ave	City of Ontario	DNE <sup>3</sup>	AM	-	Signal	AM	A / 7
			PM	-		PM	A / 7
	City of Eastvale	DNE <sup>3</sup>	AM	-	Signal	AM	A / 7
			PM	-		PM	A / 7
35. Mill Creek Ave/Scholar Way and Bellegrave Ave	City of Ontario	Signal	AM	C / 23	Signal	AM	C / 28
			PM	C / 30		PM	C / 33
	City of Eastvale	Signal	AM	C / 23	Signal	AM	C / 28
			PM	C / 30		PM	C / 33
36. Archibald Ave and Limonite Ave	City of Eastvale	Signal	AM	D / 45	Signal	AM	D / 45
			PM	D / 41		PM	D / 41
37. Sumner Ave and Limonite Ave	City of Eastvale	Signal	AM	C / 34	Signal	AM	D / 36
			PM	C / 27		PM	C / 28
38. Scholar Way and Limonite Ave	City of Eastvale	Signal	AM	B / 19	Signal	AM	C / 20
			PM	B / 19		PM	B / 19
39. Hamner Ave and Limonite Ave	City of Eastvale	Signal	AM	D / 42	Signal	AM	D / 42
			PM	D / 47		PM	D / 48
40. I-15 SB Ramps and Limonite Ave	City of Eastvale and Caltrans	Signal	AM	B / 16	Signal	AM	B / 16
			PM	B / 18		PM	B / 18
41. I-15 NB Ramps and Limonite Ave	City of Jurupa Valley and Caltrans	Signal	AM	B / 10	Signal	AM	B / 11
			PM	B / 11		PM	B / 12
42. Archibald Ave and Schleisman Rd	City of Eastvale	Signal	AM	D / 50	Signal	AM	D / 50
			PM	C / 32		PM	C / 32



**Table 9: Cumulative Year (2040) No Project and Cumulative Year (2040) Plus Project Intersection Level of Service**

Intersection	Jurisdiction	Cumulative Year (2040) No Project Conditions			Cumulative Year (2040) Plus Project Conditions		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
43. Hamner Ave and 68 <sup>th</sup> St	City of Eastvale	Signal	AM	C / 31	Signal	AM	C / 31
			PM	D / 37		PM	D / 36
44. Hamner Ave and Schleisman Rd	City of Eastvale	Signal	AM	C / 28	Signal	AM	C / 28
			PM	B / 18		PM	B / 18
45. Archibald Ave and Chandler St	City of Eastvale	Signal	AM	C / 34	Signal	AM	C / 34
			PM	C / 31		PM	C / 32
46. Hamner Ave and Norco Dr/Sixth St	City of Norco	Signal	AM	C / 31	Signal	AM	C / 31
			PM	C / 30		PM	C / 33
47. River Rd and Corydon St	City of Norco	Signal	AM	C / 29	Signal	AM	C / 29
			PM	C / 32		PM	C / 33
48. SR-71 SB Ramps and Grand Ave	City of Chino Hills and Caltrans	Signal	AM	B / 19	Signal	AM	B / 20
			PM	C / 26		PM	C / 27
49. Roswell Ave/SR-71 NB Ramps and Grand Ave	City of Chino and Caltrans	Signal	AM	C / 35	Signal	AM	C / 34
			PM	C / 31		PM	C / 31
50. Ramona Ave and Edison Ave	City of Chino	Signal	AM	C / 25	Signal	AM	C / 28
			PM	C / 29		PM	C / 32
51. Central Ave and Edison Ave	City of Chino	Signal	AM	C / 31	Signal	AM	C / 35
			PM	D / 46		PM	D / 50
52. Mountain Ave and Edison Ave	City of Chino	Signal	AM	C / 28	Signal	AM	C / 30
			PM	D / 36		PM	D / 39
53. Euclid Ave (SR-83) and Edison Ave	City of Ontario and Caltrans	Signal	AM	<b>F / 99</b>	Signal	AM	<b>F / 104</b>
			PM	<b>F / 96</b>		PM	<b>F / 99</b>
	City of Chino and Caltrans	Signal	AM	<b>F / 99</b>	Signal	AM	<b>F / 104</b>
			PM	<b>F / 96</b>		PM	<b>F / 99</b>
54. Grove Ave and Edison Ave/Ontario Ranch Rd	City of Ontario	Signal	AM	C / 32	Signal	AM	C / 34
			PM	C / 27		PM	C / 29
55. Euclid Ave (SR-83) and Merrill Ave	City of Ontario and Caltrans	Signal	AM	E / 67	Signal	AM	E / 69
			PM	<b>F / 100</b>		PM	<b>F / 100</b>
	City of Chino and Caltrans	Signal	AM	<b>E / 67</b>	Signal	AM	<b>E / 69</b>
			PM	<b>F / 100</b>		PM	<b>F / 100</b>
56. Grove Ave and Merrill Ave	City of Ontario	Signal	AM	B / 10	Signal	AM	B / 10
			PM	B / 13		PM	B / 13
57. Euclid Ave (SR-83) and Kimball Ave	City of Chino and Caltrans	Signal	AM	D / 37	Signal	AM	D / 37
			PM	D / 55		PM	D / 55
58. Euclid Ave (SR-83) and Pine Ave	City of Chino and Caltrans	Signal	AM	<b>E / 65</b>	Signal	AM	<b>E / 65</b>
			PM	<b>F / 155</b>		PM	<b>F / 155</b>
59. SR-71 NB Ramps and Euclid Ave (SR-83)	City of Chino and Caltrans	Signal	AM	C / 33	Signal	AM	C / 33
			PM	B / 19		PM	B / 19

Notes:

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way-stop-controlled (AWSC). Worst lane delay reported for two-way-stop-controlled (TWSC) intersections.
2. Delay Operations were calculated using HCM 6th methodologies.
3. DNE = Does Not Exist.
4. **Bolded** results operate below acceptable LOS standards.

Source: Fehr & Peers, 2022.





# 7. Improvements

## 7.1 Opening Year (2025) Plus Project Intersection Improvements

As discussed in Chapter 5, 21 study intersections operate below acceptable LOS standards under Opening Year (2025) Plus Project Conditions. Infrastructure modifications were provided for the 18 intersections documented below as operations were degraded with the addition of Project traffic. The modifications would improve intersection operations to better than pre-project conditions or to acceptable LOS standards (LOS E or better in the City of Ontario or LOS D or better in all other jurisdictions). LOS reports are provided in **Appendix C**.

### 4. Haven Avenue and SR-60 Eastbound Ramps

#### **Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the PM peak hour under Opening Year (2025) Conditions.

#### **Improvement(s):**

This intersection is within the City of Ontario and is a Caltrans' controlled ramp terminal intersection, and the improvements will require cooperation with and approval from Caltrans. The following intersection modifications improve intersection operations to acceptable conditions, LOS E or better, in the PM peak hour:

- Re-stripe the existing eastbound shared through/left-turn lane into a shared eastbound through/left/right-turn lane
- Optimize AM and PM peak hour signal timings

#### **Opening Year (2025) Plus Project with Improvement Conditions:**

With the above improvements, intersection operations improve to LOS E in the PM peak hour.

### 5. Archibald Avenue and Riverside Drive

#### **Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hour under Opening Year (2025) Conditions.



**Improvement(s):**

This intersection is located within the City of Ontario’s jurisdiction. The following intersection modifications improve intersection operations to acceptable conditions, LOS E or better, in the AM and PM peak hours:

- Optimize AM and PM peak hour signal timings

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the signal timing adjustments, intersection operations improve to LOS E in the AM and PM peak hours.

**6. Haven Avenue and Riverside Drive**

**Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hours under Opening Year (2025) Conditions.

**Improvement(s):**

This intersection is located within the City of Ontario’s jurisdiction. The following intersection modifications improve intersection operations to better than pre-project conditions in the AM and PM peak hours:

- Re-stripe existing southbound right-turn lane into a shared through/right-turn lane
- Add a northbound right-turn lane
- Update northbound and southbound approach from split to protected left-turn phasing

The existing southbound right-turn lane restriping is consistent with 2040 lane configuration assumptions. This improvement requires the widening of Haven Avenue to four lanes, consistent with development of the Rich Haven Specific Plan. This widening is consistent with the 2020 RTP/SCS and the City of Ontario’s Adopted General Plan and was assumed in Opening Year (2025) Conditions.

The remaining improvements are consistent with Cumulative Year (2040) Plus Project improvements and may require acquisition of ROW.

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the above improvements, the intersection continues to operate at LOS F during the AM and PM peak hours, but operations are better than pre-project conditions.



## 7. Archibald Avenue and Chino Avenue

### **Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the PM peak hour under Opening Year (2025) Conditions.

### **Improvement(s):**

This intersection is located within the City of Ontario's jurisdiction. The following intersection modifications improve intersection operations to better than pre-project conditions in the PM peak hour:

- Optimize PM peak hour signal timings

### **Opening Year (2025) Plus Project with Improvement Conditions:**

With the signal timing adjustments, the intersection continues to operate at LOS F during the PM peak hour, but operations are better than pre-project conditions.

## 11. Archibald Avenue and Ontario Ranch Road

### **Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hour under Opening Year (2025) Conditions.

### **Improvement(s):**

This intersection is located within the City of Ontario's jurisdiction. The following intersection modifications improve intersection operations to better than pre-project conditions in the AM and PM peak hours:

- Optimize AM and PM peak hour signal timings

### **Opening Year (2025) Plus Project with Improvement Conditions:**

With the signal timing adjustments, the intersection continues to operate at LOS F during the AM and PM peak hours, but operations are better than pre-project conditions.

## 12. Haven Avenue and Ontario Ranch Road

### **Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hour under Opening Year (2025) Conditions.



**Improvement(s):**

This intersection is located within the City of Ontario’s jurisdiction. The following intersection modifications improve intersection operations to better than pre-project conditions in the AM and PM peak hours:

- Re-stripe northbound right-turn lane into a shared through/right-turn lane

This improvement is consistent with 2040 lane configuration assumptions. This improvement requires the widening of Haven Avenue to four lanes, consistent with development of the Rich Haven Specific Plan.. This widening is consistent with the 2020 RTP/SCS and the City of Ontario’s Adopted General Plan and was assumed in Opening Year (2025) Conditions.

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the above improvements, the intersection continues to operate at LOS F during the AM and PM peak hours, but operations are better than pre-project conditions.

**13. Hamner Avenue and Ontario Ranch Road**

**Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hour under Opening Year (2025) Conditions.

**Improvement(s):**

This intersection is located on the border of the Cities of Eastvale and Ontario. Improvements at the intersection will require cooperation between both Cities. The following intersection modifications improve intersection operations to better than pre-project conditions in the AM and PM peak hours:

- Optimize AM and PM peak hour signal timings

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the signal timing adjustments, the intersection continues to operate at LOS F during the AM and PM peak hours, but operations are better than pre-project conditions.

**14. I-15 Southbound Ramps and Ontario Ranch Road**

**Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS E and F in the AM and PM peak hours, respectively, under Opening Year (2025) Conditions.



**Improvement(s):**

This intersection is within the City of Eastvale and is a Caltrans' controlled ramp terminal intersection, and the improvements will require cooperation with and approval from Caltrans. The following intersection modifications improve intersection operations to acceptable conditions, LOS D or better, in the AM and PM peak hours:

- Re-stripe the existing shared southbound left/right lane into a southbound left-turn lane
- Construct a free channelized southbound right-turn lane
- Optimize AM and PM peak hour signal timings

These improvements are consistent with Cumulative Year (2040) Plus Project improvements and are feasible within existing ROW, as there are three existing westbound receiving lanes and only two westbound through lanes.

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the above improvements, intersection operations improve to LOS A in the AM and PM peak hours.

**15. I-15 Northbound Ramps and Ontario Ranch Road**

**Opening Year Plus Project Conditions:**

The intersection is forecast to operate at LOS E and F in the AM and PM peak hours, respectively, under Opening Year (2025) Conditions. The buildout of the Proposed Specific Plan adds delay to the intersection and degrades AM peak hour intersection operations from LOS E to F.

**Improvement(s):**

This intersection is within the City of Jurupa Valley but is a Caltrans' controlled ramp terminal intersection, and the improvement will require cooperation with and approval from Caltrans. The following intersection modifications improve intersection operations to acceptable conditions, LOS D or better, in the AM and PM peak hours:

- Re-stripe one of the existing eastbound through lanes into a eastbound right-turn lane
- Optimize AM and PM peak hour signal timings

This improvement is consistent with Cumulative Year (2040) Plus Project improvements.

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the above improvements, intersection operations improve to LOS D in the AM and PM peak hours.



## 25. Archibald Avenue and Parkview Street

### Opening Year Plus Project Conditions:

The intersection is forecast to operate at LOS E in the AM and PM peak hours under Opening Year (2025) Conditions. The buildout of the Proposed Specific Plan adds delay to the intersection and degrades intersection operations from LOS E to F in the AM and PM peak hours.

### Improvement(s):

This intersection is located within the City of Ontario's jurisdiction. The following intersection modifications improve intersection operations to acceptable conditions, LOS E or better, in the AM and PM peak hours:

- Optimize AM and PM peak hour signal timings

### Opening Year (2025) Plus Project with Improvement Conditions:

With the signal timing adjustments, the intersection operations improve to LOS B in the AM and PM peak hours.

## 28. Hamner Avenue and Bellegrave Avenue

### Opening Year Plus Project Conditions:

The intersection is forecast to operate at LOS D in the PM peak hour under Opening Year (2025) Conditions. The buildout of the Proposed Specific Plan adds delay to the intersection and degrades intersection operations from LOS D to E in the PM peak hour. This deficiency is triggered at 95 percent buildout of the proposed amendment.

### Improvement(s):

This intersection is located on the border of the Cities of Eastvale and Ontario. Improvements will require cooperation between both Cities. The intersection does not operate acceptably under City of Eastvale standards but does operate acceptably under City of Ontario standards. The following intersection modifications improve intersection operations to acceptable City of Eastvale standards, LOS D or better, in the PM peak hour:

- Optimize PM peak hour signal timings

### Opening Year (2025) Plus Project with Improvement Conditions:

With the above improvements, the intersection operations improve to LOS D in the PM peak hour.





### 33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue

#### Opening Year Plus Project Conditions:

The intersection is forecast to operate at LOS F in the PM peak hour under Opening Year (2025) Conditions. The buildout of the Proposed Specific Plan improves intersection operations from LOS F to E in the PM peak hour.

#### Improvement(s):

This intersection is located on the border of the Cities of Eastvale and Ontario. Improvements will require cooperation between both Cities. The intersection does not operate acceptably under City of Eastvale standards but does operate acceptably under City of Ontario standards. The following intersection modifications improve intersection operations to acceptable City of Eastvale standards, LOS D or better, in the PM peak hour:

- Add an additional westbound left-turn lane

This improvement is consistent with Cumulative Year (2040) Plus Project improvements for the City of Eastvale.

#### Opening Year (2025) Plus Project with Improvement Conditions:

With the above improvements, the intersection operations improve to LOS D in the PM peak hour.

### 36. Archibald Avenue and Limonite Avenue

#### Opening Year Plus Project Conditions:

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the PM peak hour under Opening Year (2025) Conditions.

#### Improvement(s):

This intersection is located within the City of Eastvale's jurisdiction. The following intersection modifications improve intersection operations to better than pre-project conditions in the PM peak hour:

- Optimize PM peak hour signal timings

#### Opening Year (2025) Plus Project with Improvement Conditions:

With the signal timing adjustments, the intersection operations improve to LOS E in the PM peak hour.



## 42. Archibald Avenue and Schleisman Road

### Opening Year Plus Project Conditions:

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS E in the AM peak hour under Opening Year (2025) Conditions.

### Improvement(s):

This intersection is located within the City of Eastvale's jurisdiction. The following intersection modifications improve intersection operations to acceptable conditions, LOS D or better, in the AM peak hour:

- Optimize AM peak hour signal timings

### Opening Year (2025) Plus Project with Improvement Conditions:

With the signal timing adjustments, the intersection operations improve to LOS D in the AM peak hour.

## 46. Hamner Avenue and Norco Drive/Sixth Street

### Opening Year Plus Project Conditions:

The intersection is forecast to operate at LOS D in the AM peak hour under Opening Year (2025) Conditions. The buildout of the Proposed Specific Plan adds delay to the intersection and degrades AM peak hour intersection operations from LOS D to E. This deficiency is triggered at 25 percent buildout of the proposed amendment.

### Improvement(s):

The intersection is within the City of Norco's jurisdiction. The following intersection modification improves intersection operations to acceptable conditions, LOS D or better, in the AM peak hour:

- Optimize AM peak hour signal timings

### Opening Year (2025) Plus Project with Improvement Conditions:

With the signal timing adjustments, intersection operations improve to LOS C in the AM peak hour.

## 53. Euclid Avenue (SR-83) and Edison Avenue

### Opening Year Plus Project Conditions:

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hours under Opening Year (2025) Conditions.



**Improvement(s):**

This intersection is located on the border of the Cities of Chino and Ontario but is under Caltrans' jurisdiction. Improvements at the intersection will require cooperation between both Cities and Caltrans but ultimately require Caltrans' approval. The following intersection modification was provided to improve intersection operation to better than pre-project conditions in the AM and PM peak hours:

- Optimize AM and PM peak hour signal timings

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the signal timing adjustments, the intersection continues to operate at LOS F in both peak hours, but operations are better than pre-project conditions.

**54. Grove Avenue and Edison Avenue/Ontario Ranch Road**

**Opening Year Plus Project Conditions:**

The buildout of the Proposed Specific Plan adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hours under Opening Year (2025) Conditions.

**Improvement (s):**

This intersection is within the City of Ontario's jurisdiction. The following intersection modifications improve intersection operations to acceptable conditions, LOS E or better, in the AM and PM peak hours:

- Signalize the intersection
- Add left-turn lanes with permissive phasing to all approaches

This intersection meets peak hour traffic signal warrant under Opening Year (2025) Plus Project Conditions. Peak hour traffic signal warrants<sup>7</sup> for Opening Year (2025) Plus Project Conditions are provided in **Appendix F**. This improvement is consistent with 2040 traffic control assumptions. A design engineer should verify key design attributes, such as stopping site distance, before implementation.

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<sup>7</sup> This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. San Bernardino County and the City of Colton should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



**Opening Year (2025) Plus Project with Improvement Conditions:**

With signalization of the intersection, intersection operations improve to LOS C and E in AM and PM peak hours, respectively.

**55. Euclid Avenue (SR-83) and Merrill Avenue**

**Opening Year Plus Project Conditions:**

This intersection is forecast to operate at LOS E in the AM peak hour and LOS F in the PM peak hour under Opening Year (2025) Conditions. The buildout of the Proposed Specific Plan adds delay to the intersection and degrades AM peak hour intersection operations from LOS E to F.

**Improvements(s):**

This intersection is located on the border of the Cities of Chino and Ontario but is under Caltrans' jurisdiction. Improvements at the intersection will require cooperation between both Cities and Caltrans but ultimately require Caltrans' approval. The following intersection modification was provided to improve intersection operation to better than pre-project conditions in the AM and PM peak hours:

- Optimize AM and PM peak hour signal timings

This improvement assumes by Opening Year (2025), Merrill Avenue east of Euclid Avenue (SR-83) is widened to a four-lane facility.

**Opening Year (2025) Plus Project with Improvement Conditions:**

With the signal timing adjustments, intersection operations improve to better than pre-project conditions, LOS E, which is deemed acceptable by City of Ontario standards, during the AM peak hour. During the PM peak hour, the intersection continues to operate at LOS F but operates better than pre-project conditions.

**Intersection LOS Comparison**

**Table 10** compares the delay and LOS for the Opening Year (2025) Conditions, Opening Year (2025) Plus Project Conditions, and Opening Year (2025) Plus Project Conditions with the identified improvements noted above. For all locations, the identified intersection modifications improve the intersection operations to better than pre-project conditions or acceptable conditions.



**Table 10: Opening Year (2025) Level of Service Comparison with Improvements**

Intersection	Jurisdiction	Opening Year (2025) Conditions			Opening Year (2025) Plus Project Conditions			Opening Year (2025) Plus Project Conditions with Improvements		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
4. Haven Ave and SR-60 EB Ramps	City of Ontario	Signal	AM	C / 23	Signal	AM	D / 37	Signal	AM	C / 33
			PM	<b>F / 107</b>		PM	<b>F / 180</b>		PM	E / 69
5. Archibald Ave and Riverside Dr	City of Ontario	Signal	AM	<b>F / 89</b>	Signal	AM	<b>F / 92</b>	Signal	AM	E / 71
			PM	<b>F / 99</b>		PM	<b>F / 103</b>		PM	E / 72
6. Haven Ave and Riverside Dr	City of Ontario	Signal	AM	<b>F / 185</b>	Signal	AM	<b>F / 234</b>	Signal	AM	<b>F / 154</b>
			PM	<b>F / 214</b>		PM	<b>F / 268</b>		PM	<b>F / 187</b>
7. Archibald Ave and Chino Ave	City of Ontario	Signal	AM	E / 72	Signal	AM	E / 77	Signal	AM	X
			PM	<b>F / 139</b>		PM	<b>F / 147</b>		PM	<b>F / 90</b>
11. Archibald Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	<b>F / 164</b>	Signal	AM	<b>F / 178</b>	Signal	AM	<b>F / 138</b>
			PM	<b>F / 116</b>		PM	<b>F / 125</b>		PM	<b>F / 103</b>
12. Haven Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	<b>F / 112</b>	Signal	AM	<b>F / 143</b>	Signal	AM	<b>F / 105</b>
			PM	<b>F / 163</b>		PM	<b>F / 197</b>		PM	<b>F / 158</b>
13. Hamner Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	<b>F / 95</b>	Signal	AM	<b>F / 107</b>	Signal	AM	<b>F / 83</b>
			PM	<b>F / 183</b>		PM	<b>F / 208</b>		PM	<b>F / 175</b>
	City of Eastvale	Signal	AM	<b>F / 95</b>	Signal	AM	<b>F / 107</b>	Signal	AM	<b>F / 83</b>
			PM	<b>F / 183</b>		PM	<b>F / 208</b>		PM	<b>F / 175</b>
14. I-15 SB Ramps and Ontario Ranch Rd	City of Eastvale and Caltrans	Signal	AM	<b>E / 65</b>	Signal	AM	<b>E / 76</b>	Signal	AM	A / 7
			PM	<b>F / 192</b>		PM	<b>F / 246</b>		PM	A / 8
15. I-15 NB Ramps and Ontario Ranch Rd	City of Jurupa Valley and Caltrans	Signal	AM	<b>E / 69</b>	Signal	AM	<b>F / 110</b>	Signal	AM	D / 36
			PM	<b>F / 139</b>		PM	<b>F / 163</b>		PM	D / 41
25. Archibald Ave and Parkview St	City of Ontario	Signal	AM	E / 70	Signal	AM	<b>F / 90</b>	Signal	AM	B / 19
			PM	E / 79		PM	<b>F / 102</b>		PM	B / 18
28. Hamner Ave and Bellegrave Ave	City of Ontario	Signal	AM	D / 35	Signal	AM	D / 47	Signal	AM	X
			PM	D / 38		PM	E / 56		PM	X
	City of Eastvale	Signal	AM	D / 35	Signal	AM	D / 47	Signal	AM	X
			PM	D / 38		PM	<b>E / 56</b>		PM	D / 47
33. Haven Ave/Sumner Ave and Merrill Ave/Bellegrave Ave	City of Ontario	Signal	AM	D / 46	Signal	AM	D / 51	Signal	AM	X
			PM	<b>F / 148</b>		PM	E / 75		PM	X
	City of Eastvale	Signal	AM	D / 46	Signal	AM	D / 51	Signal	AM	D / 44
			PM	<b>F / 148</b>		PM	<b>E / 75</b>		PM	D / 53
36. Archibald Ave and Limonite Ave	City of Eastvale	Signal	AM	D / 38	Signal	AM	D / 41	Signal	AM	X
			PM	<b>F / 81</b>		PM	<b>F / 83</b>		PM	<b>E / 70</b>
42. Archibald Ave and Schleisman Rd	City of Eastvale	Signal	AM	<b>E / 57</b>	Signal	AM	<b>E / 58</b>	Signal	AM	D / 51
			PM	D / 37		PM	D / 37		PM	X
46. Hamner Ave and Norco Dr/Sixth St	City of Norco	Signal	AM	D / 50	Signal	AM	<b>E / 65</b>	Signal	AM	C / 26
			PM	D / 43		PM	D / 49		PM	X
53. Euclid Ave (SR-83) and Edison Ave	City of Ontario and Caltrans	Signal	AM	<b>F / 105</b>	Signal	AM	<b>F / 107</b>	Signal	AM	<b>F / 93</b>
			PM	<b>F / 139</b>		PM	<b>F / 142</b>		PM	<b>F / 138</b>
	City of Chino and Caltrans	Signal	AM	<b>F / 105</b>	Signal	AM	<b>F / 107</b>	Signal	AM	<b>F / 93</b>
			PM	<b>F / 139</b>		PM	<b>F / 142</b>		PM	<b>F / 138</b>
54. Grove Ave and Edison Ave/Ontario Ranch Rd	City of Ontario	AWSC	AM	<b>F / 457</b>	AWSC	AM	<b>F / 473</b>	Signal	AM	C / 27
			PM	<b>F / 575</b>		PM	<b>F / 585</b>		PM	E / 62
55. Euclid Ave (SR-83) and Merrill Ave	City of Ontario and Caltrans	Signal	AM	E / 78	Signal	AM	<b>F / 82</b>	Signal	AM	E / 71
			PM	<b>F / 129</b>		PM	<b>F / 130</b>		PM	<b>F / 122</b>
	City of Chino and Caltrans	Signal	AM	<b>E / 78</b>	Signal	AM	<b>F / 82</b>	Signal	AM	<b>E / 71</b>
			PM	<b>F / 129</b>		PM	<b>F / 130</b>		PM	<b>F / 122</b>

- Notes:
1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way-stop-controlled (AWSC). Worst lane delay reported for two-way-stop-controlled (TWSC) intersections.
  2. Delay Operations were calculated using HCM 6th methodologies.
  3. "X" No improvements were recommended for corresponding peak hour.
  4. **Bolded** results operate below acceptable LOS standards.

Source: Fehr & Peers, 2022.



## 7.2 Cumulative Year (2040) Plus Project Intersection Improvements

As discussed in Chapter 6, eight intersections operate below acceptable LOS standards under Cumulative Year (2040) Conditions. Infrastructure modifications were provided for the seven intersections documented below as operations were degraded with the addition of Project traffic. Note the modifications documented in this section of the report are modifications not assumed to be accounted for in the 2020 SCAG RTP/SCS and the City of Ontario's DIF Calculation and Nexus Update Report. The modifications would improve operations to acceptable LOS standards (LOS E or better in the City of Ontario or LOS D or better in all other jurisdictions). LOS reports are provided in **Appendix C**.

### 6. Haven Avenue and Riverside Drive

#### Cumulative Year (2040) Plus Project Conditions:

The proposed amendment adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hours under Cumulative Year (2040) No Project Conditions.

#### Improvement(s):

This intersection is located within the City of Ontario's jurisdiction. The following lane configurations and phasing updates improve intersection operations to acceptable conditions, LOS E, in the AM and PM peak hours:

- Northbound approach: one left-turn lane, two through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, one through lane and one shared through/right lane
- Eastbound approach: two left-turn lanes, one through lane, and one shared through-right lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, one through lane and one shared through/right lane
- Westbound approach: two left-turn lanes, one through lane, and one shared through-right lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, one through lane and one shared through/right lane
- Update northbound and southbound approaches from split to protected/permissive left-turn phasing

These improvements would require acquisition of ROW in addition to the planned 2020 RTP/SCS projects that widen Haven Avenue and Riverside Drive to four lane facilities. These improvements are also within the ultimate ROW buildout proposed in the City of Ontario's Adopted General Plan, which identifies Haven Avenue south of Riverside Drive as a four-lane facility, Haven Avenue north of Riverside Drive as a six-lane facility, and Riverside Drive as a six-lane facility.





### **Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications, intersection operations improve to LOS E in both peak hours. The estimated project fair share contribution towards these improvements is seven percent.

### **13. Hamner Avenue and Ontario Ranch Road**

#### **Cumulative Year (2040) Plus Project Conditions:**

The intersection is forecast to operate at LOS E in the PM peak hour under Cumulative Year (2040) No Project Conditions. The proposed amendment adds delay to the intersection and degrades intersection operations from LOS E to F in the PM peak hour.

#### **Improvement(s):**

This intersection is located on the border of the Cities of Eastvale and Ontario. Improvements at the intersection will require cooperation between both Cities. Since the Cities have distinct LOS standards, improvements were provided relative to each City.

This intersection was identified in the Commerce Center study as requiring 2040 improvements. This study's identified improvements are over and above the improvements identified in the Commerce Center study.

#### City of Ontario (LOS E):

The following lane configurations are provided to improve intersection operations to acceptable conditions, LOS E or better, in PM peak hour:

- Westbound approach: two left-turn lanes, three through lanes, and a shared through/right lane
  - Cumulative Year (2040) No Project Conditions assumed two left-turn lanes, three through lanes, and a right-turn lane

There is a planned 2020 RTP/SCS projects that widens Ontario Ranch Road west of Hamner Avenue to eight lanes. This improvement can be implemented in existing ROW.

#### City of Eastvale (LOS D):

Fehr & Peers reviewed infrastructure improvement options at this intersection and were not able to identify capacity improvements that could be built within the ultimate ROW and bring intersection operations to LOS D or better. Fehr and Peers recommends implementing the improvements identified above, which improve intersection operations to LOS E. In addition, coordinating traffic signals along the Ontario Rancho Road corridor will help facilitate intersection operations and prevent queuing between adjacent, closely spaced intersections and the ramp terminal intersections.



**Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications for the Cities of Ontario and Eastvale, intersection operations improve to LOS E or better, during both peak hours. The estimated project fair share contribution towards these improvements is 13 percent. Lastly, it should be noted that adding a through lane to Hamner Avenue could induce travel and result in a secondary transportation impact related to increased VMT.

**14. I-15 Southbound Ramps and Ontario Ranch Road**

**Cumulative Year (2040) Plus Project Conditions:**

The intersection is forecast to operate at LOS E in the PM peak hour under Cumulative Year (2040) No Project Conditions. The proposed amendment adds delay to the intersection and degrades PM peak hour intersection operations from LOS E to F.

**Improvements(s):**

This intersection is within the City of Eastvale but is Caltrans' controlled ramp terminal intersection, and the improvements will require cooperation with and approval from Caltrans. The following intersection modifications improve intersection operations to acceptable conditions, LOS D or better in the PM peak hour:

- Re-stripe the existing shared southbound left/right lane into a southbound left-turn lane
- Construct a free channelized southbound right-turn lane
- Optimize peak hour signal timings

These improvements are feasible within existing ROW, as there are three existing westbound receiving lanes and only two westbound through lanes.

**Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications, intersection operations improve to LOS A in the PM peak hour. The estimated project fair share contribution towards these improvements is 17 percent.

**15. I-15 Northbound Ramps and Ontario Ranch Road**

**Cumulative Year (2040) Plus Project Conditions:**

The proposed amendment adds delay to the intersection, which is forecast to operate at LOS E in the PM under Cumulative Year (2040) No Project Conditions.

**Improvement(s):**

This intersection is within the City of Jurupa Valley but is a Caltrans' controlled ramp terminal intersection, and the improvement will require cooperation with and approval from Caltrans. The following intersection



modifications improve intersection operations to acceptable conditions, LOS D or better, in the PM peak hour:

- Re-stripe one of the existing eastbound through lanes into a eastbound right-turn lane
- Optimize peak hour signal timings

**Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications, intersection operations improve to LOS C in the PM peak hour. The estimated project fair share contribution towards these improvements is 16 percent.

**33. Haven Avenue/Sumner Avenue and Merrill Avenue/Bellegrave Avenue**

**Cumulative Year (2040) Plus Project Conditions:**

The intersection is forecast to operate at LOS E in the PM peak hour under Cumulative Year (2040) No Project Conditions. The proposed amendment adds delay to the intersection and degrades PM peak hour intersection operations from LOS E to F.

**Improvement(s):**

This intersection is located on the border of the Cities of Eastvale and Ontario. Improvements at the intersection will require cooperation between both Cities. Since the Cities have distinct LOS standards, improvements were provided relative to each City.

City of Ontario (LOS E):

The following lane configurations are provided to improve intersection operations to acceptable conditions, LOS E or better, in PM peak hour:

- Eastbound approach: one left, two throughs, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left, one through, and one shared through/right lane

This improvement can be implemented within existing ROW. There are planned 2020 RTP/SCS projects that widen Haven Avenue/Sumner Avenue, north of Merrill Avenue/ Bellegrave Avenue, and Merrill Avenue/Bellegrave Avenue, east of Haven Avenue/Sumner Avenue, to four-lane facilities. These improvements are also consistent with the City of Ontario's Adopted General Plan which identifies Merrill Avenue/Bellegrave Avenue and Haven Avenue/Sumner Avenue north of Merrill Avenue/Bellegrave Avenue as four-lane facilities.

City of Eastvale (LOS D):

The following lane configurations are provided to improve intersection operations to acceptable conditions, LOS D or better, in the PM peak hour:



- Westbound approach: two left-turn lanes, one through lane, and one shared through/right lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, one through lane and one shared through/right lane

This improvement will require acquisition of ROW in addition to the planned 2020 RTP/SCS projects that widen Haven Avenue/Sumner Avenue, north of Merrill Avenue/ Bellegrave Avenue, and Merrill Avenue/Bellegrave Avenue, east of Haven Avenue/Sumner Avenue, to four-lane facilities. These improvements are also consistent with the City of Ontario's Adopted General Plan which identifies Merrill Avenue/Bellegrave Avenue and Haven Avenue/Sumner Avenue north of Merrill Avenue/Bellegrave Avenue as four-lane facilities.

#### **Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications for the Cities of Ontario and Eastvale, intersection operations improve to LOS E and D, respectively, in the PM peak hour. The estimated project fair share contribution towards these improvements is 42 percent.

### **53. Euclid Avenue (SR-83) and Edison Avenue**

#### **Cumulative Year (2040) Plus Project Conditions:**

The proposed amendment adds delay to the intersection, which is forecast to operate at LOS F in the AM and PM peak hours under Cumulative Year (2040) No Project Conditions.

#### **Improvement(s):**

This intersection is located on the border of the Cities of Chino and Ontario but is under Caltrans' jurisdiction. Improvements at the intersection will require cooperation between both Cities and Caltrans but ultimately require Caltrans' approval. Since the Cities have distinct LOS standards, improvements were provided relative to each City.

This intersection was identified in the Commerce Center study as requiring 2040 improvements. Generally, both the City of Ontario and Chino improvements require less buildout of the intersection than the improvements identified in the Commerce Center study.

#### City of Ontario (LOS E):

The following lane configurations are provided to improve intersection operations to acceptable conditions, LOS E or better, in the AM and PM peak hours:

- Northbound approach: one left-turn lane, three through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, three through lanes, and one shared through/right lane
- Southbound approach: two left-turn lanes, three through lanes, and a right-turn lane



- Cumulative Year (2040) No Project Conditions assumed one left-turn lane, two through lanes, and a right-turn lane

These improvements require acquisition of ROW but there are planned 2020 RTP/SCS projects that widen Euclid Avenue in the northbound direction to four lanes, Edison Avenue/Ontario Ranch Road east of Euclid Avenue to eight lanes, and Edison Avenue/Ontario Ranch Road west of Euclid Avenue to three lanes. These improvements are within the ultimate ROW proposed in the City of Ontario's Adopted General Plan, which identifies Euclid Avenue (SR-83) and Edison Avenue/Ontario Ranch Road as eight-lane facilities.

#### City of Chino (LOS D):

The following lane configurations are provided to improve intersection operations to acceptable conditions, LOS D or better, in the AM and PM peak hours:

- Northbound approach: one left-turn lane, three through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, three through lanes, and one shared through/right lane
- Southbound approach: two left-turn lanes, three through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, two through lanes, and a right-turn lane
- Eastbound approach: one left-turn lane, four through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, three through lanes, and one shared through/right lane
- Westbound approach: two left-turn lanes, three through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, three through lanes, and a right-turn lane

These improvements require acquisition of ROW but there are planned 2020 RTP/SCS projects that widen Euclid Avenue in the northbound direction to four lanes, Edison Avenue/Ontario Ranch Road east of Euclid Avenue to eight lanes, and Edison Avenue/Ontario Ranch Road west of Euclid Avenue to six lanes. These improvements are within the ultimate ROW proposed in the City of Chino's Adopted General Plan, which identifies Euclid Avenue (SR-83) as an eight-lane facility and Edison Avenue/Ontario Ranch Road west of Euclid Avenue (SR-83) as a six-lane facility. Lastly, it should be noted that adding a through lane to Barton Road could induce travel and result in a secondary transportation impact related to increased VMT.

#### **Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications for the Cities of Ontario and Chino, intersection operations improve to LOS E and D, respectively, during both peak hours. The estimated project fair share



contribution towards these improvements is five percent. Lastly, it should be noted that adding a through lane to Barton Road could induce travel and result in a secondary transportation impact related to increased VMT.

## **55. Euclid Avenue (SR-83) and Merrill Avenue**

### **Cumulative Year (2040) Plus Project Conditions:**

The proposed amendment adds delay to the intersection, which is forecast to operate at LOS E and F in the AM and PM peak hours under Cumulative Year (2040) No Project Conditions.

### **Improvement(s):**

This intersection is located on the border of the Cities of Chino and Ontario but is under Caltrans' jurisdiction. Improvements at the intersection will require cooperation between both Cities and Caltrans but ultimately require Caltrans' approval. Since the Cities have distinct LOS standards, improvement were provided relative to each City.

This intersection was identified in the Commerce Center study as requiring 2040 improvements. Generally, the above improvements require less buildout of the intersection than the improvements identified in the Commerce Center study.

### City of Ontario (LOSE):

The following lane configurations and phasing updates are provided to improve intersection operations to acceptable conditions, LOS E, in the PM peak hour:

- Northbound approach: one left-turn lane, three through lanes, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, three through lanes and one shared through/right lane
- Southbound approach: one left-turn lane, two through lanes, and one shared through-right lane
  - Cumulative Year (2040) No Project Conditions assumed one left-turn lane, two through lanes and a right-turn lane
- Westbound approach: one left-turn lane and one shared through-right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one shared left/through lane and a right-turn lane
- Update eastbound and westbound from permissive left-turn phasing to split phasing

These improvements require acquisition of ROW in addition to the planned 2020 RTP/SCS projects that widen northbound Euclid Avenue (SR-83) north of Merrill Avenue to four lanes, Euclid Avenue (SR-83) south of Merrill Avenue to eight lanes, and eastbound Merrill Avenue east of (SR-83) to three lanes. These improvements are within the ultimate ROW proposed in the City of Ontario's Adopted General Plan, which





identifies Euclid Avenue (SR-83) as an eight-lane facility and Merrill Avenue east of Euclid Avenue (SR-83) as a four-lane facility.

#### City of Chino (LOS D):

In addition to the improvements identified above, the following lane configurations and phasing updates are provided to improve intersection operations to acceptable conditions, LOS D, in the AM and PM peak hour:

- Westbound approach: one left-turn lane, one shared through-left lane, and a right-turn lane
  - Cumulative Year (2040) No Project Conditions assumed one shared left/through lane and a right-turn lane

These additional improvements require acquisition of ROW in addition to the planned 2020 RTP/SCS projects that widen northbound Euclid Avenue (SR-83) north of Merrill Avenue to four lanes, Euclid Avenue (SR-83) south of Merrill Avenue to eight lanes, and eastbound Merrill Avenue east of (SR-83) to three lanes. These improvements are within the ultimate ROW proposed in the City of Chino's Adopted General Plan, which identifies Euclid Avenue (SR-83) as an eight-lane facility and Merrill Avenue east of Euclid Avenue (SR-83) as a four-lane facility.

#### **Cumulative Year (2040) Plus Project with Improvement Conditions:**

With the identified intersection modifications for the City of Ontario, intersection operations remain at LOS E during the AM peak hour and improve from LOS F to E during the PM peak hour. With the identified intersection modifications for the City of Ontario, intersection operations improve to LOS D during both peak hours. The estimated project fair share contribution towards these improvements is one percent. Lastly, it should be noted that adding a through lane to Euclid Avenue could induce travel and result in a secondary transportation impact related to increased VMT.

#### **Intersection LOS Comparison**

**Table 11** compares the delay and LOS for the Cumulative Year (2040) No Project Conditions, Cumulative Year (2040) Plus Project Conditions, and Cumulative Year (2040) Plus Project Conditions with the identified improvements noted above. For all locations, the identified modifications improve the intersection operations to acceptable conditions.



**Table 11: Cumulative Year (2040) Level of Service Comparison with Improvements**

Intersection	Jurisdiction	Cumulative Year (2040) No Project Conditions			Cumulative Year (2040) Plus Project Conditions			Cumulative Year (2040) Plus Project Conditions with Improvements		
		Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay	Control	Peak Hour	LOS / Average Delay
6. Haven Ave and Riverside Dr	City of Ontario	Signal	AM	<b>F / 216</b>	Signal	AM	<b>F / 246</b>	Signal	AM	E / 75
			PM	<b>F / 163</b>		PM	<b>F / 170</b>		PM	E / 65
13. Hamner Ave and Ontario Ranch Rd	City of Ontario	Signal	AM	D / 53	Signal	AM	D / 54	Signal	AM	D / 53
			PM	E / 78		PM	<b>F / 87</b>		PM	E / 80
	City of Eastvale	Signal	AM	D / 53	Signal	AM	D / 54	Signal	AM	-
			PM	<b>E / 78</b>		PM	<b>F / 87</b>		PM	-
14. I-15 SB Ramps and Ontario Ranch Rd	City of Eastvale and Caltrans	Signal	AM	C / 21	Signal	AM	C / 24	Signal	AM	A / 7
			PM	<b>E / 64</b>		PM	<b>F / 85</b>		PM	A / 8
15. I-15 NB Ramps and Ontario Ranch Rd	City of Jurupa Valley and Caltrans	Signal	AM	C / 23	Signal	AM	C / 32	Signal	AM	C / 21
			PM	<b>E / 57</b>		PM	<b>E / 68</b>		PM	C / 26
33. Haven Ave/Sumner Ave and Merrill Ave/Bellegrave Ave	City of Ontario	Signal	AM	C / 25	Signal	AM	C / 30	Signal	AM	C / 29
			PM	E / 70		PM	<b>F / 84</b>		PM	E / 68
	City of Eastvale	Signal	AM	C / 25	Signal	AM	C / 30	Signal	AM	C / 29
			PM	<b>E / 70</b>		PM	<b>F / 84</b>		PM	D / 50
53. Euclid Ave (SR-83) and Edison Ave	City of Ontario and Caltrans	Signal	AM	<b>F / 99</b>	Signal	AM	<b>F / 104</b>	Signal	AM	E / 68
			PM	<b>F / 96</b>		PM	<b>F / 99</b>		PM	E / 64
	City of Chino and Caltrans	Signal	AM	<b>F / 99</b>	Signal	AM	<b>F / 104</b>	Signal	AM	D / 54
			PM	<b>F / 96</b>		PM	<b>F / 99</b>		PM	D / 51
55. Euclid Ave (SR-83) and Merrill Ave	City of Ontario and Caltrans	Signal	AM	E / 67	Signal	AM	E / 69	Signal	AM	E / 72
			PM	<b>F / 100</b>		PM	<b>F / 100</b>		PM	E / 80
	City of Chino and Caltrans	Signal	AM	<b>E / 67</b>	Signal	AM	<b>E / 69</b>	Signal	AM	D / 39
			PM	<b>F / 100</b>		PM	<b>F / 100</b>		PM	D / 45

Notes:

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and all-way-stop-controlled (AWSC). Worst lane delay reported for two-way-stop-controlled (TWSC) intersections.
2. Delay Operations were calculated using HCM 6th methodologies.
3. "-" means no feasible improvements were identified to improve operations below acceptable standards.
4. **Bolded** results operate below acceptable LOS standards.

Source: Fehr & Peers, 2022.



## 8. Freeway Off Ramp Queuing

Storage capacities for all off-ramps on SR-60, SR-71, and I-15 in the study area were evaluated using HCM 6th Edition methodologies. The following intersections were included in the off-ramp queuing analysis:

1. Archibald Avenue and SR-60 Westbound Ramps
2. Haven Avenue and SR-60 Westbound Ramps
3. Archibald Avenue and SR-60 Eastbound Ramps
4. Haven Avenue and SR-60 Eastbound Ramps
14. I-15 Southbound Ramps and Ontario Ranch Road
15. I-15 Northbound Ramps and Ontario Ranch Road
40. I-15 Southbound Ramps and Limonite Avenue
41. I-15 Northbound Ramps and Limonite Avenue
48. SR-71 Southbound Ramps and Grand Avenue
49. Roswell Avenue/SR-71 Northbound Ramps and Grand Avenue
59. SR-71 Northbound Ramps and Euclid Avenue (SR-83)

Storage capacities were compared against 95<sup>th</sup> percentile queue estimates prepared using the Synchro 11 software. Off-ramp movements where the 95<sup>th</sup> percentile queue exceeded the existing storage capacity were considered inadequate. The results of the queuing analysis presented in **Appendix G** and are summarized in **Table 12**.

The intersection of I-15 Southbound Ramps and Ontario Ranch Road, is the only off-ramp forecast to exceed its existing storage capacity. Under Opening Year (2025) Plus Project Conditions and Cumulative Year (2040) Plus Project Conditions, the intersection's off-ramp experiences a max queue of 575 feet in the left-turn lanes during the PM peak hour. Under Cumulative Year (2040) Plus Project Conditions, the intersection's off-ramp experiences a max queue of 1,500 in the right-turn lanes.

As discussed in Chapters 5 and 6, the intersection is forecast to operate at LOS F under Opening Year (2025) Plus Project Conditions and Cumulative Year (2040) Plus Project Conditions. Chapter 7 discusses modifications for this intersection that improve LOS to acceptable operations. As shown in **Table 11**, these improvements also improve queuing operations, resulting in the queues to no longer exceed existing storage capacity.



**Table 12: Off Ramp Queuing Analysis Summary**

Intersection	Control	Movement	Storage Length (ft)	Peak Hour	Existing (2021) (ft)	Opening Year (2025) Conditions (ft)	Opening Year (2025) Plus Project Conditions (ft)	Opening Year (2025) Plus Project Conditions with Improvements (ft)	Cumulative Year (2040) No Project Conditions (ft)	Cumulative Year (2040) Plus Project Conditions (ft)	Cumulative Year (2040) Plus Project Conditions with Improvements (ft)
1 Archibald Ave & SR-60 WB Ramps	Signalized	WBL	425	AM	175	300	300	-	350	350	-
				PM	150	425	425	-	200	200	-
		WBL/T/R	1300	AM	100	300	325	-	250	250	-
				PM	150	450	450	-	150	150	-
		WBR	425	AM	75	175	175	-	225	225	-
				PM	50	50	50	-	75	75	-
2 Haven Ave & SR-60 WB Ramps	Signalized	WBL	250	AM	75	100	100	-	75	75	-
				PM	125	175	175	-	150	150	-
		WBT/L	250	AM	75	100	100	-	75	75	-
				PM	125	150	175	-	150	150	-
		WBR	1375	AM	425	500	500	-	425	425	-
				PM	475	575	575	-	575	575	-
3 Archibald Ave & SR-60 EB Ramps	Signalized	EBL	325	AM	200	200	200	-	300	300	-
				PM	75	75	75	-	200	200	-
		EBL/T/R	1275	AM	75	225	225	-	250	250	-
				PM	125	250	275	-	175	175	-
		EBR	325	AM	75	225	225	-	200	200	-
				PM	100	200	200	-	175	175	-
4 Haven Ave & SR-60 EB Ramps	Signalized	EBL	450	AM	225	250	250	-	300	300	-
				PM	150	150	150	-	150	150	-
		EBT/L	325	AM	225	275	275	-	300	300	-
				PM	150	150	150	-	150	150	-
		EBR	1425	AM	50	175	200	-	125	150	-
				PM	150	725	1075	-	175	275	-
14 I-15 SB Ramps & Ontario Ranch Rd	Signalized	SBL	450	AM	100	325	325	75	200	200	50
				PM	175	<b>500</b>	<b>575</b>	100	<b>500</b>	<b>575</b>	75
		SBR	1440	AM	150	750	800	325	475	500	100
				PM	450	1150	1300	1050	1275	<b>1,500</b>	450
15 I-15 NB Ramps & Ontario Ranch Rd	Signalized	NBL	1725	AM	250	550	550	-	400	425	-
				PM	200	675	700	-	375	400	-
		NBR	460	AM	100	100	100	-	175	200	-
				PM	75	50	50	-	50	50	-
40 I-15 SB Ramps & Limonite Ave	Signalized	SBL	1800	AM	75	75	75	-	75	75	-
				PM	75	75	75	-	125	125	-
		SBT/L	425	AM	75	75	75	-	75	75	-
				PM	75	100	100	-	125	125	-
		SBR	1800	AM	100	275	275	-	275	275	-
				PM	175	250	250	-	325	325	-
41 I-15 NB Ramps & Limonite Ave	Signalized	NBL	1675	AM	125	250	250	-	300	300	-
				PM	100	125	125	-	250	275	-
		NBT/L	1675	AM	125	250	250	-	275	300	-
				PM	100	125	125	-	250	275	-
		NBR	415	AM	75	100	100	-	125	125	-
				PM	100	125	125	-	150	150	-
48 SR-71 SB Ramps & Grand Ave	Signalized	SBL	1225	AM	275	300	300	-	300	325	-
				PM	275	300	300	-	300	350	-
		SBT/L	1225	AM	275	300	300	-	300	325	-
				PM	275	300	300	-	300	325	-
		SBR	550	AM	200	200	200	-	200	200	-
				PM	350	350	350	-	300	300	-
49 Roswell Ave/SR-71 NB Off-Ramp	Signalized	NBL	1375	AM	250	250	200	-	275	275	-
				PM	200	225	225	-	275	275	-
		NBT	1375	AM	250	250	200	-	300	300	-
				PM	200	225	225	-	275	275	-
		NBR	825	AM	0	0	0	-	0	0	-
				PM	125	125	125	-	125	125	-
59 Euclid Avenue (SR-83) & SR-71 NB Ramps	Signalized	WBL	1725	AM	50	50	50	-	75	75	-
				PM	75	75	75	-	75	75	-
		WBR	300	AM	0	0	0	-	0	0	-
				PM	0	0	0	-	0	0	-

Notes:

- Queues are rounded up to the nearest 25-foot increments assuming each vehicle takes up approximately 25 feet.
- Bold** queue lengths exceed existing storage capacity

Source: Fehr & Peers, 2022.



## 9. Conclusion

Although vehicle delay and LOS are no longer used to measure transportation impacts under CEQA, they still show the effects a proposed project would have on the surrounding transportation network. This study was undertaken to document the LOS of an amendment to expand the Subarea 29 Specific Plan (Project). The following summarizes the results of this analysis:

- The Project will expand the Specific Plan to add approximately 113 gross acres of land to the previously analyzed 540 gross acres of land, resulting in a new site area of 653 gross acres of land. The Project proposes to incorporate Planning Areas (PA) 32, 33, and 34 into the Specific Plan and increase the density of residential dwelling units on PAs 30 and 31. The Project consists of a net increase of 1,470 residential dwelling units and the construction of a 1200-student middle school.
- The Project is estimated to generate a net increase of 14,257 daily external vehicle trips, including 1,317 trips (444 inbound/873 outbound) during the AM peak hour and 1,357 trips (851 inbound/506 outbound) during the PM peak hour.
- The LOS analysis forecasts the Project to increase delay at 17 intersections under Opening Year (2025) Plus Project Conditions and seven intersections under Cumulative Year (2040) Plus Project Conditions at locations operating below the acceptable LOS standards during at least one peak hour. After implementation of the proposed improvements identified in Chapter 7, all intersections operate better than pre-project conditions or within acceptable LOS standards under Opening Year (2025) Plus Project Conditions and within acceptable LOS standards under Cumulative Year (2040) Plus Project Conditions.



# Appendix A: Pending and Approved Development Projects



Map ID	City	Project Description/Name	Location	SF Residential (Units)	MF Residential (Units)	Commercial Building (SF)	Industrial Building (SF)
1	Ontario	PDEV21-007	SWC of Milliken and 60 FWY				393,334
2	Ontario	PDEV19-059	NWC of Riverside Dr. and Milliken Ave.			5,552	295,991
3	Ontario	Ontario Ranch Business Park SP	NEC of Merrill Ave. and Euclid Ave.				1,905,027
4	Ontario	Merrill Commerce Center SP	Eucalyptus Ave, on the north, Merrill Ave. on the south, east of Grove Ave., and west of Carpenter Ave.				8,455,000
5	Ontario	South Ontario Logistics Center SP	Eucalyptus Ave, on the north, Merrill Ave. on the south, east of Campus Ave., and west of Grove Ave.				5,333,518
6	Ontario	Ontario Ranch Business Park SP Expansion	Eucalyptus Ave, on the north, Merrill Ave. on the south, east of Campus Ave., and west of Sultana Ave.				1,640,690
7	Ontario	PDEV17-057	Northeast corner of Merrill Ave. Carpenter Ave.				1,447,123
8	Ontario	PDEV21-010	Southwest corner of Vineyard Ave. and Eucalyptus				1,400,000
9	Ontario	PDEV21-025	Southwest corner of Hamner Ave. and Ontario Ranch Rd.			204,907	
10	Ontario	PDEV21-041	Southeast corner of Ontario Ranch Road and Archibald Ave.		362		
11	Ontario	PDEV18-031	Southwest corner of Riverside Drive and Hamner Ave.				968,092
12	Ontario	PDEV19-057	NEC of Haven Ave. and 60FWY				281,000
<b>TOTALS</b>					<b>362</b>	<b>210,459</b>	<b>22,119,775</b>

Map ID	City	Map No.	Planning No.	Project Name	Location	Land Use
13	Chino		PL 18-0103(SA) PL 20-0010(SCUP)	Remington Warehouse	Remington & Moon Place	Warehousing (61 TSF)
14	Chino		PL 20-0039 (SCUP) PL20-0040 (SA) PL20-0041 (SCUP) PL20-00-42 (SA)	7 Eleven / Loredo Taco	NWC Hellman & Kimball	Convenience Market with Gas Pumps (6 PUMPS) Fast-Food Restaurant with Drive-Through Window (3 TSF)
15	Chino	TM 20369		Falloncrest at the Preserve	North of Pine, East of EPL	Single Family Detached Housing (203 SFR)
16	Chino	TM 20312		Falloncrest at the Preserve	North of Pine, West of EPL	100.78 acres into 10 lots - "A" Map
17	Chino	TM 20164	PL 20-0006(SA)	Richmond - Discovery Park	SWC Hellman & Market	Single-Family Detached Housing
18	Chino	TM 20248	PL19-0072	Lewis	North of Exposition and south of Academy	56 DU Attached
19	Chino	TM 20167	PL 19-0072(SA)	Lewis - Orchards	S/o Market btwn EPL & Hellman	Multifamily Housing (60 DU)
20	Chino	TM 20231	PL18-0059	Lot 11 - Lennar	SWC Main & Garden Park	Attached
21	Chino	TM 20232	PL18-0059	Lot 11 - Willam Lyon	SEC WPL & Garden Park	Attached
22	Chino	TM 20223	PL18-0059	Lot 11 - Lennar	SEC WPL & Garden Park	Attached
23	Chino	TM 20102	PL18-0007 PL18-0008	Tri- Pointe	SEC Main Street and Forest Park Avenue	267 Attached
24	Chino	TM 19951	PL14-1144	Lennar	North of Bickmore and West of Alpine Meadows	93 SFR
25	Chino	TM 19952	PL18-0039	Lennar - Olive Grove II	North of Bickmore and East of Huckleberry	57 SFR
26	Chino	TM 19935 TM 19953	PL14-0946	Richmond - Vineyard	North of Bickmore, east of Alpine Meadows, and west of Apricot, south of Applewood	73 SFR
27	Chino	TM 18479		Richmond - Pineberry	North of Bickmore, between Apricot and Hellman	78 SFR
28	Chino		PL 16-0719	Fed Ex	Merrill Ave.	476,285 SF distribution building, 8,973 gateway building, 17,480 maintenance building, and 2 220 sf guardhouses.
29	Chino		PL 05-0033(SCUP) PL 20-0025(AA)	El Pollo Loco	6969 Schaefer Ave	Fast-Food Restaurant with Drive-Through Window (2 TSF)
30	Chino	PM 19889	PL 17-0092 (SCUP) 17-0121(SA)	Yorba II Business Park	SWC Eucalyptus & Yorba	Industrial Park (235 TSF)
31	Chino	TM 20028	PL 18-0035(SA) PL 18-0105(TTM)	Chino Pipeline Center	NWC Pipeline & Chino	Medical-Dental Office Building (24 TSF)
32	Chino		PL 18-0035(SA) PL 20-0026(SA)	CVUSD Education Center	Ramona Ave	Government Office Building (60 TSF)
33	Chino		PL 18-0035(SA) PL 20-0029(SA)	Yorba Warehouse	13404 Yorba Ave.	Warehousing (260 TSF)
34	Chino		PL 18-0047(SA) PL 18-0048(SCUP)	Gas Station & Convenience Store	NEC Central & El Prado	Convenience Market with Gas Pumps (3 TSF) Fast Casual Resturant (2 TSF) Automated Car Wash (1 WT)
35	Chino		PL 18-0057(SCUP) PL 18-0058(SA)	10th Street Assisted Living Facility	SEC 10th & Guardian	Assisted Living (144 DU)
36	Chino		PL 18-0114(SA)	Apple's Nest V and VI Aviation Business Park	7000 Merrill Avenue (e/o Bon View)	Business Park (160 TSF)
37	Chino	TM 20235	PL 19-0055	Francis Estates	5084 Francis Ave	Single-Family Detached Housing (15 DU)
38	Chino		PL 19-0079(SA) PL 19-0080(SCUP)	Chino Villas Assisted Living Facility	NWC Philadelphia & Benson	Assisted Living (123 DU) Small Office Building Fast-Food Resturant with Drive-Thru
39	Chino	PM 20158	PL 19-0086(SA)	East End & County Industrial	NWC East End & County	Warehousing (275 TSF)
40	Chino		PL 19-0101(AA)	Stater Bros Center - Commercial Pad	SEC Schaefer & Fern	Shopping Center
41	Chino	PM	PL 20-0003 (Annex) PL20-0004 (SA) PL20-0005(TPM)	Lankershim Industrial	Philadelphia & East End	Warehousing
42	Chino	PM 20174	PL 20-0005(SA)	East End / Philadelphia Industrial	NWC East End / Philadelphia	Warehousing (65 TSF)

Map ID	City	Map No.	Planning No.	Project Name	Location	Land Use
43	Chino		PL 17-0042(SCUP) PL 19-0044(SA)	In-N-Out Distribution Facility	SWC Kimball & Mayhew	General Light Industrial
44	Chino		PL 18-0072	ere - Manufacturing/Warehouse Buildin	NEC Euclid & Bickmore	Industrial Park (364 TSF)
45	Chino	TM 20247	PL 19-0021(MSA-B) PL 19-0022 (TTM) PL 20-0071(SA)	che-Richland/KB Homes Coastal - Detact	NEC Mayhew & Bickmore	Single-Family Detached Housing (168 DU)
46	Chino	TM 16420 / -3	PL 19-0082(SA)	Lewis Preserve Town Center (Block 6 & 7)	Pine & Main (SOP)	Pharmacy/Drugstore with Drive-Thru (13 TSF) Shopping Center (9 TSF) General Office Building (7.3 TSF) Mid-Rise Residential with 1st Floor Commercial
47	Chino	TM 16420 / -3	PL 19-0089(SA)	Lewis - Apartments (Block 6 & 7)	SWC Pine & EPL	Multifamily Housing (189 DU)
48	Chino	PM 19756		Altitude Business Centre	N/o Bickmore, S/o Kimball	Self-Storage / Mini-Warehouse (110 TSF) Business Park (233 TSF) General Light Industrial (670 TSF)
49	Chino	PM 19380 & 19831		Euclid Commerce Center - Boatman	15723-15739 Euclid Ave	General Light Industrial (187 TSF)
50	Chino	PM 20071	PL 18-0118-20 (SA)	Majestic Chino Heritage	SEC Mountain & Bickmore	High-Cube Fulfillment Center Warehouse (2,083 TSF)
51	Chino		PL 21-0011 (SA) PL 21-0012(SCUP)	Albers Retail Center	NEC Magnolia & Riverside	Shopping Center (12.4 TSF)
52	Chino	TM 20165	PL 21-0013(SA)	Block 4 - Century Communities	NEC Discovery Park & Legacy Park	Single-Family Detached Housing (79 DU)
53	Chino	TM 20380	PL21-0021(TTM)		SWC EPL & Academy	Multifamily Housing (210 DU)
54	Chino	TM 28846	PL 18-0043(TTM) PL 18-0044 PL 20-0046 PL20-0047(SA)	Rancho Miramonte	SEC Cucamonga & Chino-Corona	Shopping Center (6.5 TSF) Multifamily (659 DU) Single-Family Detatched Housing (415 DU) Public Park (15 (AC)
55	Chino	TM 20227	PL 18-0063 (SCUP) PL 18-0064 (SA) PL 18-0065 (TTM)	Monte Vista Village	12948 Monte Vista Ave	Single-Family Detached Housing (5 DU)
56	Chino			Bickmore Street Residential	Bickmore	Single-Family Detached Housing (196 DU)
57	Chino			West Preserve (Barthelemy Project)	SWC Pine & Chino-Corona NS	Single-Family Detached Housing (193 DU) Multifamily Housing (486 DU) Public Park (10 AC)
58	Chino	TM 20161		Van Vliet	S/o Bickmore, N/o Pine	Single-Family Detached Housing (471 DU)
59	Eastvale			Walmart Superstore	SEC pf Limonite Ave and Archibald Ave	Anticipated to be open by Holiday Season 2023
60	Eastvale			Leal Specific Plan	NEC of Limonite Ave and Scholar Way	2500 Residential Units, 595 KSF of Commercial Development, and a Fire Station

Map ID	City	Project Description/Name	Location	SF Residential (Units)	MF Residential (Units)	Commercial Building / Retail / Services (SF)	Industrial Building (SF)	Elementary Scjhool (Students)	Bussiness Park (SF)
61	Ontario	TTM 20524 (PMTT21-020), PDEV22-032 Edenglen	Bounded by Mill Creek Ave to the West, Edenglen Ave to the East, Riverside Dr to the North, and Chino Ave to the South		108				
62	Ontario	TTM 20530 (PMTT22-009), TTM 20529 (PMTT22-010) Rich Haven	Located on the East side of Twinkle Ave Approximately 500' North of Moonlight St		120				
63	Ontario	TTM 20526 (PMTT22-012) Rich Haven	Bounded by Riverside Dr to the North, Chino Ave to the South, Haven Ave to the West, and Mill Creek Ave to East	2,732	1,524	317,400			
64	Ontario	The Avenue	Bounded by Carpenter Ave to the West, Mill Creek Ave to the East, Schaefer Ave to the North, and Ontario Ranch Rd to the South	106				800	
65	Ontario	Armstrong Specific Plan	Bounded by Carpenter Ave to the West, Cucamonga Creek Flood Control Channel to the East, Riverside Dr to the North, and Chino Ave to the South	1,813					
66	Ontario	PDEV19-064, PDEV22-037 Parkside Specific Plan	Bounded by Carpenter Ave to the West, Archibald Ave to the East, Ontario Ranch Rd to the North, and Eucalyptus Ave to the South	540	508				
67	Eastvale	Sumner Place	Southeast corner of Sumner Ave and Schleisman Rd		216	5,000			
68	Eastvale	The Ranch at Eastvale	Bounded by Hellman Ave to the West, the Canal to the East, Existing Industrial Developments to the North, and Existing Resdientail and Recreational Developments to the South			210,000			
69	Eastvale	Homestead	Bounded by the Canal to the West, Archibald Ave to the East, and Existing Industrial Developments to the South				1,080,060		
70	Eastvale	Goodman-Commerce Center (2025)	Bounded by Hamner Ave to the West, I-15 to the East, Ontario Ranch Rd to the North, and Bellegrave Ave to the South			116,432			254,557
<b>TOTALS</b>				<b>5,191</b>	<b>2,476</b>	<b>648,832</b>	<b>1,080,060</b>	<b>800</b>	<b>254,557</b>

Project Number	Project Name	Land Use	ITE LU Code	Quantity	Units	Daily Rate	AM Peak Hour			PM Peak Hour			Daily Trips	AM Peak Hour			PM Peak Hour							
							In %	Out %	Avg. Rate	In %	Out %	Avg. Rate		In	Out	Total	In	Out	Total					
1	PDEV21-007	General Light Industrial	110	393.334	KSF	4.87	88%	12%	0.74	14%	86%	0.65	1916	256	35	291	36	220	256					
2	PDEV19-059	General Light Industrial	110	295.991	KSF	4.87	88%	12%	0.74	14%	86%	0.65	1441	193	26	219	27	165	192					
		Strip Retail Plaza (<40k)	822	5.552	KSF	54.45	60%	40%	2.36	50%	50%	6.59	302	8	5	13	19	18	37					
		Pass By (34% in PM peak Hour)												0	0	0	0	(6)	(7)	(13)				
Subtotal												302	8	5	13	13	11	24						
3	Ontario Ranch Business Park SP	General Light Industrial	-	1905.027	KSF	2.272	78%	22%	0.180	26%	74%	0.206	4328	267	75	342	100	292	392					
4	Merrill Commerce Center SP	-	-	8455	KSF	-	-	-	-	-	-	-	19806	1120	300	1420	433	1269	1702					
5	South Ontario Logistics Center SP	-	-	5333.518	KSF	-	-	-	-	-	-	-	12446	782	209	991	283	853	1136					
6	Ontario Ranch Business Park SP Expansion	General Light Industrial	-	1640.69	KSF	2.272	0.781	0.219	0.180	0.255	0.745	0.206	3727	230	65	295	86	252	338					
7	PDEV17-057	General Light Industrial	-	1447.123	KSF	2.272	0.781	0.219	0.180	0.255	0.745	0.206	3288	203	57	260	76	222	298					
8	PDEV21-010	General Light Industrial	-	1400	KSF	2.272	0.781	0.219	0.180	0.255	0.745	0.206	3181	196	55	251	73	215	288					
9	PDEV21-025	Shopping Center (>150k)	820	204.907	KSF	37.01	0.62	0.38	0.84	0.45	0.52	3.4	7584	107	65	172	335	362	697					
						Pass By (34% in PM peak Hour)												0	0	0	0	(114)	(123)	(237)
						Subtotal												7584	107	65	172	221	239	460
10	PDEV21-041	Multifamily Housing (Mid-Rise)	221	362	DU	4.54	23%	77%	0.37	61%	39%	0.39	1643	31	103	134	86	55	141					
11	PDEV18-031	General Light Industrial	-	968.092	KSF	2.272	0.781	0.219	0.180	0.255	0.745	0.206	2199	136	38	174	51	148	199					
12	PDEV19-057	General Light Industrial	110	281	KSF	4.87	88%	12%	0.74	14%	86%	0.65	1368	183	25	208	26	157	183					
13	Remington Warehouse	General Light Industrial	110	61	KSF	4.87	88%	12%	0.74	14%	86%	0.65	297	40	5	45	6	34	40					
14	7 Eleven / Loredo Taco	Fast-Food Restaurant with Drive-Through Window	934	2.5	KSF	467.48	51%	49%	44.61	52%	48%	33.03	1169	57	55	112	43	40	83					
		Convenience Store/Gas Station	945	6	Vehicle Fueling Position	265.12	50%	50%	16.06	50%	50%	18.42	1591	48	48	96	56	55	111					
15	Falloncrest at the Preserve	Single-Family Detached Housing	210	203	DU	9.43	26%	74%	0.7	63%	37%	0.94	1914	37	105	142	120	71	191					
16	Falloncrest at the Preserve	Single-Family Detached Housing	210	10	DU	9.43	26%	74%	0.7	63%	37%	0.94	94	2	5	7	6	3	9					
17	Richmond - Discovery Park	Single-Family Detached Housing	210	68	DU	9.43	26%	74%	0.7	63%	37%	0.94	641	12	36	48	40	24	64					
18	Lewis	Single-Family Attached Housing	215	56	DU	7.2	31%	69%	0.48	57%	43%	0.57	403	8	19	27	18	14	32					
19	Lewis - Orchards	Multifamily Housing (Low-Rise)	220	60	DU	6.74	24%	76%	0.4	63%	37%	0.51	404	6	18	24	20	11	31					
20 / 21 / 22	Lot 11 - Lennar/Wilam Lyon	Single-Family Attached Housing	215	106	DU	7.2	31%	69%	0.48	57%	43%	0.57	763	16	35	51	34	26	60					
23	Tri- Pointe	Single-Family Attached Housing	215	267	DU	7.2	31%	69%	0.48	57%	43%	0.57	1922	40	88	128	87	65	152					
24	Lennar	Single-Family Detached Housing	-	93	DU	-	-	-	-	-	-	-	0	0	0	0	0	0	0					
25	Lennar - Olive Grove II	Single-Family Detached Housing	-	57	DU	-	-	-	-	-	-	-	0	0	0	0	0	0	0					
26	Richmond - Vineyard	Single-Family Detached Housing	-	73	DU	-	-	-	-	-	-	-	0	0	0	0	0	0	0					
27	Richmond - Pineberry	Single-Family Detached Housing	-	78	DU	-	-	-	-	-	-	-	0	0	0	0	0	0	0					
28	Fed Ex	-	-	476.285	KSF	-	-	-	-	-	-	-	3905	178	316	494	170	143	313					
29	El Pollo Loco	Fast-Food Restaurant with Drive-Through Window	934	2	KSF	467.48	51%	49%	44.61	52%	48%	33.03	935	45	44	89	34	32	66					
30	Yorba II Business Park	Industrial Park	130	235	KSF	3.37	81%	19%	0.34	22%	78%	0.34	792	65	15	80	18	62	80					
31	Chino Pipeline Center	Medical-Dental Office Building	720	24	KSF	36	79%	21%	3.1	30%	70%	3.93	864	58	16	74	28	66	94					
32	CVUSD Education Center	Government Office Building	730	60	KSF	22.59	75%	25%	3.34	25%	75%	1.71	1355	150	50	200	26	77	103					
33	Yorba Warehouse	Warehousing	150	260	KSF	1.71	77%	23%	0.17	28%	72%	0.18	445	34	10	44	13	34	47					
34	Gas Station & Convenience Store	Convenience Store/Gas Station	945	3	KSF	624.2	50%	50%	40.59	50%	50%	48.48	1873	61	61	122	73	72	145					
		Fast Casual Resturant	930	2	KSF	97.14	50%	50%	1.43	55%	45%	12.55	194	2	1	3	14	11	25					
		Automated Car Wash	948	1	Car Wash Tunnel	0	0%	0%	0	50%	50%	77.5	0	0	0	0	39	39	78					
35	10th Street Assisted Living Facility	Assisted Living	254	144	DU	2.6	60%	40%	0.18	39%	61%	0.24	374	16	10	26	14	21	35					
36	Eagle's Nest V and VI Aviation Business Park	Business Park	-	160	KSF	-	-	-	-	-	-	-	0	0	0	0	0	0	0					
37	Francis Estates	Single-Family Detached Housing	210	15	DU	9.43	26%	74%	0.7	63%	37%	0.94	141	3	8	11	9	5	14					
38	Chino Villas Assisted Living Facility	General Office Building	710	65	KSF	10.84	88%	12%	1.52	17%	83%	1.44	705	87	12	99	16	78	94					
		Fast-Food Restaurant with Drive-Through Window	934	1.5	KSF	467.48	51%	49%	44.61	52%	48%	33.03	701	34	33	67	26	24	50					
		Assisted Living	220	123	DU	2.6	60%	40%	0.18	39%	61%	0.24	320	13	9	22	12	18	30					
39	East End & County Industrial	Warehousing	150	275	KSF	1.71	77%	23%	0.17	28%	72%	0.18	470	36	11	47	14	36	50					

Project Number	Project Name	Land Use	ITE LU Code	Quantity	Units	Daily Rate	AM Peak Hour			PM Peak Hour			Daily Trips	AM Peak Hour			PM Peak Hour			
							In %	Out %	Avg. Rate	In %	Out %	Avg. Rate		In	Out	Total	In	Out	Total	
40	Stater Bros Center - Commercial Pad	Supermarket	-	63	KSF	-	-	-	-	-	-	0	0	0	0	0	0			
42	East End / Philadelphia Industrial	Warehousing	150	65	KSF	1.71	77%	23%	0.17	28%	72%	0.18	111	8	3	11	3	9	12	
43	In-N-Out Distribution Facility	General Light Industrial	110	380.593	KSF	4.87	88%	12%	0.74	14%	86%	0.65	1853	248	34	282	35	212	247	
44	Alere - Manufacturing/Warehouse Buildings	Industrial Park	130	364	KSF	3.37	81%	19%	0.34	22%	78%	0.34	1227	100	24	124	27	97	124	
45	Detached SFDU	Single-Family Detached Housing	210	168	DU	9.43	26%	74%	0.7	63%	37%	0.94	1584	31	87	118	100	58	158	
46	Lewis Preserve Town Center (Block 6 & 7)	Pharmacy/Drugstore with Drive-Thru	881	13	KSF	108.4	52%	48%	3.74	50%	50%	10.25	1409	25	24	49	67	66	133	
		Strip Retail Plaza (<40k)	822	9	KSF	54.45	60%	40%	2.36	50%	50%	6.59	490	13	8	21	30	29	59	
		General Office Building	710	7.3	KSF	10.84	88%	12%	1.52	17%	83%	1.44	79	10	1	11	2	9	11	
		Mid-Rise Residential with 1st Floor Commercial	231	16	DU	-	-	-	0.22	-	-	0.17	0	0	4	4	0	3	3	
47	Lewis - Apartments (Block 6 & 7)	Multi-Family Housing	220	189	DU	6.74	24%	76%	0.4	63%	37%	0.51	1274	18	58	76	60	36	96	
48	Altitude Business Centre	-	-	-	-	-	-	-	-	-	-	-	7496	664	126	790	179	619	798	
49	Euclid Commerce Center - Boatman	General Light Industrial	110	187	KSF	4.87	88%	12%	0.74	14%	86%	0.65	911	121	17	138	17	105	122	
50	Majestic Chino Heritage	High-Cube Fulfillment Center Warehouse	155	2083	KSF	1.81	81%	19%	0.15	39%	61%	0.16	3770	253	59	312	130	203	333	
51	Albers Retail Center	Strip Retail Plaza (<40k)	822	12.4	KSF	54.45	60%	40%	2.36	50%	50%	6.59	675	17	12	29	41	41	82	
52	Block 4 - Century Communities	Single-Family Detached Housing	210	79	DU	9.43	26%	74%	0.7	63%	37%	0.94	745	14	41	55	47	27	74	
53	Rancho Miramonte	Multi-Family Housing	220	210	DU	6.74	24%	76%	0.4	63%	37%	0.51	1415	20	64	84	67	40	107	
Strip Retail Plaza (<40k)		822	6.5	KSF	54.45	60%	40%	2.36	50%	50%	6.59	354	9	6	15	22	21	43		
Public Park		411	15	Acres	0.78	59%	41%	0.02	55%	45%	0.11	12	0	0	0	1	1	2		
Single-Family Detached Housing		210	415	DU	9.43	26%	74%	0.7	63%	37%	0.94	3913	76	215	291	246	144	390		
55	Monte Vista Village	Multi-Family Housing	220	659	DU	6.74	24%	76%	0.4	63%	37%	0.51	4442	63	201	264	212	124	336	
56	Bickmore Street Residential	Single-Family Detached Housing	210	5	DU	9.43	26%	74%	0.7	63%	37%	0.94	47	1	3	4	3	2	5	
57	West Preserve (Barthelemy Project)	Single-Family Detached Housing	210	196	DU	9.43	26%	74%	0.7	63%	37%	0.94	1848	36	101	137	116	68	184	
		Public Park	411	10	Acres	0.78	59%	41%	0.02	55%	45%	0.11	8	0	0	0	1	0	1	
		Multi-Family Housing	220	486	DU	6.74	24%	76%	0.4	63%	37%	0.51	3276	47	100	135	114	67	181	
58	Van Vliet	Single-Family Detached Housing	210	108	DU	9.43	26%	74%	0.7	63%	37%	0.94	4442	86	244	330	279	164	443	
61	Edenglen	Multi-Family Attached (Condo)	220	108	DU	6.74	24%	76%	0.4	63%	37%	0.51	728	10	33	43	35	20	55	
62	Rich Haven	Multi-Family Attached (Condo)	220	120	DU	6.74	24%	76%	0.4	63%	37%	0.51	809	12	36	48	38	23	61	
63	Rich Haven	Single Family Detached	210	2732	DU	9.43	26%	74%	0.7	63%	37%	0.94	25763	497	1415	1912	1618	950	2568	
		Multi-Family Attached (Condo)	220	1524	DU	6.74	24%	76%	0.4	63%	37%	0.51	10272	146	464	610	490	287	777	
		Shopping Center (>150K)	820	317.4	KSF	37.01	62%	38%	0.84	48%	52%	3.4	11747	166	101	267	518	561	1079	
		Subtotal	-	-	-	-	-	-	-	-	-	-	-	11747	166	101	267	342	370	712
64	The Avenue	Single Family Detached	210	106	DU	9.43	26%	74%	0.7	63%	37%	0.94	1000	19	55	74	63	37	100	
65	Armstrong Specific Plan	Elementary School	520	800	Students	2.27	54%	46%	0.74	46%	54%	0.16	1816	320	272	592	59	69	128	
		Single Family Detached	210	1813	DU	9.43	26%	74%	0.7	63%	37%	0.94	17097	330	939	1269	1074	630	1704	
66	Parkside Specific Plan	Single Family Detached	210	540	DU	9.43	26%	74%	0.7	63%	37%	0.94	5092	98	280	378	320	188	508	
		Multi-Family	220	508	DU	6.74	24%	76%	0.4	63%	37%	0.51	3424	49	154	203	163	96	259	
67	Sumner Place	Multi-Family Attached (Condo)	220	216	DU	6.74	24%	76%	0.4	63%	37%	0.51	1456	21	65	86	69	41	110	
		Strip Retail Plaza (<40k)	822	5	KSF	54.45	60%	40%	2.36	50%	50%	6.59	272	7	5	12	17	16	33	
		Subtotal	-	-	-	-	-	-	-	-	-	-	-	272	7	5	12	11	22	
68	The Ranch at Eastvale	Shopping Center (>150K)	820	210	KSF	37.01	62%	38%	0.84	48%	52%	3.4	7772	109	67	176	343	371	714	
		Subtotal	-	-	-	-	-	-	-	-	-	-	-	7772	109	67	176	226	245	471
69	Homestead	General Light Industrial	110	1080.6	KSF	4.87	88%	12%	0.74	14%	86%	0.65	5263	704	96	800	98	604	702	
70	Goodman-Commerce Center	Shopping Center (40-150K)	821	116.4	KSF	94.49	62%	38%	3.53	48%	52%	9.03	11002	255	156	411	504	547	1051	
		Subtotal	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	(171)	(186)	(357)
		Business Park	770	254.6	KSF	12.44	85%	15%	1.35	26%	74%	1.22	3167	292	52	344	81	230	311	



# Appendix B: Traffic Counts

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Archibald  
EAST & WEST: SR-60 WB Ramps

**PROJECT #:** SC  
**LOCATION #:** 1  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			SR-60 WB Ramps			SR-60 WB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	X	X	4	1	X	X	X	1.3	0.3	1.3	

<b>AM</b>	7:00 AM	224	151	0	0	56	27	0	0	0	40	4	60	562
	7:15 AM	189	150	0	0	83	38	0	0	0	35	4	76	575
	7:30 AM	157	178	0	0	82	44	0	0	0	64	5	59	589
	7:45 AM	165	219	0	0	90	42	0	0	0	65	0	84	665
	8:00 AM	192	190	0	0	69	30	0	0	0	60	0	70	611
	8:15 AM	158	139	0	0	73	33	0	0	0	53	0	95	551
	8:30 AM	119	164	0	0	86	21	0	0	0	54	2	88	534
	8:45 AM	127	173	0	0	84	23	0	0	0	52	1	56	516
	VOLUMES	1,331	1,364	0	0	623	258	0	0	0	423	16	588	4,604
	APPROACH %	49%	51%	0%	0%	71%	29%	0%	0%	0%	41%	2%	57%	
APP/DEPART	2,695	/	1,953	882	/	1,046	0	/	0	1,027	/	1,605	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	703	737	0	0	324	154	0	0	0	224	9	289	2,440	
APPROACH %	49%	51%	0%	0%	68%	32%	0%	0%	0%	43%	2%	55%		
PEAK HR FACTOR	0.938			0.905			0.000			0.876			0.917	
APP/DEPART	1,440	/	1,026	478	/	548	0	/	0	522	/	866	0	
<b>PM</b>	4:00 PM	106	100	0	0	204	55	0	0	0	78	1	36	580
	4:15 PM	119	102	0	0	197	36	0	0	0	71	0	42	567
	4:30 PM	115	76	0	0	309	85	0	0	0	64	3	44	696
	4:45 PM	114	72	0	0	227	45	0	0	0	70	1	42	571
	5:00 PM	104	78	0	0	266	105	0	0	0	71	0	38	662
	5:15 PM	130	90	0	0	264	56	0	0	0	78	2	37	657
	5:30 PM	117	69	0	0	220	64	0	0	0	72	5	59	606
	5:45 PM	103	109	0	0	197	54	0	0	0	79	4	28	574
	VOLUMES	908	696	0	0	1,884	500	0	0	0	583	16	326	4,914
	APPROACH %	57%	43%	0%	0%	79%	21%	0%	0%	0%	63%	2%	35%	
APP/DEPART	1,605	/	1,022	2,384	/	2,468	0	/	0	925	/	1,424	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	463	316	0	0	1,066	291	0	0	0	283	6	161	2,587	
APPROACH %	59%	41%	0%	0%	79%	21%	0%	0%	0%	63%	1%	36%		
PEAK HR FACTOR	0.886			0.861			0.000			0.962			0.929	
APP/DEPART	780	/	477	1,357	/	1,350	0	/	0	450	/	760	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Haven  
EAST & WEST: SR-60 WB Ramps

**PROJECT #:** SC  
**LOCATION #:** 2  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Haven			Haven			SR-60 WB Ramps			SR-60 WB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	X	X	3	1	X	X	X	1.5	0.5	1	

<b>AM</b>	7:00 AM	101	256	0	0	130	98	0	0	0	34	2	76	697
	7:15 AM	89	299	0	0	138	82	0	0	0	37	9	78	732
	7:30 AM	84	332	0	0	165	85	0	0	0	44	3	108	821
	7:45 AM	74	318	0	0	159	99	0	0	0	41	4	135	830
	8:00 AM	74	309	0	0	183	91	0	0	0	29	2	113	801
	8:15 AM	79	316	0	0	164	96	0	0	0	21	3	143	822
	8:30 AM	74	303	0	0	153	92	0	0	0	31	1	139	793
	8:45 AM	51	265	0	0	159	83	0	0	0	28	3	123	712
	VOLUMES	626	2,398	0	0	1,251	726	0	0	0	265	27	915	6,208
	APPROACH %	21%	79%	0%	0%	63%	37%	0%	0%	0%	22%	2%	76%	
APP/DEPART	3,024	/	3,313	1,977	/	1,516	0	/	0	1,207	/	1,379	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	311	1,275	0	0	671	371	0	0	0	135	12	499	3,274	
APPROACH %	20%	80%	0%	0%	64%	36%	0%	0%	0%	21%	2%	77%		
PEAK HR FACTOR	0.953			0.951			0.000			0.897			0.986	
APP/DEPART	1,586	/	1,774	1,042	/	806	0	/	0	646	/	694	0	
<b>PM</b>	4:00 PM	41	197	0	0	263	131	0	0	0	61	2	115	810
	4:15 PM	45	209	0	0	327	112	0	0	0	52	1	124	870
	4:30 PM	39	185	0	0	354	110	0	0	0	61	0	110	859
	4:45 PM	38	214	0	0	413	137	0	0	0	54	0	101	957
	5:00 PM	38	171	0	0	330	120	0	0	0	58	1	157	875
	5:15 PM	33	176	0	0	361	152	0	0	0	56	3	136	917
	5:30 PM	35	189	0	0	355	137	0	0	0	61	1	170	948
	5:45 PM	30	191	0	0	334	104	0	0	0	88	1	146	894
	VOLUMES	299	1,532	0	0	2,737	1,003	0	0	0	491	9	1,059	7,130
	APPROACH %	16%	84%	0%	0%	73%	27%	0%	0%	0%	31%	1%	68%	
APP/DEPART	1,831	/	2,591	3,740	/	3,228	0	/	0	1,559	/	1,311	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	144	750	0	0	1,459	546	0	0	0	229	5	564	3,697	
APPROACH %	16%	84%	0%	0%	73%	27%	0%	0%	0%	29%	1%	71%		
PEAK HR FACTOR	0.887			0.911			0.000			0.860			0.966	
APP/DEPART	894	/	1,314	2,005	/	1,688	0	/	0	798	/	695	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Archibald  
EAST & WEST: SR-60 EB Ramps

**PROJECT #:** SC  
**LOCATION #:** 3  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			SR-60 EB Ramps			SR-60 EB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	4	1	2	3	X	1.3	0.3	1.3	X	X	X	

<b>AM</b>	7:00 AM	0	328	94	17	79	0	47	2	71	0	0	0	638
	7:15 AM	0	297	110	20	93	0	49	1	86	0	0	0	656
	7:30 AM	0	278	104	25	121	0	57	0	125	0	0	0	710
	7:45 AM	0	303	112	21	134	0	81	1	113	0	0	0	765
	8:00 AM	0	306	113	16	113	0	75	1	104	0	0	0	728
	8:15 AM	0	253	77	17	109	0	44	2	121	0	0	0	623
	8:30 AM	0	235	72	14	126	0	48	1	91	0	0	0	587
	8:45 AM	0	239	79	25	111	0	61	1	91	0	0	0	607
	VOLUMES	0	2,239	761	155	886	0	462	9	802	0	0	0	5,314
	APPROACH %	0%	75%	25%	15%	85%	0%	36%	1%	63%	0%	0%	0%	
APP/DEPART	3,000	/	2,702	1,041	/	1,688	1,273	/	924	0	/	0	0	
BEGIN PEAK HR		7:15 AM												
VOLUMES	0	1,184	439	82	461	0	262	3	428	0	0	0	2,859	
APPROACH %	0%	73%	27%	15%	85%	0%	38%	0%	62%	0%	0%	0%		
PEAK HR FACTOR		0.968			0.876			0.888			0.000			0.934
APP/DEPART	1,623	/	1,447	543	/	889	693	/	523	0	/	0	0	
<b>PM</b>	4:00 PM	0	179	96	85	197	0	27	0	92	0	0	0	676
	4:15 PM	0	200	102	78	190	0	21	0	87	0	0	0	678
	4:30 PM	0	171	92	143	230	0	20	0	75	0	0	0	731
	4:45 PM	0	171	85	92	205	0	15	1	96	0	0	0	665
	5:00 PM	0	169	80	112	226	0	14	0	84	0	0	0	685
	5:15 PM	0	206	90	102	240	0	18	0	95	0	0	0	751
	5:30 PM	0	175	109	66	222	0	11	0	112	0	0	0	695
	5:45 PM	0	189	78	60	216	0	23	1	124	0	0	0	691
	VOLUMES	0	1,460	732	738	1,726	0	149	2	765	0	0	0	5,572
	APPROACH %	0%	67%	33%	30%	70%	0%	16%	0%	84%	0%	0%	0%	
APP/DEPART	2,192	/	1,610	2,464	/	2,491	916	/	1,471	0	/	0	0	
BEGIN PEAK HR		4:30 PM												
VOLUMES	0	717	347	449	901	0	67	1	350	0	0	0	2,832	
APPROACH %	0%	67%	33%	33%	67%	0%	16%	0%	84%	0%	0%	0%		
PEAK HR FACTOR		0.899			0.905			0.925			0.000			0.943
APP/DEPART	1,064	/	785	1,350	/	1,251	418	/	796	0	/	0	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Haven  
EAST & WEST: SR-60 EB Ramps

**PROJECT #:** SC  
**LOCATION #:** 4  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Haven			Haven			SR-60 EB Ramps			SR-60 EB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	3	0	2	3	X	1.5	0.5	1	X	X	X	

<b>AM</b>	7:00 AM	0	237	66	48	105	0	111	1	35	0	0	0	603
	7:15 AM	0	236	85	64	116	0	157	1	27	0	0	0	686
	7:30 AM	0	266	86	70	131	0	153	0	37	0	0	0	743
	7:45 AM	0	242	62	54	142	0	154	2	54	0	0	0	710
	8:00 AM	0	251	66	46	178	0	128	2	47	0	0	0	718
	8:15 AM	0	253	54	70	115	0	142	1	58	0	0	0	693
	8:30 AM	0	237	54	83	103	0	148	0	27	0	0	0	652
	8:45 AM	0	166	31	86	104	0	147	1	38	0	0	0	573
	VOLUMES	0	1,888	504	521	994	0	1,140	8	323	0	0	0	5,378
	APPROACH %	0%	79%	21%	34%	66%	0%	77%	1%	22%	0%	0%	0%	
APP/DEPART	2,392	/	3,028	1,515	/	1,317	1,471	/	1,033	0	/	0	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	1,012	268	240	566	0	577	5	196	0	0	0	2,864	
APPROACH %	0%	79%	21%	30%	70%	0%	74%	1%	25%	0%	0%	0%		
PEAK HR FACTOR	0.909			0.900			0.926			0.000			0.964	
APP/DEPART	1,280	/	1,589	806	/	762	778	/	513	0	/	0	0	
<b>PM</b>	4:00 PM	0	158	55	131	181	2	83	1	39	0	0	0	650
	4:15 PM	0	170	50	165	214	0	94	0	46	0	0	0	739
	4:30 PM	0	149	57	183	218	0	57	0	58	0	0	0	722
	4:45 PM	0	187	64	175	307	0	79	0	54	0	0	0	866
	5:00 PM	0	148	46	146	234	0	58	0	46	0	0	0	678
	5:15 PM	0	147	32	164	255	0	56	1	56	0	0	0	711
	5:30 PM	0	149	46	156	267	0	79	1	41	0	0	0	739
	5:45 PM	0	134	33	143	282	0	86	1	47	0	0	0	726
	VOLUMES	0	1,242	383	1,263	1,958	2	592	4	387	0	0	0	5,831
	APPROACH %	0%	76%	24%	39%	61%	0%	60%	0%	39%	0%	0%	0%	
APP/DEPART	1,625	/	1,834	3,223	/	2,345	983	/	1,650	0	/	2	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	0	654	217	669	973	0	288	0	204	0	0	0	3,005	
APPROACH %	0%	75%	25%	41%	59%	0%	59%	0%	41%	0%	0%	0%		
PEAK HR FACTOR	0.868			0.852			0.879			0.000			0.867	
APP/DEPART	871	/	942	1,642	/	1,177	492	/	886	0	/	0	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Archibald  
EAST & WEST: Riverside

**PROJECT #:** SC  
**LOCATION #:** 5  
**CONTROL:** SIGNAL

<b>NOTES:</b>	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Riverside			Riverside			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
<b>LANES:</b>	1	3	0	1	3	0	1	2	0	1	2	0	

<b>AM</b>	7:00 AM	63	262	6	21	85	27	21	51	22	26	115	32	731
	7:15 AM	68	303	27	27	87	29	19	46	30	21	109	48	814
	7:30 AM	64	235	14	44	87	37	34	113	29	36	153	48	894
	7:45 AM	77	278	19	40	137	64	40	76	28	29	147	43	978
	8:00 AM	74	254	15	38	135	42	26	88	45	19	158	50	944
	8:15 AM	59	200	16	32	108	28	24	65	31	14	116	49	742
	8:30 AM	70	194	12	25	112	35	24	50	30	28	109	39	728
	8:45 AM	52	202	14	40	104	34	29	49	28	21	76	36	685
	VOLUMES	527	1,928	123	267	855	296	217	538	243	194	983	345	6,516
	APPROACH %	20%	75%	5%	19%	60%	21%	22%	54%	24%	13%	65%	23%	
APP/DEPART	2,578	/	2,494	1,418	/	1,310	998	/	924	1,522	/	1,788	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	283	1,070	75	149	446	172	119	323	132	105	567	189	3,630	
APPROACH %	20%	75%	5%	19%	58%	22%	21%	56%	23%	12%	66%	22%		
PEAK HR FACTOR	0.897			0.796			0.815			0.908			0.928	
APP/DEPART	1,428	/	1,379	767	/	693	574	/	546	861	/	1,012	0	
<b>PM</b>	4:00 PM	74	169	18	51	169	49	48	131	80	24	108	27	948
	4:15 PM	65	155	34	60	143	34	54	135	51	33	81	23	868
	4:30 PM	58	184	16	56	183	41	42	132	77	43	107	32	971
	4:45 PM	76	165	30	61	150	55	34	156	73	30	94	33	957
	5:00 PM	51	170	12	51	154	39	43	113	66	39	83	23	844
	5:15 PM	47	165	14	56	161	38	27	165	75	26	126	37	937
	5:30 PM	60	152	19	58	194	46	29	144	72	39	94	36	943
	5:45 PM	68	159	19	67	155	41	50	134	76	25	98	31	923
	VOLUMES	499	1,319	162	460	1,309	343	327	1,110	570	259	791	242	7,391
	APPROACH %	25%	67%	8%	22%	62%	16%	16%	55%	28%	20%	61%	19%	
APP/DEPART	1,980	/	1,889	2,112	/	2,208	2,007	/	1,731	1,292	/	1,563	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	273	673	98	228	645	179	178	554	281	130	390	115	3,744	
APPROACH %	26%	64%	9%	22%	61%	17%	18%	55%	28%	20%	61%	18%		
PEAK HR FACTOR	0.963			0.939			0.963			0.872			0.964	
APP/DEPART	1,044	/	967	1,052	/	1,089	1,013	/	879	635	/	809	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Haven  
EAST & WEST: East Riverside

**PROJECT #:** SC  
**LOCATION #:** 6  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Haven			Haven			East Riverside			East Riverside			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	1	1	1	1	1	0	1	2	0	

<b>AM</b>	7:00 AM	8	90	7	26	39	44	51	41	6	2	77	35	426
	7:15 AM	2	69	9	31	33	58	75	63	3	15	108	46	512
	7:30 AM	3	81	16	48	34	102	85	74	2	13	98	23	579
	7:45 AM	2	68	11	52	31	70	79	130	8	15	117	41	624
	8:00 AM	6	52	33	84	49	60	78	111	6	19	110	49	657
	8:15 AM	7	54	38	90	51	57	78	101	5	29	122	82	714
	8:30 AM	3	64	3	33	30	48	43	48	7	17	132	69	497
	8:45 AM	3	63	5	24	45	59	46	31	3	5	48	15	347
	VOLUMES	34	541	122	388	312	498	535	599	40	115	812	360	4,356
	APPROACH %	5%	78%	18%	32%	26%	42%	46%	51%	3%	9%	63%	28%	
APP/DEPART	697	/	1,442	1,198	/	467	1,174	/	1,103	1,287	/	1,344	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	18	255	98	274	165	289	320	416	21	76	447	195	2,574	
APPROACH %	5%	69%	26%	38%	23%	40%	42%	55%	3%	11%	62%	27%		
PEAK HR FACTOR	0.928			0.919			0.872			0.770			0.901	
APP/DEPART	371	/	773	728	/	262	757	/	785	718	/	754	0	
<b>PM</b>	4:00 PM	4	59	8	27	57	69	58	85	16	10	75	28	496
	4:15 PM	7	69	13	37	86	80	80	105	5	12	62	17	573
	4:30 PM	8	64	8	26	65	89	68	106	10	4	77	31	556
	4:45 PM	10	70	12	34	90	82	70	81	7	6	57	19	538
	5:00 PM	10	65	11	48	78	84	72	92	8	10	81	27	586
	5:15 PM	6	49	11	34	77	95	76	88	13	19	97	22	587
	5:30 PM	3	62	13	38	90	100	67	96	3	22	76	16	586
	5:45 PM	6	56	13	46	101	111	61	88	9	15	72	20	598
	VOLUMES	54	494	89	290	644	710	552	741	71	98	597	180	4,520
	APPROACH %	8%	78%	14%	18%	39%	43%	40%	54%	5%	11%	68%	21%	
APP/DEPART	637	/	1,231	1,644	/	813	1,364	/	1,115	875	/	1,361	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	25	232	48	166	346	390	276	364	33	66	326	85	2,357	
APPROACH %	8%	76%	16%	18%	38%	43%	41%	54%	5%	14%	68%	18%		
PEAK HR FACTOR	0.887			0.874			0.951			0.864			0.985	
APP/DEPART	305	/	597	902	/	445	673	/	574	477	/	741	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Haven  
EAST & WEST: Chino

**PROJECT #:** SC  
**LOCATION #:** 8  
**CONTROL:** STOP E

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Haven			Haven			Chino			Chino			
	NL 1	NT 1	NR X	SL X	ST 1	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	

<b>AM</b>	7:00 AM	22	90	0	0	33	8	8	0	5	0	0	0	166
	7:15 AM	34	107	0	0	35	14	9	0	11	0	0	0	210
	7:30 AM	52	95	0	0	40	12	10	0	10	0	0	0	219
	7:45 AM	34	92	0	0	53	9	13	0	21	0	0	0	222
	8:00 AM	24	65	0	0	64	11	28	0	20	0	0	0	212
	8:15 AM	18	61	0	0	66	23	5	0	11	0	0	0	184
	8:30 AM	16	55	0	0	48	8	5	0	7	0	0	0	139
	8:45 AM	14	65	0	0	47	5	0	0	11	0	0	0	142
	VOLUMES	214	630	0	0	386	90	78	0	96	0	0	0	1,494
	APPROACH %	25%	75%	0%	0%	81%	19%	45%	0%	55%	0%	0%	0%	
APP/DEPART	844	/	706	476	/	482	174	/	0	0	/	306	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	144	359	0	0	192	46	60	0	62	0	0	0	863	
APPROACH %	29%	71%	0%	0%	81%	19%	49%	0%	51%	0%	0%	0%		
PEAK HR FACTOR	0.855			0.793			0.635			0.000			0.972	
APP/DEPART	503	/	417	238	/	254	122	/	0	0	/	192	0	
<b>PM</b>	4:00 PM	16	56	0	0	81	7	10	0	11	0	0	0	181
	4:15 PM	11	68	0	0	94	2	14	0	11	0	0	0	200
	4:30 PM	18	65	0	0	78	4	12	0	13	0	0	0	190
	4:45 PM	22	76	0	0	99	10	10	0	16	0	0	0	233
	5:00 PM	16	68	0	0	75	11	10	0	15	0	0	0	195
	5:15 PM	10	64	0	0	92	11	7	0	22	0	0	0	206
	5:30 PM	9	63	0	0	116	12	5	0	16	0	0	0	221
	5:45 PM	20	62	0	0	114	3	10	0	15	0	0	0	224
	VOLUMES	122	522	0	0	749	60	78	0	119	0	0	0	1,650
	APPROACH %	19%	81%	0%	0%	93%	7%	40%	0%	60%	0%	0%	0%	
APP/DEPART	644	/	600	809	/	868	197	/	0	0	/	182	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	57	271	0	0	382	44	32	0	69	0	0	0	855	
APPROACH %	17%	83%	0%	0%	90%	10%	32%	0%	68%	0%	0%	0%		
PEAK HR FACTOR	0.837			0.832			0.871			0.000			0.917	
APP/DEPART	328	/	303	426	/	451	101	/	0	0	/	101	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Archibald  
EAST & WEST: Schaefer

**PROJECT #:** SC  
**LOCATION #:** 9  
**CONTROL:** SIGNAL

NOTES:  <div style="text-align: center; color: blue; font-weight: bold;">WB closed;</div>	AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Schaefer			Schaefer			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	3	0	1	2	X	X	X	X	1	X	1	

AM	7:00 AM	0	275	3	8	99	0	0	0	0	6	0	20	411
	7:15 AM	0	266	3	2	121	0	0	0	0	6	0	17	415
	7:30 AM	0	272	5	6	138	0	0	0	0	8	0	24	453
	7:45 AM	0	298	1	4	164	0	0	0	0	12	0	20	499
	8:00 AM	0	307	7	8	173	0	0	0	0	7	0	17	519
	8:15 AM	0	250	3	2	145	0	0	0	0	4	0	19	423
	8:30 AM	0	240	4	6	136	0	0	0	0	6	0	16	408
	8:45 AM	0	249	4	7	129	0	0	0	0	8	0	15	412
	VOLUMES	0	2,157	30	43	1,105	0	0	0	0	57	0	148	3,583
	APPROACH %	0%	98%	1%	4%	93%	0%	0%	0%	0%	28%	0%	72%	
APP/DEPART	2,195	/	2,340	1,183	/	1,170	0	/	73	205	/	0	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	1,127	16	20	620	0	0	0	0	31	0	80	1,917	
APPROACH %	0%	98%	1%	3%	94%	0%	0%	0%	0%	28%	0%	72%		
PEAK HR FACTOR	0.910			0.891			0.000			0.867			0.915	
APP/DEPART	1,147	/	1,226	659	/	655	0	/	36	111	/	0	0	
PM	4:00 PM	0	164	2	15	175	0	0	0	0	3	0	8	367
	4:15 PM	0	173	2	15	211	0	0	0	0	2	0	8	411
	4:30 PM	0	233	2	12	195	0	0	0	0	3	0	2	447
	4:45 PM	0	167	1	20	233	0	0	0	0	2	0	5	428
	5:00 PM	0	196	4	15	223	0	0	0	0	5	0	10	453
	5:15 PM	0	172	4	16	275	0	0	0	0	5	0	5	477
	5:30 PM	0	177	7	20	256	0	0	0	0	1	0	3	464
	5:45 PM	0	184	4	14	191	0	0	0	0	1	0	9	403
	VOLUMES	0	1,466	26	127	1,759	0	0	0	0	22	0	50	3,540
	APPROACH %	0%	98%	2%	6%	89%	0%	0%	0%	0%	31%	0%	69%	
APP/DEPART	1,499	/	1,599	1,969	/	1,788	0	/	153	72	/	0	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	0	712	16	71	987	0	0	0	0	13	0	23	1,865	
APPROACH %	0%	97%	2%	6%	90%	0%	0%	0%	0%	36%	0%	64%		
PEAK HR FACTOR	0.906			0.908			0.000			0.600			0.955	
APP/DEPART	732	/	774	1,097	/	1,004	0	/	87	36	/	0	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Haven  
EAST & WEST: Schaefer

**PROJECT #:** SC  
**LOCATION #:** 10  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Haven			Haven			Schaefer			Schaefer			
	NL 1	NT 1	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	

<b>AM</b>	7:00 AM	20	134	0	0	26	3	11	0	8	0	0	0	202
	7:15 AM	26	131	0	0	44	3	18	0	15	0	0	0	237
	7:30 AM	29	140	0	0	47	10	13	0	14	0	0	0	253
	7:45 AM	26	108	0	0	60	4	11	0	26	0	0	0	235
	8:00 AM	23	95	0	0	78	12	5	0	25	0	0	0	238
	8:15 AM	15	76	0	0	72	9	7	0	12	0	0	0	191
	8:30 AM	14	78	0	0	55	2	5	0	10	0	0	0	164
	8:45 AM	11	69	0	0	59	2	10	0	12	0	0	0	163
	VOLUMES	164	831	0	0	441	45	80	0	122	0	0	0	1,716
	APPROACH %	16%	81%	0%	0%	90%	9%	40%	0%	60%	0%	0%	0%	
APP/DEPART	1,026	/	913	488	/	594	202	/	0	0	/	209	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	104	474	0	0	229	29	47	0	80	0	0	0	980	
APPROACH %	18%	80%	0%	0%	88%	11%	37%	0%	63%	0%	0%	0%		
PEAK HR FACTOR	0.857			0.722			0.858			0.000			0.950	
APP/DEPART	593	/	523	260	/	324	127	/	0	0	/	133	0	
<b>PM</b>	4:00 PM	21	74	0	0	104	4	4	0	20	0	0	0	227
	4:15 PM	25	72	0	0	107	6	3	0	20	0	0	0	233
	4:30 PM	19	74	0	0	90	3	8	0	21	0	0	0	215
	4:45 PM	12	92	0	0	111	2	5	0	28	0	0	0	250
	5:00 PM	36	71	0	0	90	4	5	0	24	0	0	0	230
	5:15 PM	21	64	0	0	110	6	5	0	21	0	0	0	227
	5:30 PM	24	70	0	0	128	2	9	0	27	0	0	0	260
	5:45 PM	38	77	0	0	126	4	7	0	23	0	0	0	275
	VOLUMES	196	594	0	0	866	31	46	0	184	0	0	0	1,965
	APPROACH %	23%	71%	0%	0%	96%	3%	20%	0%	80%	0%	0%	0%	
APP/DEPART	835	/	643	900	/	1,095	230	/	0	0	/	227	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	119	282	0	0	454	16	26	0	95	0	0	0	1,017	
APPROACH %	28%	66%	0%	0%	96%	3%	21%	0%	79%	0%	0%	0%		
PEAK HR FACTOR	0.885			0.906			0.840			0.000			0.908	
APP/DEPART	425	/	309	471	/	573	121	/	0	0	/	135	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Archibald  
Ontario Ranch

**PROJECT #:** SC  
**LOCATION #:** 11  
**CONTROL:** SIGNAL

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

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Ontario Ranch			Ontario Ranch			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
<b>LANES:</b>	1	2	1	1	2	1	2	2	1	1	2	1	

<b>AM</b>	7:00 AM	35	252	56	8	97	7	3	21	15	53	61	22	630
	7:15 AM	27	247	48	11	83	6	3	31	14	65	80	15	630
	7:30 AM	36	310	56	12	111	12	8	23	10	54	74	31	737
	7:45 AM	22	256	54	21	125	13	2	32	14	51	64	33	687
	8:00 AM	44	201	51	30	124	9	5	28	16	45	63	45	661
	8:15 AM	23	207	39	12	111	10	2	38	14	40	68	21	585
	8:30 AM	27	170	32	16	94	8	6	32	19	36	71	25	536
	8:45 AM	18	190	54	13	109	7	5	20	21	48	68	18	571
	VOLUMES	232	1,833	390	123	854	72	34	225	123	392	549	210	5,037
	APPROACH %	9%	75%	16%	12%	81%	7%	9%	59%	32%	34%	48%	18%	
APP/DEPART	2,455	/	2,077	1,049	/	1,368	382	/	741	1,151	/	851	0	
BEGIN PEAK HR		7:15 AM												
VOLUMES	129	1,014	209	74	443	40	18	114	54	215	281	124	2,715	
APPROACH %	10%	75%	15%	13%	80%	7%	10%	61%	29%	35%	45%	20%		
PEAK HR FACTOR		0.841				0.854		0.949			0.969		0.921	
APP/DEPART	1,352	/	1,156	557	/	711	186	/	399	620	/	449	0	
<b>PM</b>	04:00 AM	24	150	51	32	173	6	11	96	44	43	33	16	679
	4:15 AM	18	179	65	26	146	10	16	109	51	56	36	21	733
	4:30 AM	19	160	72	27	180	10	14	83	50	41	36	26	718
	4:45 AM	23	134	75	33	159	4	16	114	39	70	39	29	735
	5:00 AM	17	146	84	25	157	19	17	122	43	57	45	23	755
	5:15 AM	19	181	69	44	183	7	13	100	47	69	35	26	793
	5:30 AM	20	160	72	31	188	11	17	67	56	63	40	31	756
	5:45 AM	13	136	55	32	191	11	15	91	48	63	48	33	736
	VOLUMES	153	1,246	543	250	1,377	78	119	782	378	462	312	205	5,905
	APPROACH %	8%	64%	28%	15%	81%	5%	9%	61%	30%	47%	32%	21%	
APP/DEPART	1,942	/	1,573	1,705	/	2,217	1,279	/	1,572	979	/	543	0	
BEGIN PEAK HR		5:00 AM												
VOLUMES	69	623	280	132	719	48	62	380	194	252	168	113	3,040	
APPROACH %	7%	64%	29%	15%	80%	5%	10%	60%	31%	47%	32%	21%		
PEAK HR FACTOR		0.903				0.960		0.874			0.925		0.958	
APP/DEPART	972	/	799	899	/	1,165	636	/	791	533	/	285	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
**NORTH & SOUTH:** Haven  
**EAST & WEST:** Ontario Ranch

**PROJECT #:** SC  
**LOCATION #:** 12  
**CONTROL:** SIGNAL

<b>NOTES:</b>	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Haven			Haven			Ontario Ranch			Ontario Ranch			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
<b>LANES:</b>	1	1	1	1	2	0	1	3	1	2	4	1	

<b>AM</b>	7:00 AM	3	65	23	19	41	6	25	70	5	31	146	46	480
	7:15 AM	8	69	29	26	38	6	25	104	6	26	138	50	525
	7:30 AM	9	79	22	33	40	9	22	101	4	16	128	40	503
	7:45 AM	11	55	26	40	46	0	25	95	11	19	130	41	499
	8:00 AM	2	55	27	48	50	9	27	100	11	31	113	30	503
	8:15 AM	8	34	21	45	45	17	15	91	12	30	102	42	462
	8:30 AM	5	48	23	18	41	10	24	95	5	28	97	27	421
	8:45 AM	8	42	14	28	30	7	21	94	6	24	95	23	392
	VOLUMES	54	447	185	257	331	64	184	750	60	205	949	299	3,785
	APPROACH %	8%	65%	27%	39%	51%	10%	19%	75%	6%	14%	65%	21%	
APP/DEPART	686	/	938	652	/	589	994	/	1,177	1,453	/	1,081	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	30	258	104	147	174	24	99	400	32	92	509	161	2,030	
APPROACH %	8%	66%	27%	43%	50%	7%	19%	75%	6%	12%	67%	21%		
PEAK HR FACTOR	0.891			0.806			0.962			0.890			0.967	
APP/DEPART	392	/	528	345	/	297	531	/	637	762	/	568	0	
<b>PM</b>	4:00 PM	1	45	22	37	82	11	35	177	15	64	101	37	627
	4:15 PM	7	38	13	43	73	13	30	156	11	67	111	40	602
	4:30 PM	10	30	14	53	61	12	38	175	14	42	112	33	594
	4:45 PM	3	50	18	59	85	11	38	179	8	42	116	30	639
	5:00 PM	4	33	19	38	72	9	44	215	17	53	127	52	683
	5:15 PM	4	35	21	48	84	15	20	190	11	64	126	34	652
	5:30 PM	4	32	22	50	92	24	33	172	7	64	147	35	682
	5:45 PM	8	32	10	46	79	24	41	176	9	51	144	49	669
	VOLUMES	41	295	139	374	628	119	279	1,440	92	447	984	310	5,148
	APPROACH %	9%	62%	29%	33%	56%	11%	15%	80%	5%	26%	57%	18%	
APP/DEPART	475	/	902	1,121	/	1,164	1,811	/	1,926	1,741	/	1,156	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	20	132	72	182	327	72	138	753	44	232	544	170	2,686	
APPROACH %	9%	59%	32%	31%	56%	12%	15%	81%	5%	25%	58%	18%		
PEAK HR FACTOR	0.933			0.875			0.847			0.961			0.983	
APP/DEPART	224	/	451	581	/	600	935	/	992	946	/	643	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Hamner  
Ontario Ranch

**PROJECT #:** SC  
**LOCATION #:** 13  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			Ontario Ranch - Cantu-Galleano Ranch			Ontario Ranch - Cantu-Galleano Ranch			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	1	2	2	1	2	3	0	2	2	1	

<b>AM</b>	7:00 AM	30	120	77	26	46	6	25	93	17	45	180	66	731
	7:15 AM	35	143	79	20	36	6	24	93	14	48	155	60	713
	7:30 AM	51	176	90	31	29	5	38	98	24	48	163	59	812
	7:45 AM	39	181	80	34	50	5	38	106	26	44	107	68	778
	8:00 AM	25	127	70	23	50	22	49	129	42	40	135	47	759
	8:15 AM	41	124	66	27	67	31	35	78	35	52	130	52	738
	8:30 AM	44	113	71	33	71	21	21	104	30	53	119	54	734
	8:45 AM	39	88	62	22	46	9	10	87	31	39	111	43	587
	VOLUMES	304	1,072	595	216	395	105	240	788	219	369	1,100	449	5,852
	APPROACH %	15%	54%	30%	30%	55%	15%	19%	63%	18%	19%	57%	23%	
APP/DEPART	1,971	/	1,757	716	/	980	1,247	/	1,611	1,918	/	1,504	0	
BEGIN PEAK HR		7:30 AM												
VOLUMES	156	608	306	115	196	63	160	411	127	184	535	226	3,087	
APPROACH %	15%	57%	29%	31%	52%	17%	23%	59%	18%	19%	57%	24%		
PEAK HR FACTOR		0.844			0.748			0.793			0.875		0.950	
APP/DEPART	1,070	/	993	374	/	502	698	/	841	945	/	751	0	
<b>PM</b>	04:00 AM	66	90	47	49	123	17	13	139	64	83	126	30	847
	4:15 AM	59	102	66	46	127	19	14	150	38	72	109	25	827
	4:30 AM	58	103	72	68	120	13	19	177	58	75	106	54	923
	4:45 AM	56	118	61	60	126	17	24	154	73	92	121	39	941
	5:00 AM	93	103	79	60	127	20	27	138	46	92	120	25	930
	5:15 AM	48	87	75	48	115	25	30	183	65	114	149	38	977
	5:30 AM	79	105	51	93	170	19	28	128	64	114	129	52	1,032
	5:45 AM	71	128	61	72	155	24	18	136	68	119	132	26	1,010
	VOLUMES	530	836	512	496	1,063	154	173	1,205	476	761	992	289	7,487
	APPROACH %	28%	45%	27%	29%	62%	9%	9%	65%	26%	37%	49%	14%	
APP/DEPART	1,878	/	1,293	1,713	/	2,334	1,854	/	2,213	2,042	/	1,647	0	
BEGIN PEAK HR		5:00 AM												
VOLUMES	291	423	266	273	567	88	103	585	243	439	530	141	3,949	
APPROACH %	30%	43%	27%	29%	61%	9%	11%	63%	26%	40%	48%	13%		
PEAK HR FACTOR		0.891			0.823			0.837			0.922		0.957	
APP/DEPART	980	/	665	928	/	1,271	931	/	1,124	1,110	/	889	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH: Ontario  
EAST & WEST: I-15 SB Ramps  
Ontario Ranch

**PROJECT #:** SC  
**LOCATION #:** 14  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-15 SB Ramps			I-15 SB Ramps			Ontario Ranch - Cantu-Galleano Ranch			Ontario Ranch - Cantu-Galleano Ranch			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	1.5	X	1.5	X	3	X	X	2	X	

<b>AM</b>	7:00 AM	0	0	0	46	0	193	0	143	0	0	148	0	530
	7:15 AM	0	0	0	51	0	197	0	172	0	0	160	0	580
	7:30 AM	0	0	0	49	0	160	0	202	0	0	130	0	541
	7:45 AM	0	0	0	63	0	166	0	164	0	0	134	0	527
	8:00 AM	0	0	0	61	0	152	0	184	0	0	124	0	521
	8:15 AM	0	0	0	55	0	175	0	151	0	0	139	0	520
	8:30 AM	0	0	0	44	0	176	0	160	0	0	125	0	505
	8:45 AM	0	0	0	45	0	149	0	150	0	0	96	0	440
	VOLUMES	0	0	0	414	0	1,368	0	1,326	0	0	1,056	0	4,164
	APPROACH %	0%	0%	0%	23%	0%	77%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	1,782	/	0	1,326	/	1,740	1,056	/	2,424	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	0	0	209	0	716	0	681	0	0	572	0	2,178	
APPROACH %	0%	0%	0%	23%	0%	77%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.932			0.843			0.894			0.939	
APP/DEPART	0	/	0	925	/	0	681	/	890	572	/	1,288	0	
<b>PM</b>	4:00 PM	0	0	0	76	0	192	0	200	0	0	106	0	574
	4:15 PM	0	0	0	80	0	169	0	203	0	0	99	0	551
	4:30 PM	0	0	0	58	0	182	0	243	0	0	115	0	598
	4:45 PM	0	0	0	52	0	238	0	235	0	0	100	0	625
	5:00 PM	0	0	0	58	0	250	0	249	0	0	120	0	677
	5:15 PM	0	0	0	52	0	268	0	260	0	0	144	0	724
	5:30 PM	0	0	0	61	0	311	0	275	0	0	132	0	779
	5:45 PM	0	0	0	56	0	300	0	224	0	0	177	0	757
	VOLUMES	0	0	0	493	0	1,910	0	1,889	0	0	993	0	5,285
	APPROACH %	0%	0%	0%	21%	0%	79%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	2,403	/	0	1,889	/	2,382	993	/	2,903	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	0	0	227	0	1,129	0	1,008	0	0	573	0	2,937	
APPROACH %	0%	0%	0%	17%	0%	83%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.911			0.916			0.809			0.943	
APP/DEPART	0	/	0	1,356	/	0	1,008	/	1,235	573	/	1,702	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH: Ontario  
EAST & WEST: I-15 NB Ramps  
Ontario Ranch

**PROJECT #:** SC  
**LOCATION #:** 15  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-15 NB Ramps			I-15 NB Ramps			Ontario Ranch - Cantu-Galleano Ranch			Ontario Ranch - Cantu-Galleano Ranch			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1.5	X	1.5	X	X	X	X	3	1	2	3	X	

<b>AM</b>	7:00 AM	95	0	65	0	0	0	0	48	141	39	81	0	469
	7:15 AM	102	0	89	0	0	0	0	82	141	51	68	0	533
	7:30 AM	90	0	146	0	0	0	0	79	172	33	57	0	577
	7:45 AM	94	0	109	0	0	0	0	107	120	27	58	0	515
	8:00 AM	80	0	80	0	0	0	0	110	130	40	74	0	514
	8:15 AM	80	0	58	0	0	0	0	76	129	28	68	0	439
	8:30 AM	79	0	54	0	0	0	0	73	131	27	72	0	436
	8:45 AM	64	0	41	0	0	0	0	68	127	35	55	0	390
	VOLUMES	684	0	642	0	0	0	0	643	1,091	280	533	0	3,874
	APPROACH %	52%	0%	48%	0%	0%	0%	0%	37%	63%	34%	66%	0%	
APP/DEPART	1,326	/	0	0	/	1,371	1,735	/	1,285	813	/	1,218	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	366	0	424	0	0	0	0	378	563	151	257	0	2,139	
APPROACH %	46%	0%	54%	0%	0%	0%	0%	40%	60%	37%	63%	0%		
PEAK HR FACTOR	0.837			0.000			0.937			0.857			0.927	
APP/DEPART	790	/	0	0	/	714	941	/	802	408	/	623	0	
<b>PM</b>	4:00 PM	56	0	36	0	0	0	0	140	136	55	91	0	514
	4:15 PM	54	0	21	0	0	0	0	155	128	42	68	0	468
	4:30 PM	54	0	19	0	0	0	0	136	165	62	127	0	563
	4:45 PM	74	0	32	0	0	0	0	139	148	65	62	0	520
	5:00 PM	72	0	30	0	0	0	0	141	166	38	82	0	529
	5:15 PM	86	0	26	0	0	0	0	167	145	52	77	0	553
	5:30 PM	102	0	30	0	0	0	0	135	201	41	70	0	579
	5:45 PM	115	0	36	0	0	0	0	130	148	37	77	0	543
	VOLUMES	613	0	230	0	0	0	0	1,143	1,237	392	654	0	4,269
	APPROACH %	73%	0%	27%	0%	0%	0%	0%	48%	52%	37%	63%	0%	
APP/DEPART	843	/	0	0	/	1,629	2,380	/	1,373	1,046	/	1,267	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	375	0	122	0	0	0	0	573	660	168	306	0	2,204	
APPROACH %	75%	0%	25%	0%	0%	0%	0%	46%	54%	35%	65%	0%		
PEAK HR FACTOR	0.823			0.000			0.917			0.919			0.952	
APP/DEPART	497	/	0	0	/	828	1,233	/	695	474	/	681	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Ivy  
Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 5  
**CONTROL:** SIGNAL

NOTES:  <p style="text-align: center; color: blue;">NB, SB Closed. Construction</p>	AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	1	2	X	1	2	0	

<b>AM</b>	7:00 AM	0	0	0	1	0	0	0	0	0	1	3	5	
	7:15 AM	0	0	0	2	0	0	1	0	0	0	5	8	
	7:30 AM	0	0	0	2	0	0	0	0	0	0	0	2	
	7:45 AM	0	0	0	3	0	0	0	2	0	1	2	9	
	8:00 AM	0	0	0	1	0	0	0	0	0	2	2	5	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	2	0	0	0	0	0	0	1	3	
	8:45 AM	0	0	0	2	0	0	0	0	0	0	2	4	
	VOLUMES	0	0	0	13	0	0	1	2	0	3	2	15	36
	APPROACH %	0%	0%	0%	100%	0%	0%	33%	67%	0%	15%	10%	75%	
APP/DEPART	0	/	17	13	/	0	3	/	17	20	/	2	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	8	0	0	1	2	0	3	1	9	24	
APPROACH %	0%	0%	0%	100%	0%	0%	33%	67%	0%	23%	8%	69%		
PEAK HR FACTOR	0.000			0.667			0.375			0.650			0.667	
APP/DEPART	0	/	11	8	/	0	3	/	12	13	/	1	0	
<b>PM</b>	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	1	0	0	1	0	2	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.000			0.250			0.250			0.250	
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Archibald  
Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 17  
**CONTROL:** SIGNAL

NOTES:  <div style="text-align: center; color: blue; font-weight: bold;">WB Closed. Construction</div>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Eucalyptus			Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	2	1	1	2	0	2	2	0	2	2	0	

<b>AM</b>	7:00 AM	4	311	4	5	162	0	0	0	1	6	1	26	520
	7:15 AM	3	268	3	8	167	1	1	0	0	5	0	33	489
	7:30 AM	0	316	3	8	163	1	0	0	2	9	0	41	543
	7:45 AM	0	309	4	6	198	4	0	0	6	2	0	34	563
	8:00 AM	0	238	3	9	204	4	0	0	4	4	0	32	498
	8:15 AM	0	256	5	13	168	1	0	0	0	6	0	14	463
	8:30 AM	1	218	2	7	160	0	0	0	1	2	0	19	410
	8:45 AM	0	179	7	4	182	2	0	0	1	3	0	21	399
	VOLUMES	8	2,095	31	60	1,404	13	1	0	15	37	1	220	3,889
	APPROACH %	0%	98%	1%	4%	95%	1%	6%	0%	94%	14%	0%	85%	
APP/DEPART	2,135	/	2,319	1,480	/	1,457	16	/	91	258	/	22	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	7	1,204	14	27	690	6	1	0	9	22	1	134	2,118	
APPROACH %	1%	98%	1%	4%	95%	1%	10%	0%	90%	14%	1%	85%		
PEAK HR FACTOR	0.958			0.871			0.417			0.785			0.940	
APP/DEPART	1,226	/	1,341	725	/	722	10	/	41	157	/	14	0	
<b>PM</b>	4:00 PM	0	223	5	27	221	0	0	0	0	6	0	9	491
	4:15 PM	0	213	4	24	229	1	0	0	0	2	0	8	481
	4:30 PM	0	280	5	24	245	0	1	0	0	1	0	12	568
	4:45 PM	0	226	3	16	264	0	0	0	0	4	0	9	522
	5:00 PM	0	235	5	22	282	0	0	0	0	1	0	12	557
	5:15 PM	0	221	7	27	264	0	0	0	0	3	0	5	527
	5:30 PM	0	240	4	26	303	0	0	0	0	5	0	18	596
	5:45 PM	0	200	2	24	285	0	0	0	0	1	0	14	526
	VOLUMES	0	1,838	35	190	2,093	1	1	0	0	23	0	87	4,272
	APPROACH %	0%	98%	2%	8%	92%	0%	100%	0%	0%	21%	0%	79%	
APP/DEPART	1,874	/	1,929	2,287	/	2,117	1	/	225	110	/	1	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	896	18	99	1,134	0	0	0	0	10	0	49	2,209	
APPROACH %	0%	98%	2%	8%	92%	0%	0%	0%	0%	17%	0%	83%		
PEAK HR FACTOR	0.936			0.939			0.000			0.641			0.927	
APP/DEPART	914	/	948	1,236	/	1,144	0	/	117	59	/	0	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Parkplace  
Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 18  
**CONTROL:** STOP N

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Parkplace			Parkplace			Eucalyptus			Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	X	0	X	X	X	X	2	0	1	2	X	

<b>AM</b>	7:00 AM	12	0	7	0	0	0	4	4	4	21	0	52	
	7:15 AM	11	0	13	0	0	0	8	2	4	27	0	65	
	7:30 AM	8	0	16	0	0	0	9	2	1	43	0	79	
	7:45 AM	16	0	7	0	0	0	7	3	6	21	0	60	
	8:00 AM	10	0	3	0	0	0	9	3	10	26	0	61	
	8:15 AM	4	0	7	0	0	0	14	3	6	17	0	51	
	8:30 AM	9	0	8	0	0	0	7	3	7	13	0	47	
	8:45 AM	7	0	8	0	0	0	10	0	4	17	0	46	
	VOLUMES	77	0	69	0	0	0	0	68	20	42	185	0	461
	APPROACH %	53%	0%	47%	0%	0%	0%	0%	77%	23%	19%	81%	0%	
APP/DEPART	146	/	0	0	/	62	88	/	137	227	/	262	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	45	0	39	0	0	0	0	33	10	21	117	0	265	
APPROACH %	54%	0%	46%	0%	0%	0%	0%	77%	23%	15%	85%	0%		
PEAK HR FACTOR	0.875			0.000			0.896			0.784			0.839	
APP/DEPART	84	/	0	0	/	31	43	/	72	138	/	162	0	
<b>PM</b>	4:00 PM	4	0	4	0	0	0	22	10	10	11	0	61	
	4:15 PM	4	0	6	0	0	0	23	4	7	6	0	50	
	4:30 PM	6	0	4	0	0	0	21	7	11	8	0	57	
	4:45 PM	5	0	8	0	0	0	17	2	11	8	0	51	
	5:00 PM	7	0	2	0	0	0	20	6	6	7	0	48	
	5:15 PM	2	0	6	0	0	0	27	7	5	7	0	54	
	5:30 PM	7	0	5	0	0	0	26	3	8	14	0	63	
	5:45 PM	3	0	3	0	0	0	20	7	12	13	0	58	
	VOLUMES	38	0	38	0	0	0	0	176	46	70	74	0	442
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	79%	21%	49%	51%	0%	
APP/DEPART	76	/	0	0	/	116	222	/	214	144	/	112	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	19	0	16	0	0	0	0	93	23	31	41	0	223	
APPROACH %	54%	0%	46%	0%	0%	0%	0%	80%	20%	43%	57%	0%		
PEAK HR FACTOR	0.729			0.000			0.853			0.720			0.885	
APP/DEPART	35	/	0	0	/	54	116	/	109	72	/	60	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Celebration  
Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 19  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Celebration - Turner			Celebration - Turner			Eucalyptus			Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	1	1	2	0	

<b>AM</b>	7:00 AM	10	0	21	0	0	0	0	12	1	10	19	0	73
	7:15 AM	9	0	28	0	0	1	0	16	4	6	26	1	91
	7:30 AM	12	0	29	0	0	0	0	19	3	8	24	0	95
	7:45 AM	6	0	24	0	0	0	0	15	1	14	25	0	85
	8:00 AM	6	0	19	0	0	0	0	8	5	12	26	0	76
	8:15 AM	3	0	22	0	0	0	0	16	5	8	18	0	72
	8:30 AM	3	0	8	0	0	0	0	12	2	2	14	0	41
	8:45 AM	5	0	15	0	0	0	0	16	3	5	16	0	60
	VOLUMES	54	0	166	0	0	1	0	114	24	65	168	1	593
	APPROACH %	25%	0%	75%	0%	0%	100%	0%	83%	17%	28%	72%	0%	
APP/DEPART	220	/	1	1	/	89	138	/	280	234	/	223	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	33	0	100	0	0	1	0	58	13	40	101	1	347	
APPROACH %	25%	0%	75%	0%	0%	100%	0%	82%	18%	28%	71%	1%		
PEAK HR FACTOR	0.811			0.250			0.807			0.910			0.913	
APP/DEPART	133	/	1	1	/	53	71	/	158	142	/	135	0	
<b>PM</b>	4:00 PM	2	0	5	0	0	0	0	18	10	13	18	0	66
	4:15 PM	1	0	17	0	0	0	0	21	6	19	12	0	76
	4:30 PM	7	0	11	0	0	0	0	19	10	25	11	0	83
	4:45 PM	2	0	8	0	0	0	0	20	4	13	18	0	65
	5:00 PM	2	0	14	0	0	0	0	18	5	20	10	0	69
	5:15 PM	1	0	9	0	0	0	0	27	7	19	13	0	76
	5:30 PM	4	0	8	0	0	0	0	20	7	24	18	0	81
	5:45 PM	9	0	14	0	0	0	0	16	9	13	14	1	76
	VOLUMES	28	0	86	0	0	0	0	159	58	146	114	1	592
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	73%	27%	56%	44%	0%	
APP/DEPART	114	/	1	0	/	204	217	/	245	261	/	142	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	16	0	45	0	0	0	0	81	28	76	55	1	302	
APPROACH %	26%	0%	74%	0%	0%	0%	0%	74%	26%	58%	42%	1%		
PEAK HR FACTOR	0.663			0.000			0.801			0.786			0.932	
APP/DEPART	61	/	1	0	/	104	109	/	126	132	/	71	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Sumner  
Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 21  
**CONTROL:** STOP ALL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Sumner			Sumner			Eucalyptus			Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	X	X	1	0	1	X	1	X	X	X	

<b>AM</b>	7:00 AM	7	64	0	0	57	15	29	0	8	0	0	0	180
	7:15 AM	16	73	0	0	48	12	31	0	4	0	0	0	184
	7:30 AM	23	97	0	0	33	10	30	0	8	0	0	0	201
	7:45 AM	20	54	0	0	32	13	25	0	6	0	0	0	150
	8:00 AM	19	62	0	0	51	21	25	0	6	0	0	0	184
	8:15 AM	7	57	0	0	48	11	21	0	10	0	0	0	154
	8:30 AM	11	54	0	0	54	9	23	0	3	0	0	0	154
	8:45 AM	13	54	0	0	37	5	19	0	9	0	0	0	137
	VOLUMES	116	515	0	0	360	96	203	0	54	0	0	0	1,344
	APPROACH %	18%	82%	0%	0%	79%	21%	79%	0%	21%	0%	0%	0%	
APP/DEPART	631	/	718	456	/	414	257	/	0	0	/	212	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	78	286	0	0	164	56	111	0	24	0	0	0	719	
APPROACH %	21%	79%	0%	0%	75%	25%	82%	0%	18%	0%	0%	0%		
PEAK HR FACTOR	0.758			0.764			0.888			0.000			0.894	
APP/DEPART	364	/	397	220	/	188	135	/	0	0	/	134	0	
<b>PM</b>	4:00 PM	6	45	0	0	89	25	8	0	10	0	0	0	183
	4:15 PM	10	46	0	0	85	19	19	0	19	0	0	0	198
	4:30 PM	7	45	0	0	122	28	10	0	17	0	0	0	229
	4:45 PM	3	51	0	0	96	24	20	0	16	0	0	0	210
	5:00 PM	10	51	0	0	101	23	12	0	23	0	0	0	220
	5:15 PM	10	40	0	0	107	22	20	0	18	0	0	0	217
	5:30 PM	10	57	0	0	103	32	10	0	21	0	0	0	233
	5:45 PM	6	41	0	0	107	20	17	0	15	0	0	0	206
	VOLUMES	62	376	0	0	810	193	116	0	139	0	0	0	1,696
	APPROACH %	14%	86%	0%	0%	81%	19%	45%	0%	55%	0%	0%	0%	
APP/DEPART	438	/	492	1,003	/	949	255	/	0	0	/	255	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	33	199	0	0	407	101	62	0	78	0	0	0	880	
APPROACH %	14%	86%	0%	0%	80%	20%	44%	0%	56%	0%	0%	0%		
PEAK HR FACTOR	0.866			0.941			0.921			0.000			0.944	
APP/DEPART	232	/	261	508	/	485	140	/	0	0	/	134	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH: Ontario  
EAST & WEST: Mill Creek  
Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 23  
**CONTROL:** SIGNAL

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

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Mill Creek			Mill Creek			Eucalyptus			Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
<b>LANES:</b>	X	1	1	1	1	X	X	X	X	1	X	1	

<b>AM</b>	7:00 AM	0	0	3	0	0	0	0	0	18	0	0	21	
	7:15 AM	0	0	2	0	0	0	0	0	23	0	1	26	
	7:30 AM	0	0	11	1	1	0	0	0	9	0	0	22	
	7:45 AM	0	1	6	0	0	0	0	0	11	0	0	18	
	8:00 AM	0	0	7	0	0	0	0	0	8	0	0	15	
	8:15 AM	0	0	5	0	0	0	0	0	7	0	0	12	
	8:30 AM	0	0	2	0	0	0	0	0	12	0	0	14	
	8:45 AM	0	1	6	1	1	0	0	0	11	0	0	20	
	VOLUMES	0	2	42	2	2	0	0	0	0	99	0	1	149
	APPROACH %	0%	4%	93%	50%	50%	0%	0%	0%	0%	99%	0%	1%	
APP/DEPART	45	/	3	4	/	102	0	/	44	100	/	0	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	1	22	1	1	0	0	0	0	61	0	1	87	
APPROACH %	0%	4%	96%	50%	50%	0%	0%	0%	0%	98%	0%	2%		
PEAK HR FACTOR	0.523			0.250			0.000			0.646			0.837	
APP/DEPART	23	/	2	2	/	62	0	/	23	62	/	0	0	
<b>PM</b>	4:00 PM	0	0	8	0	0	0	0	0	4	0	0	12	
	4:15 PM	0	0	15	0	0	0	0	0	7	0	0	22	
	4:30 PM	0	0	5	0	1	0	0	0	10	0	0	16	
	4:45 PM	0	0	7	0	0	0	0	0	3	0	0	10	
	5:00 PM	0	0	12	1	0	0	0	0	5	0	1	19	
	5:15 PM	0	0	5	0	0	0	0	0	10	0	0	15	
	5:30 PM	0	0	5	0	0	0	0	0	3	0	0	8	
	5:45 PM	0	0	8	0	0	0	0	0	5	0	0	13	
	VOLUMES	0	0	65	1	1	0	0	0	0	47	0	1	117
	APPROACH %	0%	0%	97%	50%	50%	0%	0%	0%	0%	98%	0%	2%	
APP/DEPART	67	/	1	2	/	50	0	/	66	48	/	0	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	0	0	39	1	1	0	0	0	0	25	0	1	68	
APPROACH %	0%	0%	98%	50%	50%	0%	0%	0%	0%	96%	0%	4%		
PEAK HR FACTOR	0.667			0.500			0.000			0.650			0.773	
APP/DEPART	40	/	1	2	/	27	0	/	40	26	/	0	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
**NORTH & SOUTH:** Hamner  
**EAST & WEST:** Eucalyptus

**PROJECT #:** SC  
**LOCATION #:** 24  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			Eucalyptus			Eucalyptus			
	NL 1	NT 3	NR X	SL X	ST 3	SR 0	EL 2	ET X	ER 1	WL X	WT X	WR X	

<b>AM</b>	7:00 AM	4	211	0	0	94	16	7	0	1	0	0	0	333	
	7:15 AM	5	261	0	0	88	18	13	0	3	0	0	0	388	
	7:30 AM	6	247	0	0	84	9	19	0	5	0	0	0	370	
	7:45 AM	5	291	0	0	114	23	9	0	0	0	0	0	442	
	8:00 AM	4	245	0	0	118	7	14	0	3	0	0	0	391	
	8:15 AM	5	213	0	0	134	10	12	0	5	0	0	0	379	
	8:30 AM	3	218	0	0	126	10	11	0	1	0	0	0	369	
	8:45 AM	3	182	0	0	135	4	15	0	6	0	0	0	345	
	VOLUMES	35	1,868	0	0	893	97	100	0	24	0	0	0	0	3,021
	APPROACH %	2%	98%	0%	0%	90%	10%	81%	0%	19%	0%	0%	0%	0%	
APP/DEPART	1,904	/	1,971	993	/	918	124	/	0	0	/	132	0		
BEGIN PEAK HR	7:15 AM														
VOLUMES	20	1,044	0	0	404	57	55	0	11	0	0	0	0	1,593	
APPROACH %	2%	98%	0%	0%	87%	12%	83%	0%	17%	0%	0%	0%	0%		
PEAK HR FACTOR	0.899			0.843			0.688			0.000			0.901		
APP/DEPART	1,065	/	1,100	462	/	416	66	/	0	0	/	77	0		
<b>PM</b>	4:00 PM	8	230	0	0	291	18	12	0	4	0	0	0	563	
	4:15 PM	4	255	0	0	348	6	9	0	7	0	0	0	629	
	4:30 PM	9	281	0	0	297	5	14	0	10	0	0	0	616	
	4:45 PM	6	248	0	0	310	12	6	0	5	0	0	0	587	
	5:00 PM	4	263	0	0	307	16	10	0	1	0	0	0	601	
	5:15 PM	2	251	0	0	317	20	8	0	2	0	0	0	600	
	5:30 PM	3	287	0	0	305	7	6	0	5	0	0	0	613	
	5:45 PM	1	288	0	0	320	14	9	0	5	0	0	0	637	
	VOLUMES	37	2,103	0	0	2,495	98	74	0	39	0	0	0	0	4,859
	APPROACH %	2%	98%	0%	0%	96%	4%	65%	0%	34%	0%	0%	0%	0%	
APP/DEPART	2,145	/	2,184	2,600	/	2,539	114	/	0	0	/	136	0		
BEGIN PEAK HR	5:00 PM														
VOLUMES	10	1,089	0	0	1,249	57	33	0	13	0	0	0	0	2,458	
APPROACH %	1%	99%	0%	0%	95%	4%	72%	0%	28%	0%	0%	0%	0%		
PEAK HR FACTOR	0.950			0.969			0.821			0.000			0.962		
APP/DEPART	1,102	/	1,126	1,310	/	1,265	46	/	0	0	/	67	0		

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Archibald  
Parkview

**PROJECT #:** SC  
**LOCATION #:** 25  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Parkview			Parkview			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	1	1	3	1	1	0.5	0.5	1	0.5	0.5	

<b>AM</b>	7:00 AM	8	289	4	4	144	21	12	1	4	8	1	19	515
	7:15 AM	4	242	2	7	147	17	16	0	9	7	0	16	467
	7:30 AM	3	274	3	3	159	12	20	0	4	17	2	26	523
	7:45 AM	4	287	7	9	177	19	12	1	4	5	0	13	538
	8:00 AM	5	219	7	15	187	9	9	0	5	7	4	10	477
	8:15 AM	2	237	7	7	153	14	9	1	3	7	0	16	456
	8:30 AM	5	201	9	3	154	5	10	0	6	3	0	11	407
	8:45 AM	3	165	5	10	154	21	8	3	6	3	0	13	391
	VOLUMES	34	1,914	44	58	1,275	118	96	6	41	57	7	124	3,774
	APPROACH %	2%	96%	2%	4%	88%	8%	67%	4%	29%	30%	4%	66%	
APP/DEPART	1,992	/	2,139	1,451	/	1,375	143	/	103	188	/	157	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	19	1,092	16	23	627	69	60	2	21	37	3	74	2,043	
APPROACH %	2%	97%	1%	3%	87%	10%	72%	2%	25%	32%	3%	65%		
PEAK HR FACTOR	0.936			0.877			0.830			0.633			0.949	
APP/DEPART	1,127	/	1,228	719	/	686	83	/	39	114	/	90	0	
<b>PM</b>	4:00 PM	1	218	5	15	207	5	6	0	7	3	1	5	473
	4:15 PM	5	208	7	6	219	6	6	0	5	4	0	4	470
	4:30 PM	3	269	8	8	230	7	6	4	5	10	1	11	562
	4:45 PM	0	206	9	13	245	9	13	1	9	11	0	10	526
	5:00 PM	1	226	7	11	267	4	2	0	10	4	0	13	545
	5:15 PM	1	205	9	12	247	7	12	0	3	3	1	11	511
	5:30 PM	5	231	13	12	290	5	7	0	2	8	1	6	580
	5:45 PM	4	192	8	19	262	5	5	2	4	9	2	5	517
	VOLUMES	20	1,755	66	96	1,967	48	57	7	45	52	6	65	4,184
	APPROACH %	1%	95%	4%	5%	93%	2%	52%	6%	41%	42%	5%	53%	
APP/DEPART	1,841	/	1,878	2,111	/	2,067	109	/	168	123	/	71	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	7	868	38	48	1,049	25	34	1	24	26	2	40	2,162	
APPROACH %	1%	95%	4%	4%	93%	2%	58%	2%	41%	38%	3%	59%		
PEAK HR FACTOR	0.917			0.914			0.641			0.810			0.932	
APP/DEPART	913	/	942	1,122	/	1,100	59	/	87	68	/	33	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Sumner  
Parkview

**PROJECT #:** SC  
**LOCATION #:** 26  
**CONTROL:** STOP E

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Sumner			Sumner			Parkview			Parkview			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	X	X	2	0	0	X	0	X	X		

<b>AM</b>	7:00 AM	4	71	0	0	64	1	0	0	0	0	0	0	140	
	7:15 AM	2	89	0	0	51	1	1	0	0	0	0	0	144	
	7:30 AM	0	120	0	0	40	1	0	0	0	0	0	0	161	
	7:45 AM	1	75	0	0	37	1	0	0	3	0	0	0	117	
	8:00 AM	2	81	0	0	56	1	0	0	0	0	0	0	140	
	8:15 AM	0	64	0	0	56	2	0	0	0	0	0	0	122	
	8:30 AM	2	65	0	0	56	0	1	0	0	0	0	0	124	
	8:45 AM	1	64	0	0	42	3	4	0	1	0	0	0	115	
	VOLUMES	12	629	0	0	402	10	6	0	4	0	0	0	0	1,063
	APPROACH %	2%	98%	0%	0%	98%	2%	60%	0%	40%	0%	0%	0%	0%	
APP/DEPART	641	/	634	412	/	414	10	/	0	0	/	15	0		
BEGIN PEAK HR	7:15 AM														
VOLUMES	5	365	0	0	184	4	1	0	3	0	0	0	0	562	
APPROACH %	1%	99%	0%	0%	98%	2%	25%	0%	75%	0%	0%	0%	0%		
PEAK HR FACTOR	0.771			0.723			0.333			0.000			0.873		
APP/DEPART	370	/	365	188	/	190	4	/	0	0	/	7	0		
<b>PM</b>	4:00 PM	5	50	0	0	99	0	1	0	3	0	0	0	158	
	4:15 PM	2	54	0	0	104	0	2	0	0	0	0	0	162	
	4:30 PM	2	50	0	0	138	0	3	0	3	0	0	0	196	
	4:45 PM	1	53	0	0	111	1	1	0	0	0	0	0	167	
	5:00 PM	1	61	0	0	124	0	0	0	0	0	0	0	186	
	5:15 PM	4	50	0	0	125	0	0	0	1	0	0	0	180	
	5:30 PM	1	66	0	0	123	0	1	0	1	0	0	0	192	
	5:45 PM	4	46	0	0	119	2	2	0	2	0	0	0	175	
	VOLUMES	20	430	0	0	943	3	10	0	10	0	0	0	0	1,416
	APPROACH %	4%	96%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%	0%	
APP/DEPART	450	/	440	946	/	967	20	/	0	0	/	9	0		
BEGIN PEAK HR	5:00 PM														
VOLUMES	10	223	0	0	491	2	3	0	4	0	0	0	0	733	
APPROACH %	4%	96%	0%	0%	100%	0%	43%	0%	57%	0%	0%	0%	0%		
PEAK HR FACTOR	0.869			0.986			0.438			0.000			0.954		
APP/DEPART	233	/	226	493	/	501	7	/	0	0	/	6	0		

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Mill Creek  
EAST & WEST: Amanecer Privado

**PROJECT #:** SC  
**LOCATION #:** 27  
**CONTROL:** STOP W

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Mill Creek			Mill Creek			Amanecer Privado			Amanecer Privado			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	0	1	1	X	X	X	X	0	X	0	

<b>AM</b>	7:00 AM	0	2	4	13	4	0	0	0	0	0	0	1	24
	7:15 AM	0	1	9	15	7	0	0	0	0	3	0	2	37
	7:30 AM	0	7	5	2	8	0	0	0	0	2	0	3	27
	7:45 AM	0	4	4	4	8	0	0	0	0	0	0	2	22
	8:00 AM	0	7	5	1	7	0	0	0	0	0	0	1	21
	8:15 AM	0	2	1	5	2	0	0	0	0	1	0	3	14
	8:30 AM	0	1	5	8	3	0	0	0	0	1	0	1	19
	8:45 AM	0	2	3	6	7	0	0	0	0	5	0	5	28
	VOLUMES	0	26	36	54	46	0	0	0	0	12	0	18	198
	APPROACH %	0%	41%	57%	53%	46%	0%	0%	0%	0%	35%	0%	53%	
APP/DEPART	63	/	45	101	/	59	0	/	94	34	/	0	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	14	22	34	27	0	0	0	0	5	0	8	115	
APPROACH %	0%	38%	59%	55%	44%	0%	0%	0%	0%	31%	0%	50%		
PEAK HR FACTOR	0.771			0.705			0.000			0.571			0.757	
APP/DEPART	37	/	23	62	/	33	0	/	59	16	/	0	0	
<b>PM</b>	4:00 PM	0	5	2	0	5	0	0	0	0	3	0	2	17
	4:15 PM	0	7	1	0	4	0	0	0	0	3	0	9	24
	4:30 PM	0	2	0	0	13	0	0	0	0	3	0	2	20
	4:45 PM	0	4	1	0	3	0	0	0	0	3	0	2	13
	5:00 PM	0	12	1	0	7	0	0	0	0	4	0	2	26
	5:15 PM	0	5	1	0	10	0	0	0	0	0	0	0	16
	5:30 PM	0	5	0	1	3	0	0	0	0	1	0	1	11
	5:45 PM	0	8	1	0	5	0	0	0	0	1	0	0	15
	VOLUMES	0	48	7	1	50	0	0	0	0	18	0	18	142
	APPROACH %	0%	87%	13%	2%	98%	0%	0%	0%	0%	50%	0%	50%	
APP/DEPART	55	/	66	51	/	68	0	/	8	36	/	0	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	0	25	3	0	27	0	0	0	0	13	0	15	83	
APPROACH %	0%	89%	11%	0%	100%	0%	0%	0%	0%	46%	0%	54%		
PEAK HR FACTOR	0.538			0.519			0.000			0.583			0.798	
APP/DEPART	28	/	40	27	/	40	0	/	3	28	/	0	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Hamner  
EAST & WEST: Bellegrave

**PROJECT #:** SC  
**LOCATION #:** 28  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			Bellegrave			Bellegrave			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	1	3	1	2	2	1	2	1	1	

<b>AM</b>	7:00 AM	10	132	15	6	38	50	88	31	6	17	48	34	475
	7:15 AM	7	168	24	2	55	39	118	37	6	36	48	34	574
	7:30 AM	12	148	33	14	54	42	104	47	7	24	46	31	562
	7:45 AM	19	129	60	18	46	49	103	54	13	38	41	23	593
	8:00 AM	12	117	61	6	88	41	78	32	14	44	39	28	560
	8:15 AM	7	107	38	18	77	46	69	49	17	64	31	39	562
	8:30 AM	8	114	36	11	89	37	56	37	6	35	33	25	487
	8:45 AM	12	107	32	9	77	26	58	24	17	33	30	32	457
	VOLUMES	87	1,022	299	84	524	330	674	311	86	291	316	246	4,270
	APPROACH %	6%	73%	21%	9%	56%	35%	63%	29%	8%	34%	37%	29%	
APP/DEPART	1,408	/	1,948	938	/	902	1,071	/	688	853	/	732	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	50	562	178	40	243	171	403	170	40	142	174	116	2,289	
APPROACH %	6%	71%	23%	9%	54%	38%	66%	28%	7%	33%	40%	27%		
PEAK HR FACTOR	0.950			0.841			0.901			0.915			0.965	
APP/DEPART	790	/	1,084	454	/	426	613	/	385	432	/	394	0	
<b>PM</b>	4:00 PM	15	135	55	23	156	93	64	80	31	60	37	40	789
	4:15 PM	14	165	62	30	183	92	81	73	28	57	42	36	863
	4:30 PM	13	146	64	22	186	102	89	82	21	44	48	36	853
	4:45 PM	12	114	58	40	184	101	67	88	23	59	42	45	833
	5:00 PM	11	186	59	25	200	116	90	92	34	67	35	21	936
	5:15 PM	12	160	52	22	191	118	98	80	23	64	61	38	919
	5:30 PM	11	177	51	26	194	115	89	83	30	59	57	31	923
	5:45 PM	13	186	51	28	214	93	99	56	25	63	41	33	902
	VOLUMES	101	1,269	452	216	1,508	830	677	634	215	473	363	280	7,018
	APPROACH %	6%	70%	25%	8%	59%	32%	44%	42%	14%	42%	33%	25%	
APP/DEPART	1,822	/	2,230	2,554	/	2,196	1,526	/	1,300	1,116	/	1,292	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	47	709	213	101	799	442	376	311	112	253	194	123	3,680	
APPROACH %	5%	73%	22%	8%	60%	33%	47%	39%	14%	44%	34%	22%		
PEAK HR FACTOR	0.946			0.984			0.925			0.874			0.983	
APP/DEPART	969	/	1,211	1,342	/	1,164	799	/	623	570	/	682	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Charlotte  
Merrill

**PROJECT #:** SC  
**LOCATION #:** 29  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Charlotte			Charlotte			Merrill			Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	1	2	0	1	1	1	

<b>AM</b>	7:00 AM	1	0	0	9	0	2	3	85	0	2	160	4	266
	7:15 AM	0	0	0	6	0	4	1	83	1	2	191	4	292
	7:30 AM	0	0	0	3	0	10	2	80	2	3	204	8	312
	7:45 AM	0	0	2	3	0	9	4	87	6	4	214	9	338
	8:00 AM	0	0	1	6	0	4	1	114	3	6	147	3	285
	8:15 AM	1	0	0	6	0	3	2	91	2	2	108	6	221
	8:30 AM	2	0	1	6	0	1	0	72	2	2	148	7	241
	8:45 AM	2	0	0	5	0	4	1	58	0	3	134	4	211
	VOLUMES	6	0	4	44	0	37	14	670	16	24	1,306	45	2,166
	APPROACH %	60%	0%	40%	54%	0%	46%	2%	96%	2%	2%	95%	3%	
APP/DEPART	10	/	59	81	/	40	700	/	718	1,375	/	1,349	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	3	18	0	27	8	364	12	15	756	24	1,227	
APPROACH %	0%	0%	100%	40%	0%	60%	2%	95%	3%	2%	95%	3%		
PEAK HR FACTOR	0.375			0.865			0.814			0.876			0.908	
APP/DEPART	3	/	32	45	/	27	384	/	385	795	/	783	0	
<b>PM</b>	4:00 PM	0	0	1	5	0	2	2	226	2	3	116	9	366
	4:15 PM	2	1	4	5	0	7	6	223	1	1	80	7	337
	4:30 PM	5	0	8	3	0	4	8	281	0	1	118	10	438
	4:45 PM	2	0	8	4	0	3	2	233	0	0	103	4	359
	5:00 PM	6	0	18	1	0	3	4	262	0	2	153	8	457
	5:15 PM	1	0	6	9	0	5	4	207	0	1	109	6	348
	5:30 PM	0	0	7	5	0	0	4	251	0	1	133	5	406
	5:45 PM	1	0	1	3	0	5	5	221	1	2	106	5	350
	VOLUMES	17	1	53	35	0	29	35	1,904	4	11	918	54	3,061
	APPROACH %	24%	1%	75%	55%	0%	45%	2%	98%	0%	1%	93%	5%	
APP/DEPART	71	/	90	64	/	14	1,943	/	1,993	983	/	964	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	14	0	40	17	0	15	18	983	0	4	483	28	1,602	
APPROACH %	26%	0%	74%	53%	0%	47%	2%	98%	0%	1%	94%	5%		
PEAK HR FACTOR	0.563			0.571			0.866			0.790			0.876	
APP/DEPART	54	/	46	32	/	4	1,001	/	1,040	515	/	512	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Archibald  
Merrill

**PROJECT #:** SC  
**LOCATION #:** 30  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Merrill			Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	1	2	2	1	2	2	1	1	2	0	

<b>AM</b>	7:00 AM	50	221	9	7	97	55	52	28	14	15	61	12	621
	7:15 AM	72	187	8	8	83	57	45	29	15	19	69	14	606
	7:30 AM	76	258	12	9	112	67	41	28	13	17	72	16	721
	7:45 AM	74	200	13	16	101	77	44	29	19	12	82	25	692
	8:00 AM	42	187	6	16	117	56	66	29	26	12	59	20	636
	8:15 AM	40	161	16	14	102	40	46	19	32	10	36	13	529
	8:30 AM	52	153	8	8	110	52	46	15	17	8	53	12	534
	8:45 AM	36	122	6	9	89	70	38	11	14	10	37	13	455
	VOLUMES	442	1,489	78	87	811	474	378	188	150	103	469	125	4,794
	APPROACH %	22%	74%	4%	6%	59%	35%	53%	26%	21%	15%	67%	18%	
APP/DEPART	2,009	/	1,995	1,372	/	1,070	716	/	351	697	/	1,378	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	264	832	39	49	413	257	196	115	73	60	282	75	2,655	
APPROACH %	23%	73%	3%	7%	57%	36%	51%	30%	19%	14%	68%	18%		
PEAK HR FACTOR	0.820			0.927			0.793			0.876			0.921	
APP/DEPART	1,135	/	1,106	719	/	551	384	/	201	417	/	797	0	
<b>PM</b>	4:00 PM	29	140	14	7	152	56	72	92	68	14	43	6	693
	4:15 PM	19	134	19	19	157	41	68	108	56	11	29	10	671
	4:30 PM	22	169	13	13	177	67	108	111	73	13	42	13	821
	4:45 PM	16	122	24	15	190	52	72	99	74	19	39	11	733
	5:00 PM	32	141	20	7	191	87	99	102	78	16	45	9	827
	5:15 PM	20	144	20	15	192	53	60	92	70	12	43	8	729
	5:30 PM	22	146	9	19	190	86	85	105	73	15	34	14	798
	5:45 PM	22	140	13	19	200	58	66	77	80	15	33	9	732
	VOLUMES	182	1,136	132	114	1,449	500	630	786	572	115	308	80	6,004
	APPROACH %	13%	78%	9%	6%	70%	24%	32%	40%	29%	23%	61%	16%	
APP/DEPART	1,450	/	1,848	2,063	/	2,137	1,988	/	1,030	503	/	989	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	90	576	77	50	750	259	339	404	295	60	169	41	3,110	
APPROACH %	12%	78%	10%	5%	71%	24%	33%	39%	28%	22%	63%	15%		
PEAK HR FACTOR	0.911			0.929			0.889			0.964			0.940	
APP/DEPART	743	/	956	1,059	/	1,105	1,038	/	531	270	/	518	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Parkplace  
Merrill

**PROJECT #:** SC  
**LOCATION #:** 31  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Parkplace - McCleve			Parkplace			Merrill			Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	1	2	0	1	2	0	

<b>AM</b>	7:00 AM	4	1	6	6	0	4	0	41	2	0	81	3	148
	7:15 AM	10	2	7	5	1	5	3	37	4	1	87	2	164
	7:30 AM	15	3	4	1	1	3	1	38	9	1	87	3	166
	7:45 AM	18	3	4	2	1	3	1	46	10	1	99	3	191
	8:00 AM	13	0	6	0	2	4	1	40	9	2	74	3	154
	8:15 AM	12	1	4	3	2	2	3	37	9	4	45	1	123
	8:30 AM	2	4	1	4	1	2	1	28	1	1	69	2	116
	8:45 AM	6	1	3	6	1	3	0	24	2	3	52	2	103
	VOLUMES	80	15	35	27	9	26	10	291	46	13	594	19	1,165
	APPROACH %	62%	12%	27%	44%	15%	42%	3%	84%	13%	2%	95%	3%	
APP/DEPART	130	/	43	62	/	68	347	/	353	626	/	701	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	56	8	21	8	5	15	6	161	32	5	347	11	675	
APPROACH %	66%	9%	25%	29%	18%	54%	3%	81%	16%	1%	96%	3%		
PEAK HR FACTOR	0.850			0.636			0.873			0.881			0.884	
APP/DEPART	85	/	25	28	/	42	199	/	190	363	/	418	0	
<b>PM</b>	4:00 PM	2	0	1	3	0	3	5	103	4	4	59	2	186
	4:15 PM	9	0	1	4	0	4	14	119	12	2	36	6	207
	4:30 PM	7	2	2	2	3	2	6	123	8	1	59	3	218
	4:45 PM	7	2	6	5	2	4	5	124	9	1	58	2	225
	5:00 PM	7	0	4	4	1	2	7	114	7	3	60	4	213
	5:15 PM	1	0	2	4	1	5	8	111	7	6	57	2	204
	5:30 PM	7	5	3	5	5	3	6	116	10	5	53	1	219
	5:45 PM	5	1	3	5	3	0	3	93	13	1	53	4	184
	VOLUMES	45	10	22	32	15	23	54	903	70	23	435	24	1,656
	APPROACH %	58%	13%	29%	46%	21%	33%	5%	88%	7%	5%	90%	5%	
APP/DEPART	77	/	86	70	/	108	1,027	/	957	482	/	505	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	30	4	13	15	6	12	32	480	36	7	213	15	863	
APPROACH %	64%	9%	28%	45%	18%	36%	6%	88%	7%	3%	91%	6%		
PEAK HR FACTOR	0.783			0.750			0.945			0.877			0.959	
APP/DEPART	47	/	49	33	/	49	548	/	508	235	/	257	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Celebration  
Merrill

**PROJECT #:** SC  
**LOCATION #:** 32  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND <small>Celebration - McCleve</small>			SOUTHBOUND <small>Celebration - McCleve</small>			EASTBOUND <small>Merrill</small>			WESTBOUND <small>Merrill</small>			TOTAL
	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	

<b>AM</b>	7:00 AM	7	4	16	10	0	10	5	46	2	2	68	6	176
	7:15 AM	6	1	8	12	1	9	6	42	0	2	75	1	163
	7:30 AM	10	10	10	8	2	12	3	37	2	3	69	7	173
	7:45 AM	9	3	6	2	5	11	7	38	6	7	83	8	185
	8:00 AM	5	1	4	9	3	9	4	42	0	3	66	5	151
	8:15 AM	2	1	13	12	1	5	5	34	4	5	42	11	135
	8:30 AM	4	1	8	8	0	8	2	28	2	12	61	10	144
	8:45 AM	3	1	5	7	1	7	5	26	2	3	48	3	111
	VOLUMES	46	22	70	68	13	71	37	293	18	37	512	51	1,238
	APPROACH %	33%	16%	51%	45%	9%	47%	11%	84%	5%	6%	85%	9%	
APP/DEPART	138	/	110	152	/	68	348	/	430	600	/	630	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	32	18	40	32	8	42	21	163	10	14	295	22	697	
APPROACH %	36%	20%	44%	39%	10%	51%	11%	84%	5%	4%	89%	7%		
PEAK HR FACTOR	0.750			0.932			0.915			0.844			0.942	
APP/DEPART	90	/	61	82	/	32	194	/	235	331	/	369	0	
<b>PM</b>	4:00 PM	4	0	8	10	5	3	10	90	6	5	58	10	209
	4:15 PM	0	3	10	8	1	7	6	111	6	6	38	13	209
	4:30 PM	2	2	9	6	3	5	5	122	0	12	56	8	230
	4:45 PM	5	3	4	14	1	7	9	119	6	9	49	11	237
	5:00 PM	2	1	6	11	3	3	10	106	6	9	63	11	231
	5:15 PM	2	2	6	13	4	2	18	97	1	6	61	15	227
	5:30 PM	3	1	5	11	4	4	9	109	5	7	52	8	218
	5:45 PM	3	2	5	9	2	6	8	88	5	9	49	12	198
	VOLUMES	21	14	53	82	23	37	75	842	35	63	426	88	1,759
	APPROACH %	24%	16%	60%	58%	16%	26%	8%	88%	4%	11%	74%	15%	
APP/DEPART	88	/	177	142	/	121	952	/	977	577	/	484	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	11	8	25	44	11	17	42	444	13	36	229	45	925	
APPROACH %	25%	18%	57%	61%	15%	24%	8%	89%	3%	12%	74%	15%		
PEAK HR FACTOR	0.846			0.818			0.931			0.934			0.976	
APP/DEPART	44	/	95	72	/	60	499	/	513	310	/	257	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Sumner  
Bellegrave

**PROJECT #:** SC  
**LOCATION #:** 33  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Sumner			Sumner			Bellegrave - Merrill			Bellegrave - Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	2	0	1	1	0	1	1	0	

<b>AM</b>	7:00 AM	17	54	51	13	31	9	9	31	17	28	59	10	329
	7:15 AM	15	72	82	5	49	8	7	39	19	36	60	12	404
	7:30 AM	18	94	71	6	26	7	4	43	13	35	68	22	407
	7:45 AM	20	54	76	11	22	6	4	31	5	27	64	17	337
	8:00 AM	12	63	50	17	32	3	6	39	12	31	54	12	331
	8:15 AM	13	49	44	10	38	6	6	42	11	20	46	11	296
	8:30 AM	19	53	46	8	46	8	2	21	9	22	45	10	289
	8:45 AM	12	43	43	8	42	5	5	22	13	23	37	15	268
	VOLUMES	126	482	463	78	286	52	43	268	99	222	433	109	2,661
	APPROACH %	12%	45%	43%	19%	69%	13%	10%	65%	24%	29%	57%	14%	
APP/DEPART	1,071	/	634	416	/	607	410	/	808	764	/	612	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	65	283	279	39	129	24	21	152	49	129	246	63	1,479	
APPROACH %	10%	45%	44%	20%	67%	13%	9%	68%	22%	29%	56%	14%		
PEAK HR FACTOR	0.857			0.774			0.854			0.876			0.908	
APP/DEPART	627	/	366	192	/	307	222	/	470	438	/	336	0	
<b>PM</b>	4:00 PM	14	40	53	28	74	14	4	89	19	64	40	10	449
	4:15 PM	16	37	54	25	84	4	6	93	24	62	37	13	455
	4:30 PM	11	35	62	36	87	8	7	84	33	61	59	7	490
	4:45 PM	13	47	56	24	74	5	6	97	17	84	56	5	484
	5:00 PM	17	45	63	41	77	8	8	100	30	59	45	10	503
	5:15 PM	18	31	62	25	77	6	6	98	25	101	57	14	520
	5:30 PM	15	46	62	31	92	10	10	81	40	72	48	11	518
	5:45 PM	9	33	58	32	97	4	5	87	22	77	50	10	484
	VOLUMES	113	314	470	242	662	59	52	729	210	580	392	80	3,903
	APPROACH %	13%	35%	52%	25%	69%	6%	5%	74%	21%	55%	37%	8%	
APP/DEPART	897	/	447	963	/	1,453	991	/	1,440	1,052	/	563	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	59	155	245	129	343	28	29	366	117	309	200	45	2,025	
APPROACH %	13%	34%	53%	26%	69%	6%	6%	71%	23%	56%	36%	8%		
PEAK HR FACTOR	0.918			0.940			0.928			0.805			0.974	
APP/DEPART	459	/	230	500	/	770	512	/	739	554	/	286	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH: Ontario  
EAST & WEST: Fallsgrove  
Bellevue

**PROJECT #:** SC  
**LOCATION #:** 34  
**CONTROL:** STOP N

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Fallsgrove			Fallsgrove			Bellevue			Bellevue			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	X	0	X	X	X	X	2	0	1	1	X	

<b>AM</b>	7:00 AM	2	0	4	0	0	0	106	0	2	90	0	204	
	7:15 AM	3	0	7	0	0	0	142	0	1	101	0	254	
	7:30 AM	3	0	4	0	0	0	129	1	1	116	0	254	
	7:45 AM	2	0	3	0	0	0	125	1	0	110	0	241	
	8:00 AM	2	0	2	0	0	0	116	2	1	89	0	212	
	8:15 AM	1	0	2	0	0	0	102	0	1	76	0	182	
	8:30 AM	0	0	2	0	0	0	77	0	0	77	0	156	
	8:45 AM	2	0	2	0	0	0	75	3	3	69	0	154	
	VOLUMES	15	0	26	0	0	0	0	872	7	9	728	0	1,657
	APPROACH %	37%	0%	63%	0%	0%	0%	0%	99%	1%	1%	99%	0%	
APP/DEPART	41	/	0	0	/	16	879	/	898	737	/	743	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	10	0	16	0	0	0	0	512	4	3	416	0	961	
APPROACH %	38%	0%	62%	0%	0%	0%	0%	99%	1%	1%	99%	0%		
PEAK HR FACTOR	0.650			0.000			0.908			0.895			0.946	
APP/DEPART	26	/	0	0	/	7	516	/	528	419	/	426	0	
<b>PM</b>	4:00 PM	0	0	2	0	0	0	168	0	6	112	0	288	
	4:15 PM	2	0	3	0	0	0	167	6	9	113	0	300	
	4:30 PM	0	0	4	0	0	0	181	1	4	145	0	335	
	4:45 PM	0	0	3	0	0	0	177	5	3	144	0	332	
	5:00 PM	2	0	4	0	0	0	209	2	7	136	0	360	
	5:15 PM	1	0	1	0	0	0	188	4	3	156	0	353	
	5:30 PM	3	0	4	0	0	0	176	4	6	139	0	332	
	5:45 PM	2	0	2	0	0	0	175	1	2	138	0	320	
	VOLUMES	10	0	23	0	0	0	0	1,441	23	40	1,083	0	2,620
	APPROACH %	30%	0%	70%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
APP/DEPART	33	/	0	0	/	63	1,464	/	1,464	1,123	/	1,093	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	3	0	12	0	0	0	0	755	12	17	581	0	1,380	
APPROACH %	20%	0%	80%	0%	0%	0%	0%	98%	2%	3%	97%	0%		
PEAK HR FACTOR	0.625			0.000			0.909			0.940			0.958	
APP/DEPART	15	/	0	0	/	29	767	/	767	598	/	584	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Scholar  
EAST & WEST: Bellegrave

**PROJECT #:** SC  
**LOCATION #:** 35  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Scholar			Scholar			Bellegrave			Bellegrave			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	1	0	1	1	0	1	1	1	

<b>AM</b>	7:00 AM	4	1	17	0	1	2	2	101	6	11	86	3	234
	7:15 AM	6	0	30	0	4	9	4	136	7	6	85	7	294
	7:30 AM	12	5	33	0	2	8	3	122	2	8	101	4	300
	7:45 AM	7	0	32	0	1	6	4	124	6	12	95	4	291
	8:00 AM	8	1	21	0	2	7	7	101	12	8	77	5	249
	8:15 AM	10	1	28	0	1	2	1	96	11	12	72	1	235
	8:30 AM	5	4	18	1	0	3	1	75	4	11	67	2	191
	8:45 AM	6	0	18	2	1	12	3	70	1	11	56	2	182
	VOLUMES	58	12	197	3	12	49	25	825	49	79	639	28	1,976
	APPROACH %	22%	4%	74%	5%	19%	77%	3%	92%	5%	11%	86%	4%	
APP/DEPART	267	/	65	64	/	140	899	/	1,025	746	/	746	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	33	6	116	0	9	30	18	483	27	34	358	20	1,134	
APPROACH %	21%	4%	75%	0%	23%	77%	3%	91%	5%	8%	87%	5%		
PEAK HR FACTOR	0.775			0.750			0.898			0.912			0.945	
APP/DEPART	155	/	44	39	/	70	528	/	599	412	/	421	0	
<b>PM</b>	4:00 PM	6	2	18	1	4	3	4	167	11	25	109	2	352
	4:15 PM	4	3	24	1	2	5	5	151	12	29	113	0	349
	4:30 PM	4	0	24	1	6	8	1	171	14	21	138	1	389
	4:45 PM	5	1	16	1	3	3	4	168	10	18	138	0	367
	5:00 PM	9	1	24	1	3	6	9	185	11	28	124	1	402
	5:15 PM	6	3	17	0	3	5	3	181	10	43	151	0	422
	5:30 PM	7	2	25	0	0	5	2	166	9	32	130	1	379
	5:45 PM	3	3	14	0	1	5	5	142	17	23	132	1	346
	VOLUMES	44	15	162	5	22	40	33	1,331	94	219	1,035	6	3,006
	APPROACH %	20%	7%	73%	7%	33%	60%	2%	91%	6%	17%	82%	0%	
APP/DEPART	221	/	54	67	/	335	1,458	/	1,498	1,260	/	1,119	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	24	5	81	3	15	22	17	705	45	110	551	2	1,580	
APPROACH %	22%	5%	74%	8%	38%	55%	2%	92%	6%	17%	83%	0%		
PEAK HR FACTOR	0.809			0.667			0.935			0.854			0.936	
APP/DEPART	110	/	24	40	/	170	767	/	789	663	/	597	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Archibald  
Limonite

**PROJECT #:**  
**LOCATION #:**  
**CONTROL:**

SC  
36  
SIGNAL

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

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Limonite			Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:	X	2	1	1	1	X	X	X	X	2	X	1	

<b>AM</b>	7:00 AM	0	175	58	17	88	0	0	0	0	72	0	94	504
	7:15 AM	0	144	75	22	94	0	0	0	0	119	0	126	580
	7:30 AM	0	190	84	38	89	0	0	0	0	93	0	134	628
	7:45 AM	0	191	66	42	76	0	0	0	0	99	0	105	579
	8:00 AM	0	134	78	51	96	0	0	0	0	102	0	83	544
	8:15 AM	0	162	90	47	94	0	0	0	0	91	0	84	568
	8:30 AM	0	131	67	38	78	0	0	0	0	92	0	78	484
	8:45 AM	0	91	63	26	68	0	0	0	0	92	0	69	409
	VOLUMES	0	1,218	581	281	683	0	0	0	0	760	0	773	4,296
	APPROACH %	0%	68%	32%	29%	71%	0%	0%	0%	0%	50%	0%	50%	
APP/DEPART	1,799	/	1,991	964	/	1,443	0	/	862	1,533	/	0	0	
BEGIN PEAK HR		7:15 AM												
VOLUMES	0	659	303	153	355	0	0	0	0	413	0	448	2,331	
APPROACH %	0%	69%	31%	30%	70%	0%	0%	0%	0%	48%	0%	52%		
PEAK HR FACTOR		0.878			0.864			0.000			0.879		0.928	
APP/DEPART	962	/	1,107	508	/	768	0	/	456	861	/	0	0	
<b>PM</b>	04:00 PM	0	113	104	95	145	0	0	0	0	113	0	73	643
	4:15 PM	0	112	82	96	112	0	0	0	0	122	0	46	570
	4:30 PM	0	115	93	122	132	0	0	0	0	116	0	55	633
	4:45 PM	0	115	93	95	166	0	0	0	0	140	0	44	653
	5:00 PM	0	106	129	103	161	0	0	0	0	140	0	64	703
	5:15 PM	0	99	117	109	180	0	0	0	0	142	0	51	698
	5:30 PM	0	94	85	120	172	0	0	0	0	131	0	72	674
	5:45 PM	0	115	101	98	174	0	0	0	0	121	0	52	661
	VOLUMES	0	869	804	838	1,242	0	0	0	0	1,025	0	457	5,235
	APPROACH %	0%	52%	48%	40%	60%	0%	0%	0%	0%	69%	0%	31%	
APP/DEPART	1,673	/	1,326	2,080	/	2,267	0	/	1,642	1,482	/	0	0	
BEGIN PEAK HR		5:00 PM												
VOLUMES	0	414	432	430	687	0	0	0	0	534	0	239	2,736	
APPROACH %	0%	49%	51%	38%	62%	0%	0%	0%	0%	69%	0%	31%		
PEAK HR FACTOR		0.900			0.956			0.000			0.947		0.973	
APP/DEPART	846	/	653	1,117	/	1,221	0	/	862	773	/	0	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Sumner  
Limonite

**PROJECT #:** SC  
**LOCATION #:** 37  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Sumner			Sumner			Limonite			Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	2	3	0	2	3	1	

<b>AM</b>	7:00 AM	20	73	30	17	89	18	22	111	9	23	154	21	587
	7:15 AM	19	93	43	31	99	24	35	122	8	25	168	17	684
	7:30 AM	26	130	40	22	54	21	43	145	8	29	190	14	722
	7:45 AM	20	94	36	24	35	21	34	119	4	16	141	23	567
	8:00 AM	11	64	37	41	53	24	25	122	5	22	151	16	571
	8:15 AM	18	70	50	36	46	21	40	165	9	39	161	23	678
	8:30 AM	14	57	30	25	36	14	27	112	6	27	137	24	509
	8:45 AM	14	50	36	29	27	23	21	113	2	35	143	21	514
	VOLUMES	142	631	302	225	439	166	247	1,009	51	216	1,245	159	4,832
	APPROACH %	13%	59%	28%	27%	53%	20%	19%	77%	4%	13%	77%	10%	
APP/DEPART	1,075	/	1,028	830	/	677	1,307	/	1,565	1,620	/	1,562	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	85	390	149	94	277	84	134	497	29	93	653	75	2,560	
APPROACH %	14%	63%	24%	21%	61%	18%	20%	75%	4%	11%	80%	9%		
PEAK HR FACTOR	0.796			0.739			0.842			0.881			0.886	
APP/DEPART	624	/	594	455	/	387	660	/	752	821	/	827	0	
<b>PM</b>	4:00 PM	8	63	27	50	104	31	36	187	15	48	153	18	740
	4:15 PM	10	51	38	43	77	35	41	189	9	65	157	32	747
	4:30 PM	17	49	31	45	95	36	37	217	9	62	170	29	797
	4:45 PM	12	72	35	63	102	39	59	167	10	54	148	28	789
	5:00 PM	10	56	41	57	96	43	33	226	16	65	197	22	862
	5:15 PM	11	66	41	53	90	47	66	201	16	51	176	26	844
	5:30 PM	15	57	36	57	102	36	51	173	18	67	206	25	843
	5:45 PM	9	51	37	41	124	41	43	191	21	60	148	23	789
	VOLUMES	92	465	286	409	790	308	366	1,551	114	472	1,355	203	6,411
	APPROACH %	11%	55%	34%	27%	52%	20%	18%	76%	6%	23%	67%	10%	
APP/DEPART	843	/	1,029	1,507	/	1,289	2,031	/	2,332	2,030	/	1,761	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	45	230	155	208	412	167	193	791	71	243	727	96	3,338	
APPROACH %	10%	53%	36%	26%	52%	21%	18%	75%	7%	23%	68%	9%		
PEAK HR FACTOR	0.903			0.955			0.932			0.894			0.968	
APP/DEPART	430	/	518	787	/	679	1,055	/	1,201	1,066	/	940	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Scholar  
EAST & WEST: Limonite

**PROJECT #:** SC  
**LOCATION #:** 38  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Scholar			Scholar			Limonite			Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	2	1	1	2	1	1	2	1	

<b>AM</b>	7:00 AM	12	17	23	20	40	9	4	179	8	13	173	5	503
	7:15 AM	15	33	25	15	40	7	3	182	11	7	189	6	533
	7:30 AM	24	46	28	15	22	8	10	194	5	15	224	8	599
	7:45 AM	15	34	31	9	46	4	11	176	8	14	162	9	519
	8:00 AM	19	28	29	18	58	10	6	163	26	21	167	6	551
	8:15 AM	30	47	38	18	38	4	5	228	16	26	202	7	659
	8:30 AM	19	31	44	12	13	3	3	172	4	13	169	13	496
	8:45 AM	11	16	25	9	6	5	3	189	4	24	195	4	491
	VOLUMES	145	252	243	116	263	50	45	1,483	82	133	1,481	58	4,351
	APPROACH %	23%	39%	38%	27%	61%	12%	3%	92%	5%	8%	89%	3%	
APP/DEPART	640	/	348	429	/	477	1,610	/	1,843	1,672	/	1,683	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	88	155	126	60	164	26	32	761	55	76	755	30	2,328	
APPROACH %	24%	42%	34%	24%	66%	10%	4%	90%	6%	9%	88%	3%		
PEAK HR FACTOR	0.802			0.727			0.851			0.871			0.883	
APP/DEPART	369	/	212	250	/	295	848	/	947	861	/	874	0	
<b>PM</b>	4:00 PM	4	18	29	12	26	10	7	229	11	18	230	18	612
	4:15 PM	4	23	17	20	31	10	8	259	12	41	244	17	686
	4:30 PM	10	19	30	17	24	7	10	262	14	27	259	20	699
	4:45 PM	12	19	31	19	24	9	9	250	15	35	215	13	651
	5:00 PM	21	25	29	14	28	9	11	299	13	25	262	21	757
	5:15 PM	11	26	30	15	46	8	5	258	14	39	229	18	699
	5:30 PM	16	19	26	17	19	13	5	271	12	33	286	13	730
	5:45 PM	7	15	27	16	31	5	7	264	19	35	248	17	691
	VOLUMES	85	164	219	130	229	71	62	2,092	110	253	1,973	137	5,525
	APPROACH %	18%	35%	47%	30%	53%	17%	3%	92%	5%	11%	83%	6%	
APP/DEPART	468	/	354	430	/	592	2,264	/	2,441	2,363	/	2,138	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	55	85	112	62	124	35	28	1,092	58	132	1,025	69	2,877	
APPROACH %	22%	34%	44%	28%	56%	16%	2%	93%	5%	11%	84%	6%		
PEAK HR FACTOR	0.840			0.801			0.912			0.923			0.950	
APP/DEPART	252	/	178	221	/	314	1,178	/	1,266	1,226	/	1,119	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Hamner  
Limonite

**PROJECT #:** SC  
**LOCATION #:** 39  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			Limonite			Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	1	2	3	1	2	3	1	2	2	1	

<b>AM</b>	7:00 AM	23	84	63	36	51	13	17	177	8	77	176	48	773
	7:15 AM	24	96	102	40	84	18	36	199	11	92	171	55	928
	7:30 AM	27	96	127	47	43	23	43	191	3	59	175	37	871
	7:45 AM	24	116	80	39	54	15	36	173	6	57	156	49	805
	8:00 AM	27	88	87	54	61	29	50	152	12	80	187	45	872
	8:15 AM	38	86	90	60	65	26	64	176	11	87	179	39	921
	8:30 AM	30	114	92	51	55	29	62	194	4	72	116	33	852
	8:45 AM	27	80	75	58	61	32	42	148	10	65	144	35	777
	VOLUMES	220	760	716	385	474	185	350	1,410	65	589	1,304	341	6,799
	APPROACH %	13%	45%	42%	37%	45%	18%	19%	77%	4%	26%	58%	15%	
APP/DEPART	1,696	/	1,448	1,044	/	1,159	1,825	/	2,548	2,234	/	1,644	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	102	396	396	180	242	85	165	715	32	288	689	186	3,476	
APPROACH %	11%	44%	44%	36%	48%	17%	18%	78%	4%	25%	59%	16%		
PEAK HR FACTOR	0.894			0.880			0.927			0.914			0.936	
APP/DEPART	894	/	746	507	/	589	912	/	1,304	1,163	/	837	0	
<b>PM</b>	4:00 PM	48	101	66	61	99	53	62	193	12	107	171	65	1,038
	4:15 PM	51	130	62	84	134	56	81	207	19	126	198	73	1,221
	4:30 PM	51	129	55	73	126	66	67	218	12	99	148	66	1,110
	4:45 PM	40	70	54	53	109	50	88	245	15	140	187	60	1,111
	5:00 PM	55	126	69	93	137	61	74	208	18	117	202	63	1,223
	5:15 PM	52	131	55	85	137	53	74	208	30	120	176	69	1,190
	5:30 PM	67	125	63	62	153	59	79	231	17	128	187	70	1,241
	5:45 PM	47	131	66	74	144	63	87	189	19	162	180	70	1,232
	VOLUMES	411	943	490	585	1,039	461	612	1,699	142	999	1,449	536	9,366
	APPROACH %	22%	51%	27%	28%	50%	22%	25%	69%	6%	33%	49%	18%	
APP/DEPART	1,844	/	2,092	2,085	/	2,246	2,453	/	2,841	2,984	/	2,187	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	221	513	253	314	571	236	314	836	84	527	745	272	4,886	
APPROACH %	22%	52%	26%	28%	51%	21%	25%	68%	7%	34%	48%	18%		
PEAK HR FACTOR	0.968			0.963			0.943			0.937			0.984	
APP/DEPART	987	/	1,102	1,121	/	1,218	1,234	/	1,438	1,544	/	1,128	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
NORTH & SOUTH: I-15 SB Ramps  
EAST & WEST: Limonite

**PROJECT #:** SC  
**LOCATION #:** 40  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-15 SB Ramps			I-15 SB Ramps			Limonite			Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	1.5	0.5	2	X	3	1	X	3	1	

<b>AM</b>	7:00 AM	0	0	0	61	0	158	0	204	110	0	193	151	877
	7:15 AM	0	0	0	42	0	124	0	238	124	0	224	193	945
	7:30 AM	0	0	0	44	0	113	0	270	132	0	196	170	925
	7:45 AM	0	0	0	42	0	120	0	217	119	0	224	159	881
	8:00 AM	0	0	0	48	1	145	0	202	104	0	231	126	857
	8:15 AM	0	0	0	53	0	171	0	230	101	0	222	141	918
	8:30 AM	0	0	0	60	0	109	0	260	123	0	204	144	900
	8:45 AM	0	0	0	47	0	132	0	237	90	0	207	120	833
	VOLUMES	0	0	0	397	1	1,072	0	1,858	903	0	1,701	1,204	7,136
	APPROACH %	0%	0%	0%	27%	0%	73%	0%	67%	33%	0%	59%	41%	
APP/DEPART	0	/	1,204	1,470	/	904	2,761	/	2,255	2,905	/	2,773	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	0	0	189	0	515	0	929	485	0	837	673	3,628	
APPROACH %	0%	0%	0%	27%	0%	73%	0%	66%	34%	0%	55%	45%		
PEAK HR FACTOR	0.000			0.804			0.879			0.905			0.960	
APP/DEPART	0	/	673	704	/	485	1,414	/	1,118	1,510	/	1,352	0	
<b>PM</b>	4:00 PM	0	0	0	89	1	148	0	241	115	0	245	114	953
	4:15 PM	0	0	0	76	0	175	0	321	141	0	304	161	1,178
	4:30 PM	0	0	0	90	0	162	0	295	110	0	260	113	1,030
	4:45 PM	0	0	0	95	1	134	0	262	150	0	324	136	1,102
	5:00 PM	0	0	0	60	0	184	0	279	128	0	305	131	1,087
	5:15 PM	0	0	0	89	0	142	0	299	136	0	324	118	1,108
	5:30 PM	0	0	0	63	1	164	0	308	143	0	322	145	1,146
	5:45 PM	0	0	0	75	0	170	0	301	133	0	317	140	1,136
	VOLUMES	0	0	0	637	3	1,279	0	2,306	1,056	0	2,401	1,058	8,740
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	69%	31%	0%	69%	31%	
APP/DEPART	0	/	1,058	1,919	/	1,059	3,362	/	2,943	3,459	/	3,680	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	0	0	287	1	660	0	1,187	540	0	1,268	534	4,477	
APPROACH %	0%	0%	0%	30%	0%	70%	0%	69%	31%	0%	70%	30%		
PEAK HR FACTOR	0.000			0.967			0.957			0.965			0.977	
APP/DEPART	0	/	534	948	/	541	1,727	/	1,474	1,802	/	1,928	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:**  
NORTH & SOUTH: Ontario  
EAST & WEST: I-15 NB Ramps  
Limonite

**PROJECT #:** SC  
**LOCATION #:** 41  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-15 NB Ramps			I-15 NB Ramps			Limonite			Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1.3	0.3	1.3	X	X	X	X	3	1	X	3	1	

<b>AM</b>	7:00 AM	82	0	98	0	0	0	0	143	132	0	272	90	817
	7:15 AM	100	1	129	0	0	0	0	159	119	0	302	88	898
	7:30 AM	118	1	140	0	0	0	0	164	140	0	254	66	883
	7:45 AM	137	0	166	0	0	0	0	153	106	0	246	43	851
	8:00 AM	109	1	116	0	0	0	0	147	110	0	249	54	786
	8:15 AM	107	0	97	0	0	0	0	179	99	0	251	63	796
	8:30 AM	87	0	120	0	0	0	0	180	129	0	258	69	843
	8:45 AM	111	0	96	0	0	0	0	168	125	0	225	68	793
	VOLUMES	851	3	962	0	0	0	0	1,293	960	0	2,057	541	6,667
	APPROACH %	47%	0%	53%	0%	0%	0%	0%	57%	43%	0%	79%	21%	
APP/DEPART	1,816	/	544	0	/	960	2,253	/	2,255	2,598	/	2,908	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	437	2	533	0	0	0	0	619	497	0	1,074	287	3,449	
APPROACH %	45%	0%	55%	0%	0%	0%	0%	55%	45%	0%	79%	21%		
PEAK HR FACTOR	0.802			0.000			0.918			0.872			0.960	
APP/DEPART	972	/	289	0	/	497	1,116	/	1,152	1,361	/	1,511	0	
<b>PM</b>	4:00 PM	54	0	99	0	0	0	0	268	75	0	335	53	884
	4:15 PM	66	0	104	0	0	0	0	317	81	0	362	48	978
	4:30 PM	59	0	108	0	0	0	0	303	70	0	331	56	927
	4:45 PM	61	0	101	0	0	0	0	287	66	0	390	44	949
	5:00 PM	72	0	114	0	0	0	0	279	68	0	369	32	934
	5:15 PM	59	0	122	0	0	0	0	311	73	0	385	43	993
	5:30 PM	75	0	103	0	0	0	0	299	71	0	391	39	978
	5:45 PM	68	0	94	0	0	0	0	308	63	0	387	40	960
	VOLUMES	514	0	845	0	0	0	0	2,372	567	0	2,950	355	7,603
	APPROACH %	38%	0%	62%	0%	0%	0%	0%	81%	19%	0%	89%	11%	
APP/DEPART	1,359	/	355	0	/	567	2,939	/	3,217	3,305	/	3,464	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	274	0	433	0	0	0	0	1,197	275	0	1,532	154	3,865	
APPROACH %	39%	0%	61%	0%	0%	0%	0%	81%	19%	0%	91%	9%		
PEAK HR FACTOR	0.950			0.000			0.958			0.980			0.973	
APP/DEPART	707	/	154	0	/	275	1,472	/	1,630	1,686	/	1,806	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Archibald  
EAST & WEST: Schleisman

**PROJECT #:** SC  
**LOCATION #:** 42  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Schleisman			Schleisman			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	1	2	3	1	2	3	1	2	3	1	

<b>AM</b>	7:00 AM	46	121	47	19	79	92	87	158	23	20	122	15	829
	7:15 AM	55	163	94	25	132	128	92	166	30	61	151	50	1,147
	7:30 AM	68	200	50	15	146	151	104	109	23	92	163	33	1,154
	7:45 AM	78	148	19	13	103	124	96	114	30	45	194	35	999
	8:00 AM	51	142	14	14	98	130	94	116	20	24	125	17	845
	8:15 AM	44	105	12	23	90	99	102	112	34	23	110	13	767
	8:30 AM	45	97	17	12	102	92	112	87	23	24	108	11	730
	8:45 AM	49	90	12	12	95	85	72	68	22	15	93	10	623
	VOLUMES	436	1,066	265	133	845	901	759	930	205	304	1,066	184	7,094
	APPROACH %	25%	60%	15%	7%	45%	48%	40%	49%	11%	20%	69%	12%	
APP/DEPART	1,767	/	1,897	1,879	/	1,358	1,894	/	1,328	1,554	/	2,511	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	252	653	177	67	479	533	386	505	103	222	633	135	4,145	
APPROACH %	23%	60%	16%	6%	44%	49%	39%	51%	10%	22%	64%	14%		
PEAK HR FACTOR	0.851			0.865			0.863			0.859			0.898	
APP/DEPART	1,082	/	1,116	1,079	/	806	994	/	750	990	/	1,473	0	
<b>PM</b>	4:00 PM	56	132	28	18	119	92	91	189	46	21	51	13	856
	4:15 PM	64	114	31	32	117	72	116	253	51	35	92	11	988
	4:30 PM	52	121	31	21	152	83	100	208	51	29	77	7	932
	4:45 PM	56	111	27	37	160	101	91	211	52	39	84	12	981
	5:00 PM	70	133	28	37	133	113	83	202	51	30	71	6	957
	5:15 PM	68	155	31	24	133	91	115	241	43	35	74	16	1,026
	5:30 PM	69	122	26	47	164	127	81	247	45	36	69	12	1,045
	5:45 PM	62	94	35	45	144	112	93	224	41	32	69	6	957
	VOLUMES	497	982	237	261	1,122	791	770	1,775	380	257	587	83	7,742
	APPROACH %	29%	57%	14%	12%	52%	36%	26%	61%	13%	28%	63%	9%	
APP/DEPART	1,716	/	1,779	2,174	/	1,763	2,925	/	2,274	927	/	1,926	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	263	521	112	145	590	432	370	901	191	140	298	46	4,009	
APPROACH %	29%	58%	13%	12%	51%	37%	25%	62%	13%	29%	62%	10%		
PEAK HR FACTOR	0.882			0.863			0.916			0.896			0.959	
APP/DEPART	896	/	905	1,167	/	925	1,462	/	1,159	484	/	1,020	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Hamner  
EAST & WEST: 68th

**PROJECT #:** SC  
**LOCATION #:** 43  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			68th			68th			
	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	

<b>AM</b>	7:00 AM	3	67	22	6	113	10	12	27	6	53	42	13	374
	7:15 AM	10	105	31	8	182	18	27	54	22	96	70	12	635
	7:30 AM	18	192	46	11	103	9	46	55	13	43	51	23	610
	7:45 AM	8	157	51	13	58	13	36	53	15	34	45	13	496
	8:00 AM	8	89	24	10	83	10	24	52	12	28	42	21	403
	8:15 AM	8	81	30	17	105	22	26	68	10	43	63	13	486
	8:30 AM	7	124	37	5	86	15	28	36	7	26	31	17	419
	8:45 AM	9	86	22	10	72	18	21	29	9	20	30	11	337
	VOLUMES	71	901	263	80	802	115	220	374	94	343	374	123	3,760
	APPROACH %	6%	73%	21%	8%	80%	12%	32%	54%	14%	41%	45%	15%	
APP/DEPART	1,235	/	1,244	997	/	1,240	688	/	717	840	/	559	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	44	543	152	42	426	50	133	214	62	201	208	69	2,144	
APPROACH %	6%	73%	21%	8%	82%	10%	33%	52%	15%	42%	44%	14%		
PEAK HR FACTOR	0.722			0.623			0.897			0.671			0.844	
APP/DEPART	739	/	745	518	/	689	409	/	408	478	/	302	0	
<b>PM</b>	4:00 PM	19	157	40	13	128	26	20	53	12	29	64	14	575
	4:15 PM	11	166	47	25	117	29	20	45	6	30	51	17	564
	4:30 PM	15	160	42	23	147	26	17	44	8	33	57	20	592
	4:45 PM	18	154	43	22	129	17	16	59	13	45	45	21	582
	5:00 PM	17	138	47	13	150	19	24	39	8	46	55	24	580
	5:15 PM	27	137	43	40	145	27	14	56	6	42	59	24	620
	5:30 PM	20	158	45	22	141	23	15	52	4	32	54	16	582
	5:45 PM	19	126	29	24	161	23	17	53	14	40	56	18	580
	VOLUMES	146	1,196	336	182	1,118	190	143	401	71	297	441	154	4,675
	APPROACH %	9%	71%	20%	12%	75%	13%	23%	65%	12%	33%	49%	17%	
APP/DEPART	1,678	/	1,493	1,490	/	1,488	615	/	919	892	/	775	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	77	589	175	98	571	89	71	198	35	166	216	89	2,374	
APPROACH %	9%	70%	21%	13%	75%	12%	23%	65%	12%	35%	46%	19%		
PEAK HR FACTOR	0.969			0.894			0.864			0.942			0.957	
APP/DEPART	841	/	749	758	/	774	304	/	471	471	/	380	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Hamner  
EAST & WEST: Schleisman

**PROJECT #:** SC  
**LOCATION #:** 44  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			Schleisman			Schleisman			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	1	2	1	1	1	1	1	0.5	0.5	

<b>AM</b>	7:00 AM	54	76	1	5	111	60	26	8	45	2	2	0	390
	7:15 AM	61	109	0	6	155	233	74	11	37	6	3	4	699
	7:30 AM	89	156	1	4	105	123	111	12	50	4	2	7	664
	7:45 AM	53	161	3	4	94	43	82	7	46	3	0	1	497
	8:00 AM	33	79	2	9	86	46	48	6	46	5	0	2	362
	8:15 AM	49	80	1	8	122	78	57	5	40	1	2	0	443
	8:30 AM	48	118	0	8	86	31	46	9	37	6	1	6	396
	8:45 AM	45	104	2	3	89	16	29	4	41	3	2	2	340
	VOLUMES	432	883	10	47	848	630	473	62	342	30	12	22	3,791
	APPROACH %	33%	67%	1%	3%	56%	41%	54%	7%	39%	47%	19%	34%	
APP/DEPART	1,325	/	1,379	1,525	/	1,231	877	/	119	64	/	1,062	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	257	502	5	19	465	459	293	38	178	15	7	12	2,250	
APPROACH %	34%	66%	1%	2%	49%	49%	58%	7%	35%	44%	21%	35%		
PEAK HR FACTOR	0.776			0.598			0.736			0.654			0.805	
APP/DEPART	764	/	808	943	/	660	509	/	62	34	/	720	0	
<b>PM</b>	4:00 PM	58	189	1	8	121	50	39	3	34	1	0	5	509
	4:15 PM	63	182	1	4	104	54	58	0	41	5	1	1	514
	4:30 PM	53	178	1	3	110	51	54	2	46	2	1	3	504
	4:45 PM	58	189	2	6	122	53	44	1	29	3	2	0	509
	5:00 PM	49	156	2	5	131	45	46	2	18	3	4	0	461
	5:15 PM	48	183	1	11	144	48	22	2	33	4	3	0	499
	5:30 PM	57	190	1	7	136	26	45	1	20	1	0	1	485
	5:45 PM	60	159	0	3	183	51	36	1	24	2	0	1	520
	VOLUMES	446	1,426	9	47	1,051	378	344	12	245	21	11	11	4,001
	APPROACH %	24%	76%	0%	3%	71%	26%	57%	2%	41%	49%	26%	26%	
APP/DEPART	1,881	/	1,791	1,476	/	1,327	601	/	55	43	/	828	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	232	738	5	21	457	208	195	6	150	11	4	9	2,036	
APPROACH %	24%	76%	1%	3%	67%	30%	56%	2%	43%	46%	17%	38%		
PEAK HR FACTOR	0.979			0.948			0.860			0.857			0.990	
APP/DEPART	975	/	945	686	/	620	351	/	27	24	/	444	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Archibald  
EAST & WEST: Chandler

**PROJECT #:** SC  
**LOCATION #:** 45  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Archibald			Archibald			Chandler			Chandler			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	1	2	0	1	2	0	1	2	1	

<b>AM</b>	7:00 AM	12	103	79	11	91	14	29	52	18	62	25	10	506
	7:15 AM	20	155	72	10	149	21	40	52	19	77	33	17	665
	7:30 AM	17	148	60	12	186	32	35	21	20	87	64	19	701
	7:45 AM	26	116	33	12	123	29	20	13	18	64	50	12	516
	8:00 AM	18	93	31	5	117	29	17	17	8	43	29	3	410
	8:15 AM	11	83	20	7	107	34	19	20	9	56	14	3	383
	8:30 AM	9	70	24	3	93	14	14	14	12	50	19	8	330
	8:45 AM	15	65	8	2	77	16	26	6	6	25	9	9	264
	VOLUMES	128	833	327	62	943	189	200	195	110	464	243	81	3,775
	APPROACH %	10%	65%	25%	5%	79%	16%	40%	39%	22%	59%	31%	10%	
APP/DEPART	1,288	/	1,113	1,194	/	1,519	505	/	582	788	/	561	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	75	522	244	45	549	96	124	138	75	290	172	58	2,388	
APPROACH %	9%	62%	29%	7%	80%	14%	37%	41%	22%	56%	33%	11%		
PEAK HR FACTOR	0.851			0.750			0.759			0.765			0.852	
APP/DEPART	841	/	704	690	/	916	337	/	425	520	/	343	0	
<b>PM</b>	4:00 PM	19	107	40	12	125	27	18	27	15	30	30	7	457
	4:15 PM	14	117	36	16	136	21	19	25	15	34	24	11	468
	4:30 PM	12	110	47	11	146	25	19	41	15	46	21	7	500
	4:45 PM	18	125	54	13	125	28	28	33	15	41	24	9	513
	5:00 PM	20	113	48	14	144	25	21	28	23	49	20	3	508
	5:15 PM	17	132	51	11	130	25	21	26	9	46	16	12	496
	5:30 PM	22	128	68	18	145	16	23	40	17	60	17	7	561
	5:45 PM	17	106	38	10	142	27	17	32	13	34	22	9	467
	VOLUMES	139	938	382	105	1,093	194	166	252	122	340	174	65	3,970
	APPROACH %	10%	64%	26%	8%	79%	14%	31%	47%	23%	59%	30%	11%	
APP/DEPART	1,459	/	1,178	1,392	/	1,556	540	/	727	579	/	509	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	77	498	221	56	544	94	93	127	64	196	77	31	2,078	
APPROACH %	10%	63%	28%	8%	78%	14%	33%	45%	23%	64%	25%	10%		
PEAK HR FACTOR	0.913			0.948			0.888			0.905			0.926	
APP/DEPART	796	/	624	694	/	804	284	/	399	304	/	251	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Hamner  
EAST & WEST: Norco

**PROJECT #:** SC  
**LOCATION #:** 46  
**CONTROL:** SIGNAL

NOTES:  <p style="text-align: center; color: blue;">Construction 08:06-09:00 AM; Queue PM EB</p>	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Hamner			Hamner			Norco - Sixth			Norco - Sixth			
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1.5	WT 0.5	WR 1	

<b>AM</b>	7:00 AM	9	63	51	73	86	5	1	42	17	100	21	69	537
	7:15 AM	13	71	58	81	105	6	4	50	9	150	14	79	640
	7:30 AM	12	72	64	96	96	5	3	43	10	128	26	68	623
	7:45 AM	17	72	63	120	115	11	3	33	9	132	29	61	665
	8:00 AM	11	48	76	106	101	11	9	38	6	124	25	58	613
	8:15 AM	16	51	59	79	110	14	13	64	17	118	39	63	643
	8:30 AM	19	55	79	79	129	14	16	53	22	109	27	75	677
	8:45 AM	16	46	69	95	123	6	9	46	18	123	25	65	641
	VOLUMES	113	478	519	729	865	72	58	369	108	984	206	538	5,039
	APPROACH %	10%	43%	47%	44%	52%	4%	11%	69%	20%	57%	12%	31%	
APP/DEPART	1,110	/	1,074	1,666	/	1,978	535	/	1,618	1,728	/	369	0	
BEGIN PEAK HR	7:45 AM													
VOLUMES	63	226	277	384	455	50	41	188	54	483	120	257	2,598	
APPROACH %	11%	40%	49%	43%	51%	6%	14%	66%	19%	56%	14%	30%		
PEAK HR FACTOR	0.925			0.903			0.753			0.968			0.959	
APP/DEPART	566	/	524	889	/	1,006	283	/	850	860	/	218	0	
<b>PM</b>	4:00 PM	18	158	123	79	106	7	6	48	15	94	29	100	783
	4:15 PM	21	172	124	77	107	4	12	43	8	70	21	107	766
	4:30 PM	9	146	141	71	97	3	9	45	12	71	22	95	721
	4:45 PM	19	171	96	82	117	5	11	43	10	91	19	88	752
	5:00 PM	20	162	134	66	110	6	22	30	7	85	33	97	772
	5:15 PM	16	141	100	75	87	1	9	32	10	77	31	119	698
	5:30 PM	20	147	85	68	116	6	20	26	8	86	32	102	716
	5:45 PM	17	155	98	82	96	15	9	39	10	80	27	111	739
	VOLUMES	140	1,252	901	600	836	47	98	306	80	654	214	819	5,947
	APPROACH %	6%	55%	39%	40%	56%	3%	20%	63%	17%	39%	13%	49%	
APP/DEPART	2,293	/	2,170	1,483	/	1,593	484	/	1,807	1,687	/	377	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	67	647	484	309	427	19	38	179	45	326	91	390	3,022	
APPROACH %	6%	54%	40%	41%	57%	3%	15%	68%	17%	40%	11%	48%		
PEAK HR FACTOR	0.945			0.925			0.949			0.905			0.965	
APP/DEPART	1,198	/	1,076	755	/	809	262	/	972	807	/	165	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: River  
EAST & WEST: Corydon

**PROJECT #:** SC  
**LOCATION #:** 47  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	River			River			Corydon			Corydon			
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 2	ET 1	ER 1	WL 1	WT 1	WR 0	

<b>AM</b>	7:00 AM	22	165	6	9	154	107	61	35	49	6	31	8	653
	7:15 AM	42	157	3	12	221	90	60	20	66	11	44	10	736
	7:30 AM	64	151	8	12	199	78	51	26	45	11	30	7	682
	7:45 AM	58	123	12	7	206	116	63	16	26	12	29	1	669
	8:00 AM	26	135	9	11	188	98	54	25	24	8	30	7	615
	8:15 AM	17	107	11	10	182	99	25	31	22	7	22	4	537
	8:30 AM	26	77	15	5	167	79	32	20	33	10	45	6	515
	8:45 AM	34	82	7	7	157	84	34	11	17	13	39	5	490
	VOLUMES	289	997	71	73	1,474	751	380	184	282	78	270	48	4,897
	APPROACH %	21%	73%	5%	3%	64%	33%	45%	22%	33%	20%	68%	12%	
APP/DEPART	1,357	/	1,425	2,298	/	1,834	846	/	328	396	/	1,310	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	186	596	29	40	780	391	235	97	186	40	134	26	2,740	
APPROACH %	23%	73%	4%	3%	64%	32%	45%	19%	36%	20%	67%	13%		
PEAK HR FACTOR	0.909			0.920			0.887			0.769			0.931	
APP/DEPART	811	/	857	1,211	/	1,006	518	/	166	200	/	711	0	
<b>PM</b>	4:00 PM	48	151	13	19	205	76	79	40	26	16	31	8	712
	4:15 PM	53	130	8	24	163	55	72	33	19	10	42	5	614
	4:30 PM	46	167	9	22	208	68	83	31	34	10	25	7	710
	4:45 PM	42	154	12	31	216	84	94	32	29	10	34	7	745
	5:00 PM	77	179	13	18	193	58	89	39	15	8	28	5	722
	5:15 PM	50	174	12	22	162	58	85	41	25	11	30	7	677
	5:30 PM	58	137	15	22	210	61	75	25	30	11	24	5	673
	5:45 PM	50	149	12	20	190	45	62	32	25	11	17	6	619
	VOLUMES	424	1,241	94	178	1,547	505	639	273	203	87	231	50	5,472
	APPROACH %	24%	71%	5%	8%	69%	23%	57%	24%	18%	24%	63%	14%	
APP/DEPART	1,759	/	1,930	2,230	/	1,837	1,115	/	545	368	/	1,160	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	215	674	46	93	779	268	351	143	103	39	117	26	2,854	
APPROACH %	23%	72%	5%	8%	68%	24%	59%	24%	17%	21%	64%	14%		
PEAK HR FACTOR	0.869			0.861			0.963			0.892			0.958	
APP/DEPART	935	/	1,051	1,140	/	921	597	/	282	182	/	600	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: SR-71 SB Ramps  
EAST & WEST: Grand

**PROJECT #:** SC  
**LOCATION #:** 48  
**CONTROL:** SIGNAL

NOTES:  <div style="text-align: center; color: blue; font-weight: bold;">Queue EB PM</div>	AM	PM	MD	OTHER	OTHER	▲ N	◀ W	E ▶	S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	SR-71 SB Ramps			SR-71 SB Ramps			Grand			Grand			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	1.5	0.5	1	X	3	0	2	3	X	

<b>AM</b>	7:00 AM	0	0	0	94	0	76	0	155	75	12	423	0	835
	7:15 AM	0	0	0	121	0	55	0	186	65	16	294	0	737
	7:30 AM	0	0	0	129	0	44	0	141	56	8	239	0	617
	7:45 AM	0	0	0	193	0	58	0	143	44	13	260	0	711
	8:00 AM	0	0	0	176	1	69	0	139	54	8	261	0	708
	8:15 AM	0	0	0	185	0	74	0	164	50	16	239	0	728
	8:30 AM	0	0	0	149	2	59	0	190	55	19	243	0	717
	8:45 AM	0	0	0	169	0	63	0	173	50	22	223	0	700
	VOLUMES	0	0	0	1,216	3	498	0	1,291	449	114	2,182	0	5,753
	APPROACH %	0%	0%	0%	71%	0%	29%	0%	74%	26%	5%	95%	0%	
APP/DEPART	0	/	0	1,717	/	561	1,740	/	2,512	2,296	/	2,680	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	0	0	537	0	233	0	625	240	49	1,216	0	2,900	
APPROACH %	0%	0%	0%	70%	0%	30%	0%	72%	28%	4%	96%	0%		
PEAK HR FACTOR	0.000			0.767			0.862			0.727			0.868	
APP/DEPART	0	/	0	770	/	289	865	/	1,162	1,265	/	1,449	0	
<b>PM</b>	4:00 PM	0	0	0	122	0	63	0	370	101	55	272	0	983
	4:15 PM	0	0	0	127	1	95	0	335	106	66	286	0	1,016
	4:30 PM	0	0	0	142	1	102	0	333	105	62	286	0	1,031
	4:45 PM	0	0	0	144	1	122	0	304	108	60	338	0	1,077
	5:00 PM	0	0	0	158	0	88	0	361	128	69	263	0	1,067
	5:15 PM	0	0	0	155	2	105	0	295	119	70	317	0	1,063
	5:30 PM	0	0	0	150	0	104	0	324	120	65	298	0	1,061
	5:45 PM	0	0	0	167	1	79	0	274	105	64	303	0	993
	VOLUMES	0	0	0	1,165	6	758	0	2,596	892	511	2,363	0	8,291
	APPROACH %	0%	0%	0%	60%	0%	39%	0%	74%	26%	18%	82%	0%	
APP/DEPART	0	/	0	1,929	/	1,403	3,488	/	3,767	2,874	/	3,121	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	0	0	0	607	3	419	0	1,284	475	264	1,216	0	4,268	
APPROACH %	0%	0%	0%	59%	0%	41%	0%	73%	27%	18%	82%	0%		
PEAK HR FACTOR	0.000			0.963			0.899			0.930			0.991	
APP/DEPART	0	/	0	1,029	/	740	1,759	/	1,893	1,480	/	1,635	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH: Ontario  
EAST & WEST: SR-71 NB Off-Ramp  
Grand

**PROJECT #:** SC  
**LOCATION #:** 49  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	SR-71 NB Off-Ramp - Roswell			SR-71 NB Off-Ramp - Roswell			Grand			Grand			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1.5	0.5	1	1	X	2	1	3	2	X	4	0	

<b>AM</b>	7:00 AM	101	12	12	4	0	193	50	165	39	0	326	4	906
	7:15 AM	102	15	13	6	0	150	62	203	48	0	248	5	852
	7:30 AM	69	12	8	6	0	142	52	190	38	0	198	13	728
	7:45 AM	91	30	16	20	0	135	50	236	26	0	168	10	782
	8:00 AM	83	36	11	11	0	137	70	233	22	0	159	15	777
	8:15 AM	89	38	25	6	0	116	59	237	35	0	171	15	791
	8:30 AM	94	31	27	17	0	120	77	241	45	0	179	12	843
	8:45 AM	71	35	34	22	0	125	67	226	35	0	166	12	793
	VOLUMES	700	209	146	92	0	1,118	487	1,731	288	0	1,615	86	6,472
	APPROACH %	66%	20%	14%	8%	0%	92%	19%	69%	11%	0%	95%	5%	
APP/DEPART	1,055	/	782	1,210	/	288	2,506	/	1,968	1,701	/	3,434	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	363	69	49	36	0	620	214	794	151	0	940	32	3,268	
APPROACH %	75%	14%	10%	5%	0%	95%	18%	69%	13%	0%	97%	3%		
PEAK HR FACTOR	0.878			0.832			0.926			0.736			0.902	
APP/DEPART	481	/	314	656	/	151	1,159	/	879	972	/	1,924	0	
<b>PM</b>	4:00 PM	70	28	41	29	0	139	102	321	74	0	319	16	1,139
	4:15 PM	78	35	59	43	0	137	77	324	61	0	341	28	1,183
	4:30 PM	65	30	47	31	0	180	97	349	56	0	339	18	1,212
	4:45 PM	85	24	44	42	0	141	75	311	48	0	414	23	1,207
	5:00 PM	60	32	49	23	0	190	89	345	77	0	338	22	1,225
	5:15 PM	101	29	36	27	0	165	77	312	57	0	339	14	1,157
	5:30 PM	87	16	40	25	0	162	88	320	72	0	320	21	1,151
	5:45 PM	77	29	65	32	0	137	75	295	63	0	322	23	1,118
	VOLUMES	623	223	381	252	0	1,251	680	2,577	508	0	2,732	165	9,392
	APPROACH %	51%	18%	31%	17%	0%	83%	18%	68%	13%	0%	94%	6%	
APP/DEPART	1,227	/	1,052	1,503	/	508	3,765	/	3,208	2,897	/	4,624	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	288	121	199	139	0	648	338	1,329	242	0	1,432	91	4,827	
APPROACH %	47%	20%	33%	18%	0%	82%	18%	70%	13%	0%	94%	6%		
PEAK HR FACTOR	0.884			0.924			0.934			0.871			0.985	
APP/DEPART	608	/	545	787	/	242	1,909	/	1,666	1,523	/	2,374	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Ramona  
EAST & WEST: Edison

**PROJECT #:** SC  
**LOCATION #:** 50  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Ramona			Ramona			Edison			Edison			
	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 2	WL 1	WT 2	WR 0	

<b>AM</b>	7:00 AM	6	63	5	4	77	11	14	116	8	14	255	9	582
	7:15 AM	5	78	8	6	88	21	14	147	11	10	235	7	630
	7:30 AM	11	82	9	2	68	18	12	147	9	11	181	10	560
	7:45 AM	17	76	10	6	97	17	24	127	12	9	154	8	557
	8:00 AM	15	80	19	4	97	21	17	175	17	12	133	6	596
	8:15 AM	12	83	10	8	83	9	24	118	11	10	153	10	531
	8:30 AM	11	61	9	8	82	19	13	148	18	7	168	14	558
	8:45 AM	14	65	8	7	70	14	14	121	18	8	106	5	450
	VOLUMES	91	588	78	45	662	130	132	1,099	104	81	1,385	69	4,464
	APPROACH %	12%	78%	10%	5%	79%	16%	10%	82%	8%	5%	90%	4%	
APP/DEPART	757	/	789	837	/	848	1,335	/	1,222	1,535	/	1,605	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	48	316	46	18	350	77	67	596	49	42	703	31	2,343	
APPROACH %	12%	77%	11%	4%	79%	17%	9%	84%	7%	5%	91%	4%		
PEAK HR FACTOR	0.899			0.912			0.852			0.770			0.930	
APP/DEPART	410	/	414	445	/	441	712	/	660	776	/	828	0	
<b>PM</b>	4:00 PM	16	100	19	9	91	19	17	185	25	16	162	9	668
	4:15 PM	11	84	14	9	82	19	22	238	23	10	150	6	668
	4:30 PM	22	101	8	6	62	21	31	232	26	23	187	9	728
	4:45 PM	19	71	10	9	87	27	23	196	18	12	139	7	618
	5:00 PM	29	87	7	12	94	25	27	223	30	23	221	7	785
	5:15 PM	17	90	14	16	77	21	33	226	25	14	158	4	695
	5:30 PM	19	70	12	6	97	20	24	221	32	8	159	6	674
	5:45 PM	22	75	12	6	84	22	16	192	21	9	131	7	597
	VOLUMES	155	678	96	73	674	174	193	1,713	200	115	1,307	55	5,433
	APPROACH %	17%	73%	10%	8%	73%	19%	9%	81%	9%	8%	88%	4%	
APP/DEPART	929	/	925	921	/	991	2,106	/	1,882	1,477	/	1,635	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	87	349	39	43	320	94	114	877	99	72	705	27	2,826	
APPROACH %	18%	73%	8%	9%	70%	21%	10%	80%	9%	9%	88%	3%		
PEAK HR FACTOR	0.906			0.872			0.943			0.801			0.900	
APP/DEPART	475	/	489	457	/	492	1,090	/	959	804	/	886	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
**NORTH & SOUTH:** Central  
**EAST & WEST:** Edison

**PROJECT #:** SC  
**LOCATION #:** 51  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Central			Central			Edison			Edison			
	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 2	WT 2	WR 1	

<b>AM</b>	7:00 AM	32	156	57	12	184	37	17	72	4	44	215	11	841
	7:15 AM	9	165	78	9	154	34	16	106	5	80	268	15	939
	7:30 AM	9	193	55	12	162	27	19	83	7	40	183	13	803
	7:45 AM	18	167	55	12	174	28	30	91	14	77	157	18	841
	8:00 AM	11	170	57	8	206	25	21	79	3	59	151	8	798
	8:15 AM	7	131	42	7	143	31	19	100	10	64	187	23	764
	8:30 AM	13	161	57	14	168	27	23	80	13	58	151	12	777
	8:45 AM	10	138	39	4	127	22	26	93	10	50	116	22	657
	VOLUMES	109	1,281	440	78	1,318	231	171	704	66	472	1,428	122	6,420
	APPROACH %	6%	70%	24%	5%	81%	14%	18%	75%	7%	23%	71%	6%	
APP/DEPART	1,830	/	1,574	1,627	/	1,856	941	/	1,222	2,022	/	1,768	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	68	681	245	45	674	126	82	352	30	241	823	57	3,424	
APPROACH %	7%	69%	25%	5%	80%	15%	18%	76%	6%	21%	73%	5%		
PEAK HR FACTOR	0.967			0.907			0.859			0.772			0.912	
APP/DEPART	994	/	820	845	/	945	464	/	642	1,121	/	1,017	0	
<b>PM</b>	4:00 PM	21	213	102	30	139	18	50	197	20	54	122	10	976
	4:15 PM	28	238	112	27	153	29	35	196	20	49	115	13	1,015
	4:30 PM	13	174	117	23	142	29	49	215	19	50	125	18	974
	4:45 PM	25	231	110	24	176	20	33	178	25	75	100	17	1,014
	5:00 PM	19	204	132	28	168	29	49	212	16	79	129	12	1,077
	5:15 PM	13	218	123	23	176	25	37	179	24	52	104	16	990
	5:30 PM	10	195	96	32	157	21	43	214	20	61	94	6	949
	5:45 PM	19	185	93	25	188	20	24	168	26	59	126	20	953
	VOLUMES	148	1,658	885	212	1,299	191	320	1,559	170	479	915	112	7,948
	APPROACH %	5%	62%	33%	12%	76%	11%	16%	76%	8%	32%	61%	7%	
APP/DEPART	2,691	/	2,091	1,702	/	1,948	2,049	/	2,655	1,506	/	1,254	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	85	847	471	102	639	107	166	801	80	253	469	60	4,080	
APPROACH %	6%	60%	34%	12%	75%	13%	16%	77%	8%	32%	60%	8%		
PEAK HR FACTOR	0.928			0.942			0.925			0.889			0.947	
APP/DEPART	1,403	/	1,074	848	/	972	1,047	/	1,373	782	/	661	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Mountain  
Edison

**PROJECT #:** SC  
**LOCATION #:** 52  
**CONTROL:** SIGNAL

NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Mountain			Mountain			Edison			Edison			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	1	1	1	3	0	1	2	1	

<b>AM</b>	7:00 AM	23	51	5	8	17	42	26	70	3	2	205	15	467
	7:15 AM	13	45	3	9	30	22	42	123	8	2	213	19	529
	7:30 AM	15	32	5	20	21	30	28	90	13	3	195	16	468
	7:45 AM	12	43	1	9	18	47	22	93	7	5	145	24	426
	8:00 AM	8	69	30	17	32	52	24	80	1	3	166	4	486
	8:15 AM	10	74	29	9	20	50	32	87	7	27	153	17	515
	8:30 AM	9	43	4	11	35	35	23	78	8	22	169	13	450
	8:45 AM	5	25	8	16	18	34	17	66	5	8	109	13	324
	VOLUMES	95	382	85	99	191	312	214	687	52	72	1,355	121	3,665
	APPROACH %	17%	68%	15%	16%	32%	52%	22%	72%	5%	5%	88%	8%	
APP/DEPART	562	/	716	602	/	315	953	/	871	1,548	/	1,763	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	48	189	39	55	101	151	116	386	29	13	719	63	1,909	
APPROACH %	17%	68%	14%	18%	33%	49%	22%	73%	5%	2%	90%	8%		
PEAK HR FACTOR	0.645			0.760										
APP/DEPART	276	/	368	307	/	143	531	/	480	795	/	918	0	
<b>PM</b>	4:00 PM	2	24	5	17	28	28	62	222	12	5	90	16	511
	4:15 PM	3	33	9	21	38	34	65	212	11	8	78	12	524
	4:30 PM	6	22	9	13	28	39	64	259	13	5	117	19	594
	4:45 PM	4	23	10	15	37	47	67	188	16	8	94	21	530
	5:00 PM	6	20	2	12	40	42	67	256	8	11	109	19	592
	5:15 PM	5	20	6	21	37	34	71	192	20	6	102	14	528
	5:30 PM	3	17	5	15	35	38	45	231	13	9	114	16	541
	5:45 PM	9	30	13	22	44	55	52	189	8	6	132	12	572
	VOLUMES	38	189	59	136	287	317	493	1,749	101	58	836	129	4,392
	APPROACH %	13%	66%	21%	18%	39%	43%	21%	75%	4%	6%	82%	13%	
APP/DEPART	286	/	811	740	/	446	2,343	/	1,944	1,023	/	1,191	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	21	85	27	61	142	162	269	895	57	30	422	73	2,244	
APPROACH %	16%	64%	20%	17%	39%	44%	22%	73%	5%	6%	80%	14%		
PEAK HR FACTOR	0.899			0.922										
APP/DEPART	133	/	427	365	/	229	1,221	/	983	525	/	605	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
**NORTH & SOUTH:** Euclid  
**EAST & WEST:** Edison

**PROJECT #:** SC  
**LOCATION #:** 53  
**CONTROL:** SIGNAL

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

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Euclid			Euclid			Edison			Edison			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:	1	2	1	1	2	1	1	1	1	1	1	0	

<b>AM</b>	7:00 AM	56	119	8	7	153	23	14	41	10	15	100	5	551
	7:15 AM	38	137	12	9	134	36	16	33	17	18	125	7	582
	7:30 AM	26	148	4	12	216	44	16	42	23	17	87	11	646
	7:45 AM	37	142	9	14	191	36	11	44	20	14	79	10	607
	8:00 AM	41	133	7	15	183	45	16	35	16	7	88	14	600
	8:15 AM	28	136	10	18	159	39	18	24	10	13	92	17	564
	8:30 AM	45	134	4	10	143	33	21	48	25	15	79	17	574
	8:45 AM	27	142	9	9	157	30	29	27	17	6	51	6	510
	VOLUMES	298	1,091	63	94	1,336	286	141	294	138	105	701	87	4,634
	APPROACH %	21%	75%	4%	5%	78%	17%	25%	51%	24%	12%	78%	10%	
APP/DEPART	1,452	/	1,320	1,716	/	1,584	573	/	450	893	/	1,280	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	142	560	32	50	724	161	59	154	76	56	379	42	2,435	
APPROACH %	19%	76%	4%	5%	77%	17%	20%	53%	26%	12%	79%	9%		
PEAK HR FACTOR	0.976			0.859			0.892			0.795			0.942	
APP/DEPART	734	/	662	935	/	858	289	/	235	477	/	680	0	
<b>PM</b>	4:00 PM	24	200	29	13	150	27	38	95	41	19	60	18	714
	4:15 PM	22	210	31	12	143	34	42	74	44	12	45	10	679
	4:30 PM	35	207	27	8	182	39	37	105	55	7	42	11	755
	4:45 PM	23	211	31	11	162	28	46	83	47	15	51	10	718
	5:00 PM	26	220	17	14	201	25	29	77	51	12	43	13	728
	5:15 PM	15	192	24	17	181	22	35	81	46	8	62	7	690
	5:30 PM	27	187	11	13	162	23	32	90	53	11	54	7	670
	5:45 PM	22	232	18	10	162	31	35	80	45	9	71	10	725
	VOLUMES	194	1,659	188	98	1,343	229	294	685	382	93	428	86	5,679
	APPROACH %	10%	81%	9%	6%	80%	14%	22%	50%	28%	15%	71%	14%	
APP/DEPART	2,041	/	2,047	1,670	/	1,823	1,361	/	963	607	/	846	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	99	830	99	50	726	114	147	346	199	42	198	41	2,891	
APPROACH %	10%	81%	10%	6%	82%	13%	21%	50%	29%	15%	70%	15%		
PEAK HR FACTOR	0.955			0.927			0.878			0.912			0.957	
APP/DEPART	1,028	/	1,024	890	/	970	692	/	489	281	/	408	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Grove  
EAST & WEST: Edison

**PROJECT #:** SC  
**LOCATION #:** 54  
**CONTROL:** STOP ALL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Grove			Grove			Edison			Edison			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

<b>AM</b>	7:00 AM	41	45	2	9	56	5	13	36	3	4	98	5	317
	7:15 AM	54	59	2	12	40	6	13	39	2	9	81	8	325
	7:30 AM	23	69	2	8	33	6	32	34	4	13	71	8	303
	7:45 AM	28	66	3	5	45	14	18	42	5	13	78	7	324
	8:00 AM	30	65	0	5	43	13	24	35	4	4	78	14	315
	8:15 AM	33	55	1	8	38	10	12	40	3	3	86	10	299
	8:30 AM	6	38	0	12	40	15	17	45	2	4	61	5	245
	8:45 AM	7	52	3	3	33	4	13	41	1	1	62	11	231
	VOLUMES	222	449	13	62	328	73	142	312	24	51	615	68	2,359
	APPROACH %	32%	66%	2%	13%	71%	16%	30%	65%	5%	7%	84%	9%	
APP/DEPART	684	/	659	463	/	403	478	/	387	734	/	910	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	146	239	9	34	174	31	76	151	14	39	328	28	1,269	
APPROACH %	37%	61%	2%	14%	73%	13%	32%	63%	6%	10%	83%	7%		
PEAK HR FACTOR	0.857			0.854			0.861			0.923			0.976	
APP/DEPART	394	/	343	239	/	227	241	/	194	395	/	505	0	
<b>PM</b>	4:00 PM	18	77	4	23	26	6	9	90	8	3	40	11	315
	4:15 PM	11	55	8	21	47	7	9	100	6	2	41	9	316
	4:30 PM	15	77	4	17	37	9	6	91	12	2	43	9	322
	4:45 PM	11	77	7	17	43	11	9	93	17	2	52	9	348
	5:00 PM	10	66	9	11	45	6	10	84	9	4	48	9	311
	5:15 PM	4	58	6	24	58	4	11	82	11	7	61	6	332
	5:30 PM	16	63	0	19	51	2	4	83	15	5	49	3	310
	5:45 PM	12	52	3	16	46	6	5	100	18	4	59	8	329
	VOLUMES	97	525	41	148	353	51	63	723	96	29	393	64	2,583
	APPROACH %	15%	79%	6%	27%	64%	9%	7%	82%	11%	6%	81%	13%	
APP/DEPART	663	/	652	552	/	478	882	/	912	486	/	541	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	40	278	26	69	183	30	36	350	49	15	204	33	1,313	
APPROACH %	12%	81%	8%	24%	65%	11%	8%	80%	11%	6%	81%	13%		
PEAK HR FACTOR	0.896			0.820			0.914			0.851			0.943	
APP/DEPART	344	/	347	282	/	247	435	/	445	252	/	274	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Euclid  
EAST & WEST: Merrill

**PROJECT #:** SC  
**LOCATION #:** 55  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Euclid			Euclid			Merrill - Facility			Merrill - Facility			
	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	

<b>AM</b>	7:00 AM	2	122	29	36	154	15	0	1	2	62	14	73	510
	7:15 AM	1	133	30	41	141	14	2	1	1	50	9	86	509
	7:30 AM	0	131	29	54	189	12	2	0	1	70	8	97	593
	7:45 AM	3	139	25	60	200	9	0	2	0	74	10	85	607
	8:00 AM	0	135	27	52	139	7	0	0	1	48	15	91	515
	8:15 AM	2	124	23	58	160	9	4	2	0	58	3	73	516
	8:30 AM	2	164	22	60	144	2	0	2	1	49	6	70	522
	8:45 AM	0	121	25	45	142	2	1	0	1	34	2	68	441
	VOLUMES	10	1,069	210	406	1,269	70	9	8	7	445	67	643	4,213
	APPROACH %	1%	83%	16%	23%	73%	4%	38%	33%	29%	39%	6%	56%	
APP/DEPART	1,289	/	1,723	1,745	/	1,722	24	/	622	1,155	/	146	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	5	529	104	224	688	37	6	4	2	250	36	346	2,231	
APPROACH %	1%	83%	16%	24%	72%	4%	50%	33%	17%	40%	6%	55%		
PEAK HR FACTOR	0.955			0.882			0.500			0.903			0.919	
APP/DEPART	638	/	882	949	/	941	12	/	331	632	/	77	0	
<b>PM</b>	4:00 PM	0	178	57	112	187	4	14	21	1	26	0	62	662
	4:15 PM	0	180	79	106	182	4	4	14	1	26	2	62	660
	4:30 PM	1	178	57	105	179	11	3	17	0	59	0	64	674
	4:45 PM	0	179	76	97	199	3	5	19	2	51	0	79	710
	5:00 PM	0	194	74	49	214	9	1	13	5	53	1	73	686
	5:15 PM	1	187	74	119	252	9	0	8	1	39	0	57	747
	5:30 PM	2	227	78	92	205	4	0	0	0	33	0	62	703
	5:45 PM	1	196	54	99	187	0	0	2	0	55	0	58	652
	VOLUMES	5	1,519	549	779	1,605	44	27	94	10	342	3	517	5,494
	APPROACH %	0%	73%	26%	32%	66%	2%	21%	72%	8%	40%	0%	60%	
APP/DEPART	2,073	/	2,063	2,428	/	1,960	131	/	1,422	862	/	49	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	3	787	302	357	870	25	6	40	8	176	1	271	2,846	
APPROACH %	0%	72%	28%	29%	69%	2%	11%	74%	15%	39%	0%	60%		
PEAK HR FACTOR	0.889			0.824			0.519			0.862			0.952	
APP/DEPART	1,092	/	1,064	1,252	/	1,056	54	/	699	448	/	27	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Grove  
EAST & WEST: Merrill

**PROJECT #:** SC  
**LOCATION #:** 56  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Grove			Grove			Merrill			Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0.5	X	0.5	1	2	X	X	1	0	

<b>AM</b>	7:00 AM	0	0	0	48	0	31	7	52	0	0	123	74	335
	7:15 AM	0	0	0	33	0	32	5	50	0	0	132	57	309
	7:30 AM	0	0	0	29	0	42	9	66	0	0	138	74	358
	7:45 AM	0	0	0	44	0	34	7	61	0	0	145	60	351
	8:00 AM	0	0	0	31	0	28	7	68	0	0	137	72	343
	8:15 AM	0	0	0	30	0	16	4	63	0	0	117	56	286
	8:30 AM	0	0	0	31	0	17	6	58	0	0	94	36	242
	8:45 AM	0	0	0	28	0	12	8	54	0	0	105	47	254
	VOLUMES	0	0	0	274	0	212	53	472	0	0	991	476	2,478
	APPROACH %	0%	0%	0%	56%	0%	44%	10%	90%	0%	0%	68%	32%	
APP/DEPART	0	/	529	486	/	0	525	/	746	1,467	/	1,203	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	137	0	136	28	245	0	0	552	263	1,361	
APPROACH %	0%	0%	0%	50%	0%	50%	10%	90%	0%	0%	68%	32%		
PEAK HR FACTOR	0.000			0.875			0.910			0.961			0.950	
APP/DEPART	0	/	291	273	/	0	273	/	382	815	/	688	0	
<b>PM</b>	4:00 PM	0	0	0	26	0	9	36	176	0	0	82	38	367
	4:15 PM	0	0	0	47	0	8	31	190	0	0	78	31	385
	4:30 PM	0	0	0	39	0	13	31	170	0	0	103	66	422
	4:45 PM	0	0	0	50	0	10	32	151	0	0	114	59	416
	5:00 PM	0	0	0	51	0	18	37	138	0	0	84	39	367
	5:15 PM	0	0	0	58	0	15	33	199	0	0	71	29	405
	5:30 PM	0	0	0	63	0	16	23	181	0	0	75	52	410
	5:45 PM	0	0	0	60	0	20	17	150	0	0	67	34	348
	VOLUMES	0	0	0	394	0	109	240	1,355	0	0	674	348	3,120
	APPROACH %	0%	0%	0%	78%	0%	22%	15%	85%	0%	0%	66%	34%	
APP/DEPART	0	/	588	503	/	0	1,595	/	1,749	1,022	/	783	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	0	0	0	198	0	56	133	658	0	0	372	193	1,610	
APPROACH %	0%	0%	0%	78%	0%	22%	17%	83%	0%	0%	66%	34%		
PEAK HR FACTOR	0.000			0.870			0.852			0.816			0.954	
APP/DEPART	0	/	326	254	/	0	791	/	856	565	/	428	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Ontario  
Euclid  
Kimball

**PROJECT #:** SC  
**LOCATION #:** 57  
**CONTROL:** SIGNAL

NOTES:  <p style="text-align: center; color: blue;">Minor Construction NB, EB</p>	AM PM MD OTHER OTHER	
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Euclid			Euclid			Kimball			Kimball			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	1	2	2	1	2	2	0	1	2	1	

<b>AM</b>	7:00 AM	102	122	2	12	107	81	35	8	21	4	2	3	499
	7:15 AM	55	114	2	5	111	71	29	8	32	7	4	5	443
	7:30 AM	67	148	1	1	146	109	29	3	18	3	1	3	529
	7:45 AM	85	138	2	3	121	122	39	1	15	4	0	2	532
	8:00 AM	94	119	3	10	127	64	28	4	24	3	5	3	484
	8:15 AM	86	113	0	7	109	81	26	7	29	7	3	2	470
	8:30 AM	50	172	3	9	125	61	36	4	20	5	3	5	493
	8:45 AM	43	109	1	10	103	57	41	5	23	2	5	3	402
	VOLUMES	582	1,035	14	57	949	646	263	40	182	35	23	26	3,891
	APPROACH %	35%	62%	1%	3%	57%	39%	54%	8%	38%	42%	27%	31%	
APP/DEPART	1,659	/	1,335	1,663	/	1,194	485	/	111	84	/	1,251	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	332	518	6	21	503	376	122	15	86	17	9	10	2,032	
APPROACH %	38%	60%	1%	2%	56%	42%	55%	7%	39%	47%	25%	28%		
PEAK HR FACTOR	0.960			0.877			0.899			0.750			0.950	
APP/DEPART	868	/	655	905	/	618	223	/	42	36	/	717	0	
<b>PM</b>	4:00 PM	37	140	2	2	152	43	80	15	75	11	3	16	576
	4:15 PM	34	134	3	2	173	34	81	7	72	8	3	11	562
	4:30 PM	31	150	1	5	157	59	84	21	97	9	4	9	627
	4:45 PM	47	135	1	6	184	57	88	23	95	7	3	21	667
	5:00 PM	52	133	1	8	164	66	84	15	108	11	6	14	662
	5:15 PM	44	130	2	6	196	43	95	14	95	8	7	11	651
	5:30 PM	56	141	0	4	148	47	97	22	98	2	3	16	634
	5:45 PM	53	134	3	4	154	51	90	14	99	5	4	12	623
	VOLUMES	354	1,097	13	37	1,328	400	699	131	739	61	33	110	5,208
	APPROACH %	24%	74%	1%	2%	68%	20%	45%	8%	47%	30%	16%	54%	
APP/DEPART	1,481	/	2,095	1,954	/	2,145	1,569	/	181	204	/	787	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	199	539	4	24	692	213	364	74	396	28	19	62	2,751	
APPROACH %	26%	72%	1%	2%	66%	20%	44%	9%	47%	26%	17%	57%		
PEAK HR FACTOR	0.935			0.967			0.961			0.879			0.991	
APP/DEPART	752	/	1,092	1,056	/	1,126	834	/	102	109	/	431	0	

# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Thu, Nov 18, 21

**LOCATION:** Ontario  
**NORTH & SOUTH:** Euclid  
**EAST & WEST:** Pine

**PROJECT #:** SC  
**LOCATION #:** 58  
**CONTROL:** SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Euclid			Euclid			Pine			Pine			
	NL 1	NT 2	NR 1	SL 1	ST 1.5	SR 0.5	EL 1	ET 1	ER 1	WL 2	WT 0.5	WR 0.5	

<b>AM</b>	7:00 AM	12	103	145	11	132	2	0	40	4	249	94	11	803
	7:15 AM	7	115	180	11	104	3	1	41	5	222	120	11	820
	7:30 AM	11	102	165	19	110	3	0	39	3	244	133	13	842
	7:45 AM	5	100	165	21	121	3	0	38	7	228	95	7	790
	8:00 AM	8	106	136	14	121	4	1	34	7	256	96	23	806
	8:15 AM	6	104	145	21	95	3	3	22	5	243	91	22	760
	8:30 AM	7	99	133	18	108	0	0	29	7	195	79	22	697
	8:45 AM	11	86	142	15	98	5	2	16	3	220	73	23	694
	VOLUMES	67	815	1,211	130	889	23	7	259	41	1,857	781	132	6,212
	APPROACH %	3%	39%	58%	12%	85%	2%	2%	84%	13%	67%	28%	5%	
APP/DEPART	2,093	/	956	1,042	/	2,787	307	/	1,598	2,770	/	871	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	31	423	646	65	456	13	2	152	22	950	444	54	3,258	
APPROACH %	3%	38%	59%	12%	85%	2%	1%	86%	13%	66%	31%	4%		
PEAK HR FACTOR	0.911			0.921			0.936			0.928			0.967	
APP/DEPART	1,100	/	480	534	/	1,428	176	/	862	1,448	/	488	0	
<b>PM</b>	4:00 PM	8	132	210	43	122	4	5	66	12	150	54	17	823
	4:15 PM	11	136	216	63	146	0	0	108	4	137	41	16	878
	4:30 PM	8	110	203	66	105	1	1	101	9	178	46	21	849
	4:45 PM	3	109	211	69	148	0	3	90	17	158	59	18	885
	5:00 PM	7	130	224	68	173	1	2	76	11	183	64	20	959
	5:15 PM	3	117	202	71	123	2	2	94	13	180	33	8	848
	5:30 PM	3	113	201	74	120	0	3	81	4	176	46	30	851
	5:45 PM	12	121	193	90	129	1	0	95	5	127	34	23	830
	VOLUMES	55	968	1,660	544	1,066	9	16	711	75	1,289	377	153	6,923
	APPROACH %	2%	36%	62%	34%	66%	1%	2%	89%	9%	71%	21%	8%	
APP/DEPART	2,683	/	1,139	1,619	/	2,433	802	/	2,913	1,819	/	438	0	
BEGIN PEAK HR	4:15 PM													
VOLUMES	29	485	854	266	572	2	6	375	41	656	210	75	3,571	
APPROACH %	2%	35%	62%	32%	68%	0%	1%	89%	10%	70%	22%	8%		
PEAK HR FACTOR	0.942			0.868			0.942			0.881			0.931	
APP/DEPART	1,368	/	567	840	/	1,269	422	/	1,494	941	/	241	0	



# INTERSECTION TURNING MOVEMENT COUNTS

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

**DATE:**  
Tue, Nov 16, 21

**LOCATION:** Ontario  
NORTH & SOUTH: Euclid  
EAST & WEST: SR-71 NB Ramps

**PROJECT #:** SC  
**LOCATION #:** 59  
**CONTROL:** SIGNAL

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





















LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Euclid			Euclid			SR-71 NB Ramps			SR-71 NB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	1	1	2	X	X	X	X	2	X	1	

<b>AM</b>	7:00 AM	0	142	40	162	238	0	0	0	0	6	0	128	716
	7:15 AM	0	147	53	164	207	0	0	0	0	8	0	121	700
	7:30 AM	0	164	51	171	192	0	0	0	0	7	0	109	694
	7:45 AM	0	162	38	146	152	0	0	0	0	16	0	124	638
	8:00 AM	0	149	58	176	195	0	0	0	0	12	0	110	700
	8:15 AM	0	172	49	152	230	0	0	0	0	11	0	115	729
	8:30 AM	0	179	70	139	202	0	0	0	0	8	0	119	717
	8:45 AM	0	122	32	115	143	0	0	0	0	6	0	145	563
	VOLUMES	0	1,237	391	1,225	1,559	0	0	0	0	74	0	971	5,457
	APPROACH %	0%	76%	24%	44%	56%	0%	0%	0%	0%	7%	0%	93%	
APP/DEPART	1,628	/	2,208	2,784	/	1,633	0	/	1,616	1,045	/	0	0	
BEGIN PEAK HR	7:45 AM													
VOLUMES	0	662	215	613	779	0	0	0	0	47	0	468	2,784	
APPROACH %	0%	75%	25%	44%	56%	0%	0%	0%	0%	9%	0%	91%		
PEAK HR FACTOR	0.881			0.911			0.000			0.920			0.955	
APP/DEPART	877	/	1,130	1,392	/	826	0	/	828	515	/	0	0	
<b>PM</b>	4:00 PM	0	227	29	114	200	0	0	0	0	28	0	171	769
	4:15 PM	0	185	30	119	172	0	0	0	0	24	0	170	700
	4:30 PM	0	205	27	103	179	0	0	0	0	12	0	161	687
	4:45 PM	0	192	30	114	225	0	0	0	0	23	0	157	741
	5:00 PM	0	203	29	120	193	0	0	0	0	24	0	185	754
	5:15 PM	0	175	29	109	208	0	0	0	0	19	0	157	697
	5:30 PM	0	166	38	129	175	0	0	0	0	20	0	167	695
	5:45 PM	0	175	27	96	183	0	0	0	0	33	0	132	646
	VOLUMES	0	1,528	239	904	1,535	0	0	0	0	183	0	1,300	5,689
	APPROACH %	0%	86%	14%	37%	63%	0%	0%	0%	0%	12%	0%	88%	
APP/DEPART	1,767	/	2,828	2,439	/	1,718	0	/	1,143	1,483	/	0	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	809	116	450	776	0	0	0	0	87	0	659	2,897	
APPROACH %	0%	87%	13%	37%	63%	0%	0%	0%	0%	12%	0%	88%		
PEAK HR FACTOR	0.903			0.904			0.000			0.937			0.942	
APP/DEPART	925	/	1,468	1,226	/	863	0	/	566	746	/	0	0	

# Appendix C: LOS Worksheets

HCM 6th Signalized Intersection Summary  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	224	9	289	703	737	0	0	324	154
Future Volume (veh/h)	0	0	0	224	9	289	703	737	0	0	324	154
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1811	1811	1811	1811	1811	0	0	1811	1811
Adj Flow Rate, veh/h				274	0	60	764	801	0	0	352	38
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				6	6	6	6	6	0	0	6	6
Cap, veh/h				378	0	168	871	3766	0	0	2777	666
Arrive On Green				0.11	0.00	0.11	0.09	0.25	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3450	0	1535	3346	5107	0	0	6484	1493
Grp Volume(v), veh/h				274	0	60	764	801	0	0	352	38
Grp Sat Flow(s),veh/h/ln				1725	0	1535	1673	1648	0	0	1558	1493
Q Serve(g_s), s				6.9	0.0	3.3	20.3	11.5	0.0	0.0	3.0	1.3
Cycle Q Clear(g_c), s				6.9	0.0	3.3	20.3	11.5	0.0	0.0	3.0	1.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				378	0	168	871	3766	0	0	2777	666
V/C Ratio(X)				0.73	0.00	0.36	0.88	0.21	0.00	0.00	0.13	0.06
Avail Cap(c_a), veh/h				897	0	399	1115	3766	0	0	2777	666
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.8	0.0	37.1	39.7	12.3	0.0	0.0	14.6	14.2
Incr Delay (d2), s/veh				2.7	0.0	1.3	5.1	0.1	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.9	0.0	2.9	9.6	4.2	0.0	0.0	1.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.4	0.0	38.4	44.8	12.5	0.0	0.0	14.7	14.3
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					334			1565			390	
Approach Delay, s/veh					40.9			28.3			14.7	
Approach LOS					D			C			B	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		74.3		15.7	28.4	45.9						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		55.0		23.4	30.0	20.0						
Max Q Clear Time (g_c+I1), s		13.5		8.9	22.3	5.0						
Green Ext Time (p_c), s		5.9		0.9	1.1	1.9						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				27.8								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↘	↙	↗	↘	↙	↗		↘	↙
Traffic Volume (veh/h)	0	0	0	135	12	499	311	1275	0	0	671	371
Future Volume (veh/h)	0	0	0	135	12	499	311	1275	0	0	671	371
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				145	0	431	314	1288	0	0	678	126
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				872	0	388	430	3039	0	0	2135	652
Arrive On Green				0.25	0.00	0.25	0.04	0.20	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1546
Grp Volume(v), veh/h				145	0	431	314	1288	0	0	678	126
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1546
Q Serve(g_s), s				2.4	0.0	18.5	6.8	16.7	0.0	0.0	6.7	3.8
Cycle Q Clear(g_c), s				2.4	0.0	18.5	6.8	16.7	0.0	0.0	6.7	3.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				872	0	388	430	3039	0	0	2135	652
V/C Ratio(X)				0.17	0.00	1.11	0.73	0.42	0.00	0.00	0.32	0.19
Avail Cap(c_a), veh/h				872	0	388	731	3039	0	0	2135	652
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.69	0.69	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.2	0.0	28.3	34.7	18.7	0.0	0.0	14.5	13.7
Incr Delay (d2), s/veh				0.1	0.0	79.3	1.7	0.3	0.0	0.0	0.4	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.9	0.0	14.8	2.9	7.4	0.0	0.0	2.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				22.3	0.0	107.5	36.4	19.0	0.0	0.0	14.9	14.3
LnGrp LOS				C	A	F	D	B	A	A	B	B
Approach Vol, veh/h						576		1602			804	
Approach Delay, s/veh						86.1		22.4			14.8	
Approach LOS						F		C			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.7			13.4	37.3		24.3				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		45.0			16.0	25.0		18.5				
Max Q Clear Time (g_c+I1), s		18.7			8.8	8.7		20.5				
Green Ext Time (p_c), s		6.2			0.6	2.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	3	428	0	0	0	0	1184	439	82	461	0
Future Volume (veh/h)	262	3	428	0	0	0	0	1184	439	82	461	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811				0	1811	1811	1811	1811	0
Adj Flow Rate, veh/h	332	0	106				0	1273	153	88	496	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	6	6	6	6	0
Cap, veh/h	450	0	200				0	3961	951	165	3662	0
Arrive On Green	0.13	0.00	0.13				0.00	0.64	0.64	0.10	1.00	0.00
Sat Flow, veh/h	3450	0	1535				0	6484	1496	3346	5107	0
Grp Volume(v), veh/h	332	0	106				0	1273	153	88	496	0
Grp Sat Flow(s),veh/h/ln	1725	0	1535				0	1558	1496	1673	1648	0
Q Serve(g_s), s	8.3	0.0	5.8				0.0	8.4	3.7	2.3	0.0	0.0
Cycle Q Clear(g_c), s	8.3	0.0	5.8				0.0	8.4	3.7	2.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	450	0	200				0	3961	951	165	3662	0
V/C Ratio(X)	0.74	0.00	0.53				0.00	0.32	0.16	0.53	0.14	0.00
Avail Cap(c_a), veh/h	1165	0	518				0	3961	951	521	3662	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	37.6	0.0	36.6				0.0	7.5	6.7	39.6	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	2.2				0.0	0.2	0.4	0.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	2.2				0.0	2.3	1.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	38.7				0.0	7.7	7.0	40.5	0.1	0.0
LnGrp LOS	D	A	D				A	A	A	D	A	A
Approach Vol, veh/h		438						1426			584	
Approach Delay, s/veh		39.7						7.6			6.2	
Approach LOS		D						A			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	9.4	63.0				72.5		17.5				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	14.0	29.0				48.0		30.4				
Max Q Clear Time (g_c+14), s	14.3	10.4				2.0		10.3				
Green Ext Time (p_c), s	0.1	8.7				3.4		1.4				

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	577	5	196	0	0	0	0	1012	268	240	566	0	
Future Volume (veh/h)	577	5	196	0	0	0	0	1012	268	240	566	0	
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No						No		No			
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0	
Adj Flow Rate, veh/h	605	0	56				0	1054	215	250	590	0	
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96	
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0	
Cap, veh/h	742	0	330				0	2047	417	348	3250	0	
Arrive On Green	0.21	0.00	0.21				0.00	0.49	0.49	0.20	1.00	0.00	
Sat Flow, veh/h	3619	0	1610				0	4372	857	3428	5233	0	
Grp Volume(v), veh/h	605	0	56				0	846	423	250	590	0	
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1685	1714	1689	0	
Q Serve(g_s), s	12.0	0.0	2.1				0.0	12.9	12.9	5.1	0.0	0.0	
Cycle Q Clear(g_c), s	12.0	0.0	2.1				0.0	12.9	12.9	5.1	0.0	0.0	
Prop In Lane	1.00		1.00				0.00		0.51	1.00		0.00	
Lane Grp Cap(c), veh/h	742	0	330				0	1644	820	348	3250	0	
V/C Ratio(X)	0.81	0.00	0.17				0.00	0.51	0.52	0.72	0.18	0.00	
Avail Cap(c_a), veh/h	989	0	440				0	1644	820	777	3250	0	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.95	0.95	0.00	
Uniform Delay (d), s/veh	28.4	0.0	24.5				0.0	13.2	13.2	28.9	0.0	0.0	
Incr Delay (d2), s/veh	4.0	0.0	0.2				0.0	1.2	2.3	2.7	0.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.1	0.0	0.8				0.0	4.3	4.5	1.9	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	32.4	0.0	24.8				0.0	14.3	15.5	31.5	0.1	0.0	
LnGrp LOS	C	A	C				A	B	B	C	A	A	
Approach Vol, veh/h		661						1269			840		
Approach Delay, s/veh		31.8						14.7			9.5		
Approach LOS		C						B			A		
Timer - Assigned Phs	1	2	4	6									
Phs Duration (G+Y+Rc), s	1.6	42.2	21.2	53.8									
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7									
Max Green Setting (Gmax), s	17.0	22.0	20.5	43.0									
Max Q Clear Time (g_c+17), s	17.0	14.9	14.0	2.0									
Green Ext Time (p_c), s	0.6	3.2	1.4	2.4									

Intersection Summary

HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	323	132	105	567	189	283	1070	75	149	446	172
Future Volume (veh/h)	119	323	132	105	567	189	283	1070	75	149	446	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	128	347	57	113	610	133	304	1151	77	160	480	143
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	172	959	420	153	922	403	366	1615	108	209	950	273
Arrive On Green	0.10	0.27	0.27	0.09	0.26	0.26	0.21	0.34	0.34	0.12	0.25	0.25
Sat Flow, veh/h	1767	3526	1543	1767	3526	1542	1725	4728	316	1725	3794	1091
Grp Volume(v), veh/h	128	347	57	113	610	133	304	802	426	160	415	208
Grp Sat Flow(s),veh/h/ln	1767	1763	1543	1767	1763	1542	1725	1648	1748	1725	1648	1589
Q Serve(g_s), s	6.3	7.1	2.5	5.6	13.8	6.2	15.1	19.0	19.0	8.1	9.7	10.1
Cycle Q Clear(g_c), s	6.3	7.1	2.5	5.6	13.8	6.2	15.1	19.0	19.0	8.1	9.7	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.69
Lane Grp Cap(c), veh/h	172	959	420	153	922	403	366	1126	597	209	825	398
V/C Ratio(X)	0.74	0.36	0.14	0.74	0.66	0.33	0.83	0.71	0.71	0.77	0.50	0.52
Avail Cap(c_a), veh/h	690	1377	603	690	1377	602	674	1288	683	674	1288	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	26.3	24.6	39.9	29.5	26.7	33.8	25.7	25.7	38.1	28.8	29.0
Incr Delay (d2), s/veh	12.7	0.5	0.3	13.7	1.7	1.0	9.9	2.3	4.3	11.8	1.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	2.8	0.9	2.9	5.6	2.2	6.8	7.0	7.8	3.9	3.6	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	26.8	25.0	53.6	31.3	27.7	43.6	28.0	30.0	49.9	29.8	31.2
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		532			856			1532			783	
Approach Delay, s/veh		32.7			33.7			31.7			34.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	34.6	11.8	28.4	23.0	26.4	12.7	27.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+10), s	11.0	21.0	7.6	9.1	17.1	12.1	8.3	15.8				
Green Ext Time (p_c), s	1.0	9.6	0.7	4.3	1.9	6.8	0.8	7.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											32.8	
HCM 6th LOS											C	



HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	416	21	76	447	195	18	255	98	274	165	289
Future Volume (veh/h)	320	416	21	76	447	195	18	255	98	274	165	289
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	356	462	23	84	497	179	20	283	99	304	183	61
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	353	628	31	107	555	199	17	247	86	333	350	290
Arrive On Green	0.20	0.36	0.36	0.06	0.22	0.22	0.20	0.20	0.20	0.19	0.19	0.19
Sat Flow, veh/h	1767	1750	87	1767	2528	905	87	1235	432	1767	1856	1538
Grp Volume(v), veh/h	356	0	485	84	346	330	402	0	0	304	183	61
Grp Sat Flow(s),veh/h/ln	1767	0	1837	1767	1763	1670	1754	0	0	1767	1856	1538
Q Serve(g_s), s	25.0	0.0	28.8	5.9	23.8	24.1	25.0	0.0	0.0	21.1	11.1	4.2
Cycle Q Clear(g_c), s	25.0	0.0	28.8	5.9	23.8	24.1	25.0	0.0	0.0	21.1	11.1	4.2
Prop In Lane	1.00		0.05	1.00		0.54	0.05		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	353	0	659	107	387	367	351	0	0	333	350	290
V/C Ratio(X)	1.01	0.00	0.74	0.79	0.89	0.90	1.15	0.00	0.00	0.91	0.52	0.21
Avail Cap(c_a), veh/h	353	0	659	293	423	401	351	0	0	353	371	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	0.0	34.9	57.9	47.4	47.5	50.0	0.0	0.0	49.7	45.7	42.9
Incr Delay (d2), s/veh	49.8	0.0	4.3	4.7	19.6	21.8	93.9	0.0	0.0	25.9	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	0.0	13.0	2.7	12.1	11.8	19.8	0.0	0.0	11.4	5.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.8	0.0	39.2	62.7	67.0	69.2	143.9	0.0	0.0	75.6	46.6	43.1
LnGrp LOS	F	A	D	E	E	E	F	A	A	E	D	D
Approach Vol, veh/h		841			760			402			548	
Approach Delay, s/veh		64.9			67.5			143.9			62.3	
Approach LOS		E			E			F			E	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	14.6	51.9		28.6	32.0	34.5				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.7	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+I1), s		27.0	7.9	30.8		23.1	27.0	26.1				
Green Ext Time (p_c), s		0.0	0.1	0.0		0.4	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	77.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	75	39	70	139	170	203	1090	82	55	496	48
Future Volume (veh/h)	64	75	39	70	139	170	203	1090	82	55	496	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	74	87	31	81	162	48	236	1267	90	64	577	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	107	161	57	111	235	196	276	1911	136	98	966	85
Arrive On Green	0.06	0.12	0.12	0.06	0.13	0.13	0.16	0.41	0.41	0.06	0.30	0.30
Sat Flow, veh/h	1767	1296	462	1767	1856	1548	1725	4706	334	1725	3192	282
Grp Volume(v), veh/h	74	0	118	81	162	48	236	887	470	64	310	318
Grp Sat Flow(s),veh/h/ln	1767	0	1757	1767	1856	1548	1725	1648	1744	1725	1721	1753
Q Serve(g_s), s	3.3	0.0	5.0	3.6	6.7	2.2	10.6	17.5	17.5	2.9	12.3	12.3
Cycle Q Clear(g_c), s	3.3	0.0	5.0	3.6	6.7	2.2	10.6	17.5	17.5	2.9	12.3	12.3
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.19	1.00		0.16
Lane Grp Cap(c), veh/h	107	0	219	111	235	196	276	1339	708	98	521	531
V/C Ratio(X)	0.69	0.00	0.54	0.73	0.69	0.25	0.85	0.66	0.66	0.65	0.60	0.60
Avail Cap(c_a), veh/h	442	0	769	442	812	677	539	1854	981	539	968	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	32.9	36.8	33.4	31.5	32.7	19.3	19.3	36.9	23.7	23.7
Incr Delay (d2), s/veh	3.0	0.0	2.9	3.5	5.1	0.9	2.9	0.8	1.5	2.7	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.0	2.2	1.6	3.2	0.8	4.3	5.9	6.4	1.2	4.7	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	0.0	35.8	40.3	38.5	32.4	35.6	20.1	20.8	39.7	25.3	25.3
LnGrp LOS	D	A	D	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		192			291			1593			692	
Approach Delay, s/veh		37.4			38.0			22.6			26.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	40.0	11.5	16.4	20.3	31.7	11.3	16.6				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0				
Max Q Clear Time (g_c+14.5), s	14.5	19.5	5.6	7.0	12.6	14.3	5.3	8.7				
Green Ext Time (p_c), s	0.1	13.0	0.1	0.8	0.2	5.3	0.1	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											26.3	
HCM 6th LOS											C	

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	62	144	359	192	46
Future Vol, veh/h	60	62	144	359	192	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	62	64	148	370	198	47




















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	888	222	245	0	-	0
Stage 1	222	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	313	815	1315	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	278	815	1315	-	-	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	2.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1315	-	278	815	-	-
HCM Lane V/C Ratio	0.113	-	0.223	0.078	-	-
HCM Control Delay (s)	8.1	-	21.6	9.8	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.8	0.3	-	-

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	31	0	80	0	1127	16	20	620	0
Future Volume (veh/h)	0	0	0	31	0	80	0	1127	16	20	620	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	36	0	10	0	1295	18	23	713	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	0	2	6	6	6	6	6	6
Cap, veh/h	0	4	0	125	0	0	3	2231	31	85	2198	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.44	0.44	0.05	0.64	0.00
Sat Flow, veh/h	0	140277	0	1781	36		1725	5023	70	1725	3532	0
Grp Volume(v), veh/h	0	0	0	36	24.0		0	850	463	23	713	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	C		1725	1648	1797	1725	1721	0
Q Serve(g_s), s	0.0	0.0	0.0	1.0			0.0	10.0	10.0	0.7	4.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.0			0.0	10.0	10.0	0.7	4.9	0.0
Prop In Lane	0.00		0.00	1.00			1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	125			3	1464	798	85	2198	0
V/C Ratio(X)	0.00	0.00	0.00	0.29			0.00	0.58	0.58	0.27	0.32	0.00
Avail Cap(c_a), veh/h	0	327	0	1040			301	2353	1283	304	2463	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00			0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	22.7			0.0	10.7	10.7	23.6	4.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.2			0.0	0.4	0.8	1.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.4			0.0	2.5	2.8	0.3	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	24.0			0.0	11.2	11.5	25.3	4.3	0.0
LnGrp LOS	A	A	A	C			A	B	B	C	A	A
Approach Vol, veh/h		0						1313			736	
Approach Delay, s/veh		0.0						11.3			5.0	
Approach LOS								B			A	
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	10.0	30.4	11.1	0.0	0.0	40.4						
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5						
Max Green Setting (Gmax), s	9.1	36.8	30.1	9.0	9.0	36.9						
Max Q Clear Time (g_c+I1), s	2.7	12.0	3.0	0.0	0.0	6.9						
Green Ext Time (p_c), s	0.0	10.5	0.1	0.0	0.0	5.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary  
 10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖	↗			↖↗	
Traffic Volume (veh/h)	47	0	80	0	0	0	104	474	0	0	229	29
Future Volume (veh/h)	47	0	80	0	0	0	104	474	0	0	229	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	49	0	12	0	0	0	109	499	0	0	241	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	370	0	171	0	207	0	245	975	0	0	673	53
Arrive On Green	0.11	0.00	0.11	0.00	0.00	0.00	0.14	0.53	0.00	0.00	0.20	0.20
Sat Flow, veh/h	1781	0	1573	0	1900	0	1767	1856	0	0	3399	259
Grp Volume(v), veh/h	49	0	12	0	0	0	109	499	0	0	128	132
Grp Sat Flow(s),veh/h/ln	1781	0	1573	0	1900	0	1767	1856	0	0	1763	1802
Q Serve(g_s), s	1.0	0.0	0.3	0.0	0.0	0.0	2.3	7.2	0.0	0.0	2.5	2.6
Cycle Q Clear(g_c), s	1.0	0.0	0.3	0.0	0.0	0.0	2.3	7.2	0.0	0.0	2.5	2.6
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.14
Lane Grp Cap(c), veh/h	370	0	171	0	207	0	245	975	0	0	359	367
V/C Ratio(X)	0.13	0.00	0.07	0.00	0.00	0.00	0.44	0.51	0.00	0.00	0.36	0.36
Avail Cap(c_a), veh/h	1045	0	767	0	1159	0	647	975	0	0	860	879
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	16.4	0.0	0.0	0.0	16.2	6.3	0.0	0.0	14.0	14.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.0	1.3	0.5	0.0	0.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.1	0.0	0.0	0.0	0.8	1.4	0.0	0.0	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	16.5	0.0	0.0	0.0	17.5	6.9	0.0	0.0	14.7	14.8
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		61			0			608			260	
Approach Delay, s/veh		16.8			0.0			8.8			14.7	
Approach LOS		B						A			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		29.0		12.0	13.2	15.8		12.0				
Change Period (Y+Rc), s		7.5		7.5	7.5	7.5		7.5				
Max Green Setting (Gmax), s		20.0		20.0	15.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		9.2		3.0	4.3	4.6		0.0				
Green Ext Time (p_c), s		2.5		0.0	0.2	1.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↔	↔↔	↑	↔	↔	↑↑	↔	↔	↑↑	↔
Traffic Volume (veh/h)	18	114	54	215	281	124	129	1014	209	74	443	40
Future Volume (veh/h)	18	114	54	215	281	124	129	1014	209	74	443	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	20	124	0	234	305	43	140	1102	0	80	482	15
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
Percent Heavy Veh, %	13	13	13	13	13	13	6	6	6	6	6	6
Cap, veh/h	73	475		391	422	351	193	1490		110	1324	574
Arrive On Green	0.02	0.15	0.00	0.12	0.25	0.25	0.11	0.43	0.00	0.06	0.38	0.38
Sat Flow, veh/h	3155	3244	1447	3155	1707	1418	1725	3441	1535	1725	3441	1491
Grp Volume(v), veh/h	20	124	0	234	305	43	140	1102	0	80	482	15
Grp Sat Flow(s),veh/h/ln1577	1622	1447	1577	1707	1418	1725	1721	1535	1725	1721	1491	
Q Serve(g_s), s	0.4	2.3	0.0	4.8	11.2	1.6	5.4	18.3	0.0	3.1	6.9	0.4
Cycle Q Clear(g_c), s	0.4	2.3	0.0	4.8	11.2	1.6	5.4	18.3	0.0	3.1	6.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	475		391	422	351	193	1490		110	1324	574
V/C Ratio(X)	0.27	0.26		0.60	0.72	0.12	0.72	0.74		0.73	0.36	0.03
Avail Cap(c_a), veh/h	1608	1653		1608	870	723	879	1754		879	1754	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	26.0	0.0	28.5	23.7	20.1	29.5	16.2	0.0	31.6	15.1	13.1
Incr Delay (d2), s/veh	4.3	0.6	0.0	3.1	4.9	0.3	10.5	2.0	0.0	17.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.0	1.8	4.5	0.5	2.5	5.9	0.0	1.7	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	26.6	0.0	31.6	28.6	20.4	39.9	18.3	0.0	49.5	15.5	13.2
LnGrp LOS	D	C		C	C	C	D	B		D	B	B
Approach Vol, veh/h		144	A		582			1242	A		577	
Approach Delay, s/veh		28.1			29.2			20.7			20.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	33.7	12.5	14.1	11.7	30.4	5.6	21.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+1), s	19.1	20.3	6.8	4.3	7.4	8.9	2.4	13.2				
Green Ext Time (p_c), s	0.4	9.4	1.8	1.2	0.9	5.5	0.1	3.3				

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖↗	↑↑↑	↗	↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	99	400	32	92	509	161	30	258	104	147	174	24
Future Volume (veh/h)	99	400	32	92	509	161	30	258	104	147	174	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	102	412	9	95	525	35	31	266	29	152	179	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	142	960	292	269	1198	285	80	409	339	192	906	100
Arrive On Green	0.09	0.21	0.21	0.09	0.20	0.20	0.05	0.22	0.22	0.11	0.28	0.28
Sat Flow, veh/h	1626	4661	1416	3155	5873	1395	1767	1856	1540	1767	3195	352
Grp Volume(v), veh/h	102	412	9	95	525	35	31	266	29	152	98	101
Grp Sat Flow(s),veh/h/ln	1626	1554	1416	1577	1468	1395	1767	1856	1540	1767	1763	1784
Q Serve(g_s), s	4.2	5.3	0.3	1.9	5.4	1.4	1.2	8.9	1.0	5.7	2.9	3.0
Cycle Q Clear(g_c), s	4.2	5.3	0.3	1.9	5.4	1.4	1.2	8.9	1.0	5.7	2.9	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	142	960	292	269	1198	285	80	409	339	192	500	506
V/C Ratio(X)	0.72	0.43	0.03	0.35	0.44	0.12	0.39	0.65	0.09	0.79	0.20	0.20
Avail Cap(c_a), veh/h	475	2722	827	921	3430	815	516	1273	1057	516	1209	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	23.7	21.7	29.5	23.8	22.3	31.8	24.3	21.2	29.8	18.6	18.6
Incr Delay (d2), s/veh	2.5	0.4	0.1	0.3	0.4	0.3	1.1	0.7	0.0	2.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.7	0.1	0.7	1.6	0.4	0.5	3.6	0.3	2.4	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	24.1	21.8	29.8	24.2	22.5	32.9	25.0	21.3	32.5	18.7	18.7
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		523			655			326			351	
Approach Delay, s/veh		25.8			24.9			25.4			24.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	21.6	12.4	20.6	9.6	25.9	12.5	20.5				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0				
Max Q Clear Time (g_c+1), s	17.5	10.9	3.9	7.3	3.2	5.0	6.2	7.4				
Green Ext Time (p_c), s	0.1	0.9	0.1	3.8	0.0	0.6	0.1	5.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											25.2	
HCM 6th LOS											C	



HCM 6th Signalized Intersection Summary  
 13: Hamner Ave & Ontario Ranch Rd

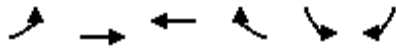
Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶↷	↑↑↑		↶↷	↑↑	↶	↶↷	↑↑↑	↶	↶↷	↑↑	↶
Traffic Volume (veh/h)	160	411	127	184	535	226	156	608	306	115	196	63
Future Volume (veh/h)	160	411	127	184	535	226	156	608	306	115	196	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	168	433	101	194	563	63	164	640	70	121	206	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	279	1235	271	284	833	364	255	1028	312	204	664	289
Arrive On Green	0.09	0.26	0.26	0.09	0.26	0.26	0.07	0.20	0.20	0.06	0.19	0.19
Sat Flow, veh/h	3155	4837	1060	3155	3244	1419	3401	5025	1527	3401	3497	1526
Grp Volume(v), veh/h	168	392	142	194	563	63	164	640	70	121	206	13
Grp Sat Flow(s),veh/h/ln	1577	1468	1492	1577	1622	1419	1700	1675	1527	1700	1749	1526
Q Serve(g_s), s	3.9	5.6	6.0	4.6	12.0	2.7	3.6	8.9	2.9	2.7	3.9	0.5
Cycle Q Clear(g_c), s	3.9	5.6	6.0	4.6	12.0	2.7	3.6	8.9	2.9	2.7	3.9	0.5
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	1125	381	284	833	364	255	1028	312	204	664	289
V/C Ratio(X)	0.60	0.35	0.37	0.68	0.68	0.17	0.64	0.62	0.22	0.59	0.31	0.04
Avail Cap(c_a), veh/h	1435	2004	679	1435	1476	646	1105	1633	496	1105	1591	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	23.4	23.6	33.9	25.7	22.2	34.6	27.9	25.5	35.2	26.8	25.5
Incr Delay (d2), s/veh	1.5	0.2	0.7	2.2	1.2	0.3	2.0	0.7	0.4	2.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	1.9	1.7	4.2	0.8	1.4	3.3	1.0	1.1	1.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	23.6	24.3	36.1	26.9	22.5	36.6	28.6	25.9	37.3	27.1	25.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		702		820		874		340				
Approach Delay, s/veh		26.6		28.7		29.9		30.7				
Approach LOS		C		C		C		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	27.1	13.3	22.1	14.3	27.3	12.1	23.2				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0				
Max Q Clear Time (g_c+1), s	10.6	8.0	5.6	5.9	5.9	14.0	4.7	10.9				
Green Ext Time (p_c), s	0.4	3.8	0.3	1.4	0.4	4.1	0.2	3.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

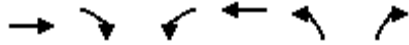
Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↓↓↓	↓
Traffic Volume (veh/h)	0	681	572	0	209	716
Future Volume (veh/h)	0	681	572	0	209	716
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	724	609	0	222	562
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	1496	1041	0	515	916
Arrive On Green	0.00	0.32	0.32	0.00	0.32	0.32
Sat Flow, veh/h	0	4968	3415	0	1626	2894
Grp Volume(v), veh/h	0	724	609	0	222	562
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1626	1447
Q Serve(g_s), s	0.0	4.2	5.3	0.0	3.7	5.6
Cycle Q Clear(g_c), s	0.0	4.2	5.3	0.0	3.7	5.6
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1496	1041	0	515	916
V/C Ratio(X)	0.00	0.48	0.59	0.00	0.43	0.61
Avail Cap(c_a), veh/h	0	4122	2869	0	1438	2559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.3	9.6	0.0	9.2	9.8
Incr Delay (d2), s/veh	0.0	0.2	0.5	0.0	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	1.0	0.0	1.0	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.5	10.2	0.0	9.7	10.5
LnGrp LOS	A	A	B	A	A	B
Approach Vol, veh/h		724	609		784	
Approach Delay, s/veh		9.5	10.2		10.3	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		17.7		16.2		17.7
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		6.2		7.6		7.3
Green Ext Time (p_c), s		4.4		3.2		3.6
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.0			
HCM 6th LOS			A			
<b>Notes</b>						
User approved volume balancing among the lanes for turning movement.						

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	378	563	151	257	366	424
Future Volume (veh/h)	378	563	151	257	366	424
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	406	380	162	276	405	203
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1416	735	285	2406	695	309
Arrive On Green	0.30	0.30	0.09	0.52	0.21	0.21
Sat Flow, veh/h	4815	1403	3155	4815	3252	1447
Grp Volume(v), veh/h	406	380	162	276	405	203
Grp Sat Flow(s),veh/h/ln	1554	1403	1577	1554	1626	1447
Q Serve(g_s), s	3.3	8.8	2.4	1.5	5.5	6.3
Cycle Q Clear(g_c), s	3.3	8.8	2.4	1.5	5.5	6.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1416	735	285	2406	695	309
V/C Ratio(X)	0.29	0.52	0.57	0.11	0.58	0.66
Avail Cap(c_a), veh/h	2840	1164	1922	2840	1981	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	7.9	21.5	6.1	17.4	17.7
Incr Delay (d2), s/veh	0.1	0.6	1.8	0.0	0.8	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.0	0.8	0.3	1.9	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.2	8.4	23.2	6.1	18.2	20.1
LnGrp LOS	B	A	C	A	B	C
Approach Vol, veh/h	786			438	608	
Approach Delay, s/veh	10.9			12.5	18.8	
Approach LOS	B			B	B	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	10.5	22.3		32.7	16.5	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	30.0	30.0		30.0	30.0	
Max Q Clear Time (g_c+1), s	14.4	10.8		3.5	8.3	
Green Ext Time (p_c), s	0.5	3.6		1.6	2.2	

Intersection Summary

HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕	↖	↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (veh/h)	1	0	9	22	1	134	7	1204	14	27	690	6
Future Volume (veh/h)	1	0	9	22	1	134	7	1204	14	27	690	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	1	0	0	23	1	13	7	1281	0	29	734	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	7	145	0	128	270	117	43	1632	728	149	2501	764
Arrive On Green	0.00	0.00	0.00	0.04	0.08	0.08	0.01	0.47	0.00	0.04	0.51	0.51
Sat Flow, veh/h	3456	3647	0	3456	3554	1539	3346	3441	1535	3346	4944	1511
Grp Volume(v), veh/h	1	0	0	23	1	13	7	1281	0	29	734	4
Grp Sat Flow(s),veh/h/ln	1728	1777	0	1728	1777	1539	1673	1721	1535	1673	1648	1511
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.5	0.1	19.3	0.0	0.5	5.3	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	0.5	0.1	19.3	0.0	0.5	5.3	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	7	145	0	128	270	117	43	1632	728	149	2501	764
V/C Ratio(X)	0.15	0.00	0.00	0.18	0.00	0.11	0.16	0.78	0.00	0.20	0.29	0.01
Avail Cap(c_a), veh/h	1116	1147	0	1116	1147	497	1080	2222	991	1080	3193	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	0.0	0.0	28.9	26.5	26.7	30.2	13.6	0.0	28.5	8.9	7.6
Incr Delay (d2), s/veh	10.0	0.0	0.0	0.7	0.0	0.2	1.8	1.3	0.0	0.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.1	5.4	0.0	0.2	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	0.0	0.0	29.6	26.5	26.8	32.0	15.0	0.0	29.2	8.9	7.6
LnGrp LOS	D	A	A	C	C	C	C	B	A	C	A	A
Approach Vol, veh/h		1			37			1288			767	
Approach Delay, s/veh		40.9			28.5			15.1			9.7	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	36.9	7.3	10.0	5.8	38.8	5.1	12.2				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	20.0	40.0	20.0	20.0	20.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	12.5	21.3	2.4	0.0	2.1	7.3	2.0	2.5				
Green Ext Time (p_c), s	0.0	8.1	0.0	0.0	0.0	4.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	33	10	21	117	45	39
Future Vol, veh/h	33	10	21	117	45	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	12	25	139	54	46

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	51	0	159
Stage 1	-	-	-	-	39
Stage 2	-	-	-	-	120
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1553	-	816
Stage 1	-	-	-	-	978
Stage 2	-	-	-	-	892
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1553	-	803
Mov Cap-2 Maneuver	-	-	-	-	803
Stage 1	-	-	-	-	978
Stage 2	-	-	-	-	878

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	902	-	-	1553	-
HCM Lane V/C Ratio	0.111	-	-	0.016	-
HCM Control Delay (s)	9.5	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	58	13	40	101	33	100
Future Volume (veh/h)	58	13	40	101	33	100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	14	44	111	36	110
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	453	371	169	1815	60	185
Arrive On Green	0.24	0.24	0.09	0.51	0.15	0.15
Sat Flow, veh/h	1870	1533	1781	3647	395	1206
Grp Volume(v), veh/h	64	14	44	111	147	0
Grp Sat Flow(s),veh/h/ln	1870	1533	1781	1777	1611	0
Q Serve(g_s), s	1.2	0.3	1.0	0.7	3.7	0.0
Cycle Q Clear(g_c), s	1.2	0.3	1.0	0.7	3.7	0.0
Prop In Lane		1.00	1.00		0.24	0.75
Lane Grp Cap(c), veh/h	453	371	169	1815	247	0
V/C Ratio(X)	0.14	0.04	0.26	0.06	0.60	0.00
Avail Cap(c_a), veh/h	1516	1242	619	2881	1232	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.8	12.5	18.1	5.3	17.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.8	0.0	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.3	0.1	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.0	12.6	18.9	5.3	19.8	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	78			155	147	
Approach Delay, s/veh	12.9			9.2	19.8	
Approach LOS	B			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.6	11.6	18.0		29.6
Change Period (Y+Rc), s		7.0	7.5	7.5		7.5
Max Green Setting (Gmax), s		33.0	15.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		5.7	3.0	3.2		2.7
Green Ext Time (p_c), s		0.6	0.0	0.4		0.7
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			14.1			
HCM 6th LOS			B			

**Intersection**

Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	111	24	78	286	164	56
Future Vol, veh/h	111	24	78	286	164	56
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	125	27	88	321	184	63
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.7	13.3	10.1
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	21%	100%	0%	0%
Vol Thru, %	79%	0%	0%	75%
Vol Right, %	0%	0%	100%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	364	111	24	220
LT Vol	78	111	0	0
Through Vol	286	0	0	164
RT Vol	0	0	24	56
Lane Flow Rate	409	125	27	247
Geometry Grp	2	7	7	2
Degree of Util (X)	0.539	0.226	0.04	0.326
Departure Headway (Hd)	4.748	6.519	5.303	4.743
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	757	546	667	751
Service Time	2.804	4.319	3.102	2.809
HCM Lane V/C Ratio	0.54	0.229	0.04	0.329
HCM Control Delay	13.3	11.2	8.3	10.1
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	3.3	0.9	0.1	1.4



Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	61	1	1	22	1	1
Future Vol, veh/h	61	1	1	22	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	73	1	1	26	1	1
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	8.4	6.9	7.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	22	61	1	1	1
LT Vol	0	0	61	0	1	0
Through Vol	1	0	0	0	0	1
RT Vol	0	22	0	1	0	0
Lane Flow Rate	1	26	73	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.002	0.029	0.103	0.001	0.002	0.002
Departure Headway (Hd)	4.682	3.981	5.084	3.883	5.195	4.695
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	757	888	707	923	682	754
Service Time	2.458	1.757	2.801	1.6	2.976	2.475
HCM Lane V/C Ratio	0.001	0.029	0.103	0.001	0.001	0.001
HCM Control Delay	7.5	6.9	8.4	6.6	8	7.5
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.1	0.3	0	0	0

HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔		↔				↔	↔↔↔		↔↔↔		
Traffic Volume (veh/h)	55	0	11	0	0	0	20	1044	0	0	404	57
Future Volume (veh/h)	55	0	11	0	0	0	20	1044	0	0	404	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	0	0	1900	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	61	0	12	0	0	0	22	1160	0	0	449	63
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2	0	0	0	4	4	4	4	4	4
Cap, veh/h	309	0	0	0	0	0	67	2788	0	5	1474	202
Arrive On Green	0.09	0.00	0.00	0.00	0.00	0.00	0.04	0.55	0.00	0.00	0.33	0.33
Sat Flow, veh/h	3456	61			0		1753	5191	0	1753	4449	610
Grp Volume(v), veh/h	61	15.3			0.0		22	1160	0	0	336	176
Grp Sat Flow(s),veh/h/ln	1728	B					1753	1675	0	1753	1675	1709
Q Serve(g_s), s	0.6						0.4	4.7	0.0	0.0	2.6	2.7
Cycle Q Clear(g_c), s	0.6						0.4	4.7	0.0	0.0	2.6	2.7
Prop In Lane	1.00						1.00		0.00	1.00		0.36
Lane Grp Cap(c), veh/h	309						67	2788	0	5	1110	566
V/C Ratio(X)	0.20						0.33	0.42	0.00	0.00	0.30	0.31
Avail Cap(c_a), veh/h	3443						1747	5722	0	1747	3815	1946
HCM Platoon Ratio	1.00						1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00						1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.8						16.4	4.5	0.0	0.0	8.7	8.8
Incr Delay (d2), s/veh	0.4						3.3	0.1	0.0	0.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0						0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2						0.2	0.3	0.0	0.0	0.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3						19.8	4.7	0.0	0.0	8.9	9.2
LnGrp LOS	B						B	A	A	A	A	A
Approach Vol, veh/h								1182			512	
Approach Delay, s/veh								4.9			9.0	
Approach LOS								A			A	
Timer - Assigned Phs	1	2			5	6	7					
Phs Duration (G+Y+Rc), s	7.9	18.1			0.0	26.0	9.1					
Change Period (Y+Rc), s	6.5	6.5			6.5	6.5	6.0					
Max Green Setting (Gmax), s	35.0	40.0			35.0	40.0	35.0					
Max Q Clear Time (g_c+1), s	12.4	4.7			0.0	6.7	2.6					
Green Ext Time (p_c), s	0.0	4.5			0.0	12.7	0.3					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	60	2	21	37	3	74	19	1092	16	23	627	69
Future Volume (veh/h)	60	2	21	37	3	74	19	1092	16	23	627	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	63	2	3	39	3	12	20	1149	8	24	660	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	428	138	207	437	67	266	84	1471	443	98	1512	455
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.30	0.30	0.06	0.31	0.31
Sat Flow, veh/h	1389	666	999	1401	321	1285	1725	4944	1488	1725	4944	1488
Grp Volume(v), veh/h	63	0	5	39	0	15	20	1149	8	24	660	33
Grp Sat Flow(s),veh/h/ln	1389	0	1665	1401	0	1606	1725	1648	1488	1725	1648	1488
Q Serve(g_s), s	1.8	0.0	0.1	1.1	0.0	0.4	0.5	10.2	0.2	0.6	5.1	0.8
Cycle Q Clear(g_c), s	2.2	0.0	0.1	1.2	0.0	0.4	0.5	10.2	0.2	0.6	5.1	0.8
Prop In Lane	1.00		0.60	1.00		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	0	345	437	0	333	84	1471	443	98	1512	455
V/C Ratio(X)	0.15	0.00	0.01	0.09	0.00	0.05	0.24	0.78	0.02	0.24	0.44	0.07
Avail Cap(c_a), veh/h	1212	0	1286	1229	0	1240	360	1548	466	360	1548	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	15.1	15.6	0.0	15.2	21.9	15.4	11.9	21.6	13.3	11.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.1	1.7	2.7	0.0	1.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	0.1	0.2	3.0	0.0	0.2	1.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	0.0	15.1	15.7	0.0	15.3	23.7	18.1	11.9	23.1	13.6	11.9
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		68			54			1177			717	
Approach Delay, s/veh		16.2			15.6			18.2			13.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	21.8		15.9	9.8	22.2		15.9				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	15.0		37.0	10.0	15.0		37.0				
Max Q Clear Time (g_c+1/2), s	12.6	12.2		4.2	2.5	7.1		3.2				
Green Ext Time (p_c), s	0.0	2.0		0.2	0.0	3.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.5								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	3	5	365	184	4
Future Vol, veh/h	1	3	5	365	184	4
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	-	225	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	1	3	6	420	211	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	646	108	216	0	0
Stage 1	214	-	-	-	-
Stage 2	432	-	-	-	-
Critical Hdwy	6.63	6.93	4.145	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.2285	-	-
Pot Cap-1 Maneuver	420	926	1346	-	-
Stage 1	802	-	-	-	-
Stage 2	654	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	418	926	1346	-	-
Mov Cap-2 Maneuver	418	-	-	-	-
Stage 1	799	-	-	-	-
Stage 2	654	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1346	-	710	-	-
HCM Lane V/C Ratio	0.004	-	0.006	-	-
HCM Control Delay (s)	7.7	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	8	14	22	34	27
Future Vol, veh/h	5	8	14	22	34	27
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	-	-	-	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	7	11	18	29	45	36

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	159	24	0	0	47
Stage 1	33	-	-	-	-
Stage 2	126	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.145
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.2285
Pot Cap-1 Maneuver	824	1047	-	-	1553
Stage 1	986	-	-	-	-
Stage 2	899	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	800	1047	-	-	1553
Mov Cap-2 Maneuver	800	-	-	-	-
Stage 1	986	-	-	-	-
Stage 2	873	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	936	1553
HCM Lane V/C Ratio	-	-	0.018	0.029
HCM Control Delay (s)	-	-	8.9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↔	↔↔	↑	↔	↔	↑↑↑	↔	↔	↑↑↑	↔
Traffic Volume (veh/h)	403	170	40	142	174	116	50	562	178	40	243	171
Future Volume (veh/h)	403	170	40	142	174	116	50	562	178	40	243	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	420	177	13	148	181	22	52	585	60	42	253	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	522	865	378	239	302	250	81	1258	383	71	1229	374
Arrive On Green	0.15	0.25	0.25	0.07	0.16	0.16	0.05	0.25	0.25	0.04	0.24	0.24
Sat Flow, veh/h	3428	3526	1541	3428	1856	1535	1753	5025	1529	1753	5025	1529
Grp Volume(v), veh/h	420	177	13	148	181	22	52	585	60	42	253	44
Grp Sat Flow(s),veh/h/ln	1714	1763	1541	1714	1856	1535	1753	1675	1529	1753	1675	1529
Q Serve(g_s), s	7.9	2.7	0.4	2.8	6.1	0.8	2.0	6.6	2.1	1.6	2.7	1.5
Cycle Q Clear(g_c), s	7.9	2.7	0.4	2.8	6.1	0.8	2.0	6.6	2.1	1.6	2.7	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	522	865	378	239	302	250	81	1258	383	71	1229	374
V/C Ratio(X)	0.80	0.20	0.03	0.62	0.60	0.09	0.64	0.46	0.16	0.59	0.21	0.12
Avail Cap(c_a), veh/h	767	2577	1127	512	1218	1008	131	3119	949	209	3344	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	20.1	19.2	30.3	26.0	23.8	31.4	21.3	19.6	31.6	20.1	19.7
Incr Delay (d2), s/veh	2.3	0.2	0.1	1.0	2.7	0.2	3.1	0.4	0.3	2.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	1.0	0.1	1.1	2.6	0.3	0.8	2.3	0.7	0.7	0.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	20.3	19.3	31.3	28.7	24.0	34.5	21.7	19.9	34.5	20.3	19.9
LnGrp LOS	C	C	B	C	C	C	C	C	B	C	C	B
Approach Vol, veh/h		610			351			697			339	
Approach Delay, s/veh		26.8			29.5			22.5			22.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	24.0	10.7	23.6	9.1	23.6	16.2	18.1				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	8.0	41.6	10.0	49.0	5.0	44.6	15.0	44.0				
Max Q Clear Time (g_c+I1), s	3.6	8.6	4.8	4.7	4.0	4.7	9.9	8.1				
Green Ext Time (p_c), s	0.0	6.0	0.1	1.6	0.0	2.5	0.3	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				24.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	364	12	15	756	24	0	0	3	18	0	27
Future Volume (veh/h)	8	364	12	15	756	24	0	0	3	18	0	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	9	400	10	16	831	17	0	0	1	20	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	10	10	10	10	10	3	3	3	2	2	2
Cap, veh/h	27	1877	816	46	1008	832	0	0	92	221	0	0
Arrive On Green	0.02	0.56	0.56	0.03	0.58	0.58	0.00	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	1668	3328	1446	1668	1752	1447	0	0	1531	1367	0	0
Grp Volume(v), veh/h	9	400	10	16	831	17	0	0	1	20	0	0
Grp Sat Flow(s),veh/h/ln	1668	1664	1446	1668	1752	1447	0	0	1532	1367	0	0
Q Serve(g_s), s	0.3	3.1	0.2	0.5	19.8	0.3	0.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	0.3	3.1	0.2	0.5	19.8	0.3	0.0	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	27	1877	816	46	1008	832	0	0	92	221	0	0
V/C Ratio(X)	0.33	0.21	0.01	0.35	0.82	0.02	0.00	0.00	0.01	0.09	0.00	0.00
Avail Cap(c_a), veh/h	646	2254	980	646	1186	980	0	0	593	673	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.1	5.6	5.0	24.7	8.9	4.7	0.0	0.0	22.8	23.2	0.0	0.0
Incr Delay (d2), s/veh	6.8	0.1	0.0	4.4	5.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.0	0.2	6.2	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	5.7	5.0	29.0	14.2	4.7	0.0	0.0	22.9	23.4	0.0	0.0
LnGrp LOS	C	A	A	C	B	A	A	A	C	C	A	A
Approach Vol, veh/h		419			864			1			20	
Approach Delay, s/veh		6.3			14.3			22.9			23.4	
Approach LOS		A			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.1	6.4	36.1		9.1	5.8	36.7				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		20.0	20.0	35.0		20.0	20.0	35.0				
Max Q Clear Time (g_c+1), s		2.0	2.5	5.1		2.7	2.3	21.8				
Green Ext Time (p_c), s		0.0	0.0	5.2		0.0	0.0	7.9				

Intersection Summary

HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	196	115	73	60	282	75	264	832	39	49	413	257
Future Volume (veh/h)	196	115	73	60	282	75	264	832	39	49	413	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	213	125	0	65	307	14	287	904	15	53	449	72
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
Percent Heavy Veh, %	10	10	10	2	2	2	6	6	6	6	6	6
Cap, veh/h	319	504		136	458	199	386	1636	499	231	980	429
Arrive On Green	0.10	0.15	0.00	0.08	0.13	0.13	0.12	0.33	0.33	0.07	0.28	0.28
Sat Flow, veh/h	3237	3328	1485	1781	3554	1543	3346	4944	1508	3346	3441	1506
Grp Volume(v), veh/h	213	125	0	65	307	14	287	904	15	53	449	72
Grp Sat Flow(s),veh/h/ln	1618	1664	1485	1781	1777	1543	1673	1648	1508	1673	1721	1506
Q Serve(g_s), s	5.1	2.7	0.0	2.8	6.6	0.6	6.7	12.1	0.5	1.2	8.6	2.9
Cycle Q Clear(g_c), s	5.1	2.7	0.0	2.8	6.6	0.6	6.7	12.1	0.5	1.2	8.6	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	504		136	458	199	386	1636	499	231	980	429
V/C Ratio(X)	0.67	0.25		0.48	0.67	0.07	0.74	0.55	0.03	0.23	0.46	0.17
Avail Cap(c_a), veh/h	804	1033		442	883	383	1039	2456	749	623	1709	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	30.1	0.0	35.7	33.4	30.8	34.5	22.1	18.2	35.5	23.7	21.6
Incr Delay (d2), s/veh	2.4	0.5	0.0	1.9	1.3	0.1	2.1	0.6	0.1	0.4	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.1	0.0	1.3	2.8	0.2	2.6	4.1	0.2	0.5	3.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	30.7	0.0	37.6	34.7	30.9	36.6	22.7	18.3	35.8	24.4	22.0
LnGrp LOS	D	C		D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		338	A		386			1206			574	
Approach Delay, s/veh		34.9			35.1			25.9			25.2	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	34.1	13.6	19.7	16.8	30.4	15.4	17.9				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	15.0	40.0	20.0	25.0	25.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	13.2	14.1	4.8	4.7	8.7	10.6	7.1	8.6				
Green Ext Time (p_c), s	0.1	11.0	0.1	1.1	0.6	5.8	0.6	1.2				

Intersection Summary

HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	161	32	5	347	11	56	8	21	8	5	15
Future Volume (veh/h)	6	161	32	5	347	11	56	8	21	8	5	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	183	16	6	394	4	64	9	4	9	6	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	891	384	20	885	382	423	45	254	279	143	31
Arrive On Green	0.01	0.25	0.25	0.01	0.25	0.25	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1533	1781	3554	1533	1190	275	1553	568	875	192
Grp Volume(v), veh/h	7	183	16	6	394	4	73	0	4	17	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1533	1781	1777	1533	1465	0	1553	1635	0	0
Q Serve(g_s), s	0.1	1.2	0.2	0.1	2.8	0.1	1.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	1.2	0.2	0.1	2.8	0.1	1.2	0.0	0.1	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.88		1.00	0.53		0.12
Lane Grp Cap(c), veh/h	24	891	384	20	885	382	468	0	254	454	0	0
V/C Ratio(X)	0.30	0.21	0.04	0.30	0.45	0.01	0.16	0.00	0.02	0.04	0.00	0.00
Avail Cap(c_a), veh/h	421	1920	829	421	1920	828	1691	0	1574	1770	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.5	8.8	8.4	14.5	9.4	8.4	10.8	0.0	10.4	10.5	0.0	0.0
Incr Delay (d2), s/veh	6.8	0.1	0.0	7.9	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.1	0.1	0.7	0.0	0.3	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	8.9	8.4	22.4	9.7	8.4	10.9	0.0	10.4	10.5	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		206			404			77			17	
Approach Delay, s/veh		9.3			9.9			10.9			10.5	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.8	5.3	13.4		10.8	5.4	13.4				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s		3.2	2.1	3.2		2.2	2.1	4.8				
Green Ext Time (p_c), s		0.2	0.0	0.8		0.0	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					9.8							
HCM 6th LOS					A							

HCM 6th Signalized Intersection Summary  
 32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	163	10	14	295	22	32	18	40	32	8	42
Future Volume (veh/h)	21	163	10	14	295	22	32	18	40	32	8	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	173	5	15	314	9	34	19	6	34	9	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	882	381	49	841	363	324	136	259	342	81	31
Arrive On Green	0.04	0.25	0.25	0.03	0.24	0.24	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1533	1781	3554	1532	781	818	1553	849	490	187
Grp Volume(v), veh/h	22	173	5	15	314	9	53	0	6	49	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1533	1781	1777	1532	1598	0	1553	1526	0	0
Q Serve(g_s), s	0.4	1.2	0.1	0.3	2.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	1.2	0.1	0.3	2.3	0.1	0.7	0.0	0.1	0.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.64		1.00	0.69		0.12
Lane Grp Cap(c), veh/h	70	882	381	49	841	363	460	0	259	454	0	0
V/C Ratio(X)	0.32	0.20	0.01	0.31	0.37	0.02	0.12	0.00	0.02	0.11	0.00	0.00
Avail Cap(c_a), veh/h	1169	4081	1761	1169	4081	1760	1460	0	1274	1413	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.2	9.1	8.6	14.5	9.7	8.9	10.9	0.0	10.6	10.9	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.1	0.0	3.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.0	0.1	0.6	0.0	0.2	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	9.2	8.7	18.0	10.0	9.0	10.9	0.0	10.6	10.9	0.0	0.0
LnGrp LOS	B	A	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		200			338			59			49	
Approach Delay, s/veh		10.0			10.3			10.9			10.9	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.1	5.8	13.6		11.1	6.2	13.2				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.7	2.3	3.2		2.7	2.4	4.3				
Green Ext Time (p_c), s		0.1	0.0	1.1		0.1	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	152	49	129	246	63	65	283	279	39	129	24
Future Volume (veh/h)	21	152	49	129	246	63	65	283	279	39	129	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	167	45	142	270	62	71	311	83	43	142	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	67	245	66	198	360	83	149	423	350	108	670	61
Arrive On Green	0.04	0.17	0.17	0.11	0.25	0.25	0.08	0.23	0.23	0.06	0.21	0.21
Sat Flow, veh/h	1781	1411	380	1767	1453	334	1767	1856	1536	1767	3263	295
Grp Volume(v), veh/h	23	0	212	142	0	332	71	311	83	43	76	79
Grp Sat Flow(s),veh/h/ln	1781	0	1791	1767	0	1786	1767	1856	1536	1767	1763	1795
Q Serve(g_s), s	0.7	0.0	6.1	4.3	0.0	9.5	2.1	8.6	2.4	1.3	2.0	2.0
Cycle Q Clear(g_c), s	0.7	0.0	6.1	4.3	0.0	9.5	2.1	8.6	2.4	1.3	2.0	2.0
Prop In Lane	1.00		0.21	1.00		0.19	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	67	0	311	198	0	443	149	423	350	108	362	368
V/C Ratio(X)	0.34	0.00	0.68	0.72	0.00	0.75	0.48	0.73	0.24	0.40	0.21	0.21
Avail Cap(c_a), veh/h	226	0	988	639	0	1405	352	1611	1333	256	1435	1461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	21.4	23.7	0.0	19.2	24.2	19.8	17.4	25.0	18.2	18.3
Incr Delay (d2), s/veh	1.1	0.0	1.0	1.8	0.0	1.0	0.9	2.5	0.3	0.9	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.4	1.6	0.0	3.3	0.8	3.4	0.7	0.5	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	22.4	25.5	0.0	20.2	25.1	22.3	17.8	25.9	18.5	18.6
LnGrp LOS	C	A	C	C	A	C	C	C	B	C	B	B
Approach Vol, veh/h		235		474		465		198				
Approach Delay, s/veh		22.9		21.8		21.9		20.1				
Approach LOS		C		C		C		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	19.6	11.2	16.1	9.6	18.3	7.1	20.2				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	48.0	48.0	20.0	30.5	11.0	45.0	7.0	43.5				
Max Q Clear Time (g_c+1/3), s	10.6	10.6	6.3	8.1	4.1	4.0	2.7	11.5				
Green Ext Time (p_c), s	0.0	2.0	0.1	0.7	0.0	0.8	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	483	27	34	358	20	33	6	116	0	9	30
Future Volume (veh/h)	18	483	27	34	358	20	33	6	116	0	9	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	19	514	14	36	381	10	35	6	32	0	10	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	405	722	594	312	722	601	99	516	424	4	183	149
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.06	0.28	0.28	0.00	0.10	0.10
Sat Flow, veh/h	983	1856	1528	866	1856	1546	1767	1856	1523	1767	1856	1512
Grp Volume(v), veh/h	19	514	14	36	381	10	35	6	32	0	10	3
Grp Sat Flow(s),veh/h/ln	983	1856	1528	866	1856	1546	1767	1856	1523	1767	1856	1512
Q Serve(g_s), s	0.6	9.5	0.2	1.5	6.4	0.2	0.8	0.1	0.6	0.0	0.2	0.1
Cycle Q Clear(g_c), s	7.0	9.5	0.2	11.0	6.4	0.2	0.8	0.1	0.6	0.0	0.2	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	405	722	594	312	722	601	99	516	424	4	183	149
V/C Ratio(X)	0.05	0.71	0.02	0.12	0.53	0.02	0.35	0.01	0.08	0.00	0.05	0.02
Avail Cap(c_a), veh/h	871	1601	1319	722	1601	1334	871	915	751	871	915	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	10.5	7.6	15.1	9.5	7.6	18.4	10.6	10.8	0.0	16.6	16.5
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.2	0.6	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.4	0.0	0.2	1.6	0.0	0.3	0.0	0.2	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	11.8	7.7	15.3	10.1	7.6	19.2	10.6	10.8	0.0	16.6	16.5
LnGrp LOS	B	B	A	B	B	A	B	B	B	A	B	B
Approach Vol, veh/h		547			427			73			13	
Approach Delay, s/veh		11.7			10.5			14.8			16.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	10.5		22.8	0.0	17.8		22.8				
Change Period (Y+Rc), s	5.0	6.5		7.0	5.0	6.5		7.0				
Max Green Setting (Gmax), s	20.0	20.0		35.0	20.0	20.0		35.0				
Max Q Clear Time (g_c+1), s	12.8	2.2		13.0	0.0	2.6		11.5				
Green Ext Time (p_c), s	0.0	0.0		2.2	0.0	0.0		3.0				

Intersection Summary

HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↷	↶	↶↶	↶	↶	↶
Traffic Volume (veh/h)	413	448	659	303	153	355
Future Volume (veh/h)	413	448	659	303	153	355
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1811	1811	1811	1811
Adj Flow Rate, veh/h	444	463	709	178	165	382
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	6	6	6	6
Cap, veh/h	1007	659	1079	936	219	960
Arrive On Green	0.30	0.30	0.31	0.31	0.13	0.53
Sat Flow, veh/h	3374	1547	3532	1523	1725	1811
Grp Volume(v), veh/h	444	463	709	178	165	382
Grp Sat Flow(s),veh/h/ln	1687	1547	1721	1523	1725	1811
Q Serve(g_s), s	7.1	16.5	12.0	3.4	6.2	8.4
Cycle Q Clear(g_c), s	7.1	16.5	12.0	3.4	6.2	8.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1007	659	1079	936	219	960
V/C Ratio(X)	0.44	0.70	0.66	0.19	0.75	0.40
Avail Cap(c_a), veh/h	2009	1118	2049	1365	1156	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	15.8	19.9	5.7	28.3	9.4
Incr Delay (d2), s/veh	0.1	0.5	0.8	0.1	7.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	13.7	4.0	1.8	2.7	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.1	16.3	20.8	5.8	35.5	9.8
LnGrp LOS	B	B	C	A	D	A
Approach Vol, veh/h	907		887			547
Approach Delay, s/veh	17.7		17.8			17.5
Approach LOS	B		B			B
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.5	27.1		25.6		41.6
Change Period (Y+Rc), s	6.0	6.0		5.5		6.0
Max Green Setting (Gmax), s	45.0	40.0		40.0		45.0
Max Q Clear Time (g_c+I), s	19.2	14.0		18.5		10.4
Green Ext Time (p_c), s	0.8	6.2		1.6		3.1

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔	↑↑	↔	↔	↑↑	↔
Traffic Volume (veh/h)	134	497	29	93	653	75	85	390	149	94	277	84
Future Volume (veh/h)	134	497	29	93	653	75	85	390	149	94	277	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	151	558	9	104	734	22	96	438	80	106	311	24
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	250	1419	432	195	1338	413	124	761	332	137	786	344
Arrive On Green	0.07	0.28	0.28	0.06	0.27	0.27	0.07	0.22	0.22	0.08	0.22	0.22
Sat Flow, veh/h	3374	4985	1518	3374	4985	1539	1767	3526	1540	1767	3526	1540
Grp Volume(v), veh/h	151	558	9	104	734	22	96	438	80	106	311	24
Grp Sat Flow(s),veh/h/ln	1687	1662	1518	1687	1662	1539	1767	1763	1540	1767	1763	1540
Q Serve(g_s), s	2.4	5.0	0.2	1.6	6.9	0.6	2.9	6.1	2.4	3.2	4.1	0.7
Cycle Q Clear(g_c), s	2.4	5.0	0.2	1.6	6.9	0.6	2.9	6.1	2.4	3.2	4.1	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	1419	432	195	1338	413	124	761	332	137	786	344
V/C Ratio(X)	0.60	0.39	0.02	0.53	0.55	0.05	0.78	0.58	0.24	0.78	0.40	0.07
Avail Cap(c_a), veh/h	1536	4086	1245	2151	4086	1261	805	1927	841	805	1927	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	15.8	14.1	25.1	17.2	14.9	25.1	19.3	17.8	24.9	18.2	16.8
Incr Delay (d2), s/veh	0.9	0.2	0.0	1.7	0.4	0.1	3.9	0.5	0.3	3.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.6	0.1	0.6	2.2	0.2	1.2	2.2	0.7	1.3	1.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	16.0	14.1	26.8	17.6	15.0	29.0	19.8	18.1	28.4	18.4	16.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		718			860			614			441	
Approach Delay, s/veh		18.0			18.6			21.0			20.7	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	21.1	8.3	17.7	8.6	20.2	8.7	17.3				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	35.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0				
Max Q Clear Time (g_c+1), s	13.6	7.0	4.9	6.1	4.4	8.9	5.2	8.1				
Green Ext Time (p_c), s	0.2	3.8	0.1	1.5	0.1	5.3	0.1	2.3				

Intersection Summary

HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	761	55	76	755	30	88	155	126	60	164	26
Future Volume (veh/h)	32	761	55	76	755	30	88	155	126	60	164	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	36	865	26	86	858	16	100	176	28	68	186	30
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	66	1317	571	113	1411	627	129	274	226	102	466	202
Arrive On Green	0.04	0.38	0.38	0.07	0.41	0.41	0.07	0.15	0.15	0.06	0.13	0.13
Sat Flow, veh/h	1739	3469	1503	1739	3469	1542	1767	1856	1533	1767	3526	1531
Grp Volume(v), veh/h	36	865	26	86	858	16	100	176	28	68	186	30
Grp Sat Flow(s),veh/h/ln	1739	1735	1503	1739	1735	1542	1767	1856	1533	1767	1763	1531
Q Serve(g_s), s	1.2	11.8	0.6	2.8	11.1	0.4	3.2	5.1	0.9	2.2	2.8	1.0
Cycle Q Clear(g_c), s	1.2	11.8	0.6	2.8	11.1	0.4	3.2	5.1	0.9	2.2	2.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1317	571	113	1411	627	129	274	226	102	466	202
V/C Ratio(X)	0.54	0.66	0.05	0.76	0.61	0.03	0.77	0.64	0.12	0.67	0.40	0.15
Avail Cap(c_a), veh/h	913	2733	1184	913	2733	1214	928	1299	1074	928	2469	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	14.6	11.2	26.3	13.4	10.2	26.0	22.9	21.1	26.4	22.7	21.9
Incr Delay (d2), s/veh	2.6	0.7	0.0	3.9	0.5	0.0	3.7	0.9	0.1	2.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.7	0.2	1.1	3.4	0.1	1.4	2.1	0.3	0.9	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	15.3	11.2	30.1	13.9	10.2	29.7	23.9	21.2	29.1	22.9	22.1
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		927			960			304			284	
Approach Delay, s/veh		15.8			15.3			25.6			24.3	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	28.7	8.7	13.1	8.2	27.2	7.8	13.9				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.0	45.0	30.0	40.0	30.0	45.0	30.0	40.0				
Max Q Clear Time (g_c+1), s	13.2	13.1	5.2	4.8	4.8	13.8	4.2	7.1				
Green Ext Time (p_c), s	0.0	7.6	0.1	0.8	0.1	7.7	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	165	715	32	288	689	186	102	396	396	180	242	85
Future Volume (veh/h)	165	715	32	288	689	186	102	396	396	180	242	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	176	761	17	306	733	98	109	421	176	191	257	17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	4	4	4	4	4	4
Cap, veh/h	234	2372	734	362	1783	793	163	790	243	249	916	282
Arrive On Green	0.07	0.48	0.48	0.11	0.51	0.51	0.05	0.16	0.16	0.07	0.18	0.18
Sat Flow, veh/h	3374	4985	1542	3374	3469	1543	3401	5025	1545	3401	5025	1547
Grp Volume(v), veh/h	176	761	17	306	733	98	109	421	176	191	257	17
Grp Sat Flow(s),veh/h/ln	1687	1662	1542	1687	1735	1543	1700	1675	1545	1700	1675	1547
Q Serve(g_s), s	5.6	10.4	0.6	9.8	14.3	3.6	3.5	8.5	11.9	6.1	4.8	1.0
Cycle Q Clear(g_c), s	5.6	10.4	0.6	9.8	14.3	3.6	3.5	8.5	11.9	6.1	4.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	2372	734	362	1783	793	163	790	243	249	916	282
V/C Ratio(X)	0.75	0.32	0.02	0.85	0.41	0.12	0.67	0.53	0.72	0.77	0.28	0.06
Avail Cap(c_a), veh/h	414	2372	734	414	1783	793	386	1343	413	386	1343	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	17.8	15.3	48.2	16.5	13.9	51.5	42.6	44.1	50.1	38.8	37.2
Incr Delay (d2), s/veh	1.9	0.4	0.1	12.0	0.7	0.3	1.8	0.2	1.5	1.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.8	0.2	4.6	5.4	1.2	1.5	3.4	4.5	2.6	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	18.2	15.3	60.2	17.2	14.2	53.3	42.9	45.6	51.9	38.8	37.2
LnGrp LOS	D	B	B	E	B	B	D	D	D	D	D	D
Approach Vol, veh/h		954			1137			706			465	
Approach Delay, s/veh		24.4			28.5			45.2			44.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.3	58.3	9.8	25.7	12.1	62.4	12.6	22.9				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	13.5	34.1	12.5	29.4	13.5	34.1	12.5	29.4				
Max Q Clear Time (g_c+I1), s	11.8	12.4	5.5	6.8	7.6	16.3	8.1	13.9				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.7	0.0	2.2	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	929	485	0	837	673	0	0	0	189	0	515
Future Volume (veh/h)	0	929	485	0	837	673	0	0	0	189	0	515
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826				1826	1826	1826
Adj Flow Rate, veh/h	0	968	261	0	872	701				197	0	414
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	5	5				5	5	5
Cap, veh/h	0	2987	925	0	2987	1203				629	0	560
Arrive On Green	0.00	0.60	0.60	0.00	1.00	1.00				0.18	0.00	0.18
Sat Flow, veh/h	0	5149	1543	0	5149	1541				3478	0	3095
Grp Volume(v), veh/h	0	968	261	0	872	701				197	0	414
Grp Sat Flow(s),veh/h/ln	0	1662	1543	0	1662	1541				1739	0	1547
Q Serve(g_s), s	0.0	5.3	4.5	0.0	0.0	0.0				2.7	0.0	7.0
Cycle Q Clear(g_c), s	0.0	5.3	4.5	0.0	0.0	0.0				2.7	0.0	7.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2987	925	0	2987	1203				629	0	560
V/C Ratio(X)	0.00	0.32	0.28	0.00	0.29	0.58				0.31	0.00	0.74
Avail Cap(c_a), veh/h	0	2987	925	0	2987	1203				1069	0	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.89	0.89				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.5	5.3	0.0	0.0	0.0				19.6	0.0	21.3
Incr Delay (d2), s/veh	0.0	0.3	0.8	0.0	0.2	1.8				0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.0	0.0	0.1	0.6				1.0	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.8	6.1	0.0	0.2	1.8				19.7	0.0	22.0
LnGrp LOS	A	A	A	A	A	A				B	A	C
Approach Vol, veh/h		1229			1573						611	
Approach Delay, s/veh		5.8			0.9						21.3	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		39.3		15.7		39.3						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		26.0		16.9		26.0						
Max Q Clear Time (g_c+I1), s		7.3		9.0		2.0						
Green Ext Time (p_c), s		4.5		1.0		5.5						

Intersection Summary

HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	619	497	0	1074	287	437	2	533	0	0	0
Future Volume (veh/h)	0	619	497	0	1074	287	437	2	533	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	0	645	518	0	1119	158	456	0	300			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	5	5	0	5	5	5	5	5			
Cap, veh/h	0	2987	1203	0	2987	925	629	0	560			
Arrive On Green	0.00	1.00	1.00	0.00	0.60	0.60	0.18	0.00	0.18			
Sat Flow, veh/h	0	5149	1541	0	5149	1543	3478	0	3095			
Grp Volume(v), veh/h	0	645	518	0	1119	158	456	0	300			
Grp Sat Flow(s),veh/h/ln	0	1662	1541	0	1662	1543	1739	0	1547			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	6.4	2.5	6.8	0.0	4.8			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	6.4	2.5	6.8	0.0	4.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2987	1203	0	2987	925	629	0	560			
V/C Ratio(X)	0.00	0.22	0.43	0.00	0.37	0.17	0.73	0.00	0.54			
Avail Cap(c_a), veh/h	0	2987	1203	0	2987	925	1005	0	895			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.94	0.94	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	5.7	4.9	21.2	0.0	20.4			
Incr Delay (d2), s/veh	0.0	0.2	1.1	0.0	0.4	0.4	0.6	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.0	1.3	0.6	2.6	0.0	1.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	1.1	0.0	6.1	5.3	21.8	0.0	20.7			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1163			1277			756				
Approach Delay, s/veh		0.6			6.0			21.4				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.3				39.3		15.7				
Change Period (Y+Rc), s		6.3				6.3		5.8				
Max Green Setting (Gmax), s		27.0				27.0		15.9				
Max Q Clear Time (g_c+I1), s		2.0				8.4		8.8				
Green Ext Time (p_c), s		3.7				5.1		1.1				

Intersection Summary

HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	386	505	103	222	633	135	252	653	177	67	479	533
Future Volume (veh/h)	386	505	103	222	633	135	252	653	177	67	479	533
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	429	561	31	247	703	31	280	726	74	74	532	354
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	10	10	10	3	3	3	6	6	6	6	6	6
Cap, veh/h	514	1325	409	331	1089	331	363	1617	500	211	1393	430
Arrive On Green	0.16	0.28	0.28	0.10	0.21	0.21	0.11	0.33	0.33	0.06	0.28	0.28
Sat Flow, veh/h	3237	4782	1477	3428	5066	1540	3346	4944	1528	3346	4944	1527
Grp Volume(v), veh/h	429	561	31	247	703	31	280	726	74	74	532	354
Grp Sat Flow(s),veh/h/ln	1618	1594	1477	1714	1689	1540	1673	1648	1528	1673	1648	1527
Q Serve(g_s), s	12.2	9.2	1.5	6.7	12.1	1.5	7.8	11.0	3.3	2.0	8.3	20.7
Cycle Q Clear(g_c), s	12.2	9.2	1.5	6.7	12.1	1.5	7.8	11.0	3.3	2.0	8.3	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	514	1325	409	331	1089	331	363	1617	500	211	1393	430
V/C Ratio(X)	0.84	0.42	0.08	0.75	0.65	0.09	0.77	0.45	0.15	0.35	0.38	0.82
Avail Cap(c_a), veh/h	849	2259	697	900	2392	727	878	1816	561	878	1816	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	28.2	25.4	41.9	34.1	30.0	41.3	25.3	22.7	42.8	27.5	32.0
Incr Delay (d2), s/veh	2.9	0.2	0.1	2.5	0.6	0.1	2.6	0.2	0.1	0.7	0.2	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	3.3	0.5	2.8	4.7	0.5	3.2	4.0	1.1	0.8	3.1	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	28.4	25.5	44.4	34.7	30.1	43.9	25.5	22.8	43.5	27.7	39.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		1021			981			1080			960	
Approach Delay, s/veh		33.9			37.0			30.1			33.3	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	33.4	11.0	36.7	20.1	27.5	15.3	32.3				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	25.0	45.0	25.0	35.0	25.0	45.0	25.0	35.0				
Max Q Clear Time (g_c+1), s	10.7	11.2	4.0	13.0	14.2	14.1	9.8	22.7				
Green Ext Time (p_c), s	0.5	3.8	0.1	4.7	0.9	4.9	0.6	3.6				

Intersection Summary

HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	214	62	201	208	69	44	543	152	42	426	50
Future Volume (veh/h)	133	214	62	201	208	69	44	543	152	42	426	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	158	255	12	239	248	19	52	646	83	50	507	27
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	186	303	251	268	397	334	66	2277	695	64	2270	685
Arrive On Green	0.10	0.16	0.16	0.15	0.21	0.21	0.04	0.45	0.45	0.04	0.45	0.45
Sat Flow, veh/h	1781	1870	1547	1781	1870	1574	1753	5025	1535	1753	5025	1518
Grp Volume(v), veh/h	158	255	12	239	248	19	52	646	83	50	507	27
Grp Sat Flow(s),veh/h/ln	1781	1870	1547	1781	1870	1574	1753	1675	1535	1753	1675	1518
Q Serve(g_s), s	9.6	14.5	0.7	14.5	13.2	1.1	3.2	8.9	3.4	3.1	6.8	1.1
Cycle Q Clear(g_c), s	9.6	14.5	0.7	14.5	13.2	1.1	3.2	8.9	3.4	3.1	6.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	303	251	268	397	334	66	2277	695	64	2270	685
V/C Ratio(X)	0.85	0.84	0.05	0.89	0.62	0.06	0.78	0.28	0.12	0.78	0.22	0.04
Avail Cap(c_a), veh/h	227	420	347	413	629	529	120	2277	695	120	2270	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	44.7	38.9	45.9	39.3	34.5	52.5	18.9	17.4	52.6	18.4	16.8
Incr Delay (d2), s/veh	18.7	7.8	0.0	10.4	0.6	0.0	7.3	0.3	0.4	7.6	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	7.2	0.3	7.0	5.9	0.4	1.5	3.3	1.2	1.5	2.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	52.6	38.9	56.3	40.0	34.6	59.7	19.2	17.7	60.2	18.6	16.9
LnGrp LOS	E	D	D	E	D	C	E	B	B	E	B	B
Approach Vol, veh/h		425			506			781			584	
Approach Delay, s/veh		57.6			47.5			21.7			22.1	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	57.3	21.0	23.1	8.7	57.2	15.5	28.6				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	5	* 31	25.5	24.7	7.5	30.5	14.0	* 37				
Max Q Clear Time (g_c+1/3), s	10.9	10.9	16.5	16.5	5.2	8.8	11.6	15.2				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.1	0.0	2.0	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	293	38	178	15	7	12	257	502	5	19	465	459
Future Volume (veh/h)	293	38	178	15	7	12	257	502	5	19	465	459
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	362	47	63	19	9	0	317	620	4	23	574	157
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	414	465	391	39	70	59	366	2313	695	45	968	424
Arrive On Green	0.23	0.25	0.25	0.02	0.04	0.00	0.21	0.46	0.46	0.03	0.28	0.28
Sat Flow, veh/h	1767	1856	1563	1767	1856	1572	1753	5025	1510	1753	3497	1530
Grp Volume(v), veh/h	362	47	63	19	9	0	317	620	4	23	574	157
Grp Sat Flow(s),veh/h/ln	1767	1856	1563	1767	1856	1572	1753	1675	1510	1753	1749	1530
Q Serve(g_s), s	14.7	1.4	2.3	0.8	0.3	0.0	13.0	5.6	0.1	1.0	10.6	6.1
Cycle Q Clear(g_c), s	14.7	1.4	2.3	0.8	0.3	0.0	13.0	5.6	0.1	1.0	10.6	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	465	391	39	70	59	366	2313	695	45	968	424
V/C Ratio(X)	0.87	0.10	0.16	0.49	0.13	0.00	0.87	0.27	0.01	0.52	0.59	0.37
Avail Cap(c_a), veh/h	630	1490	1255	138	974	825	531	4077	1225	146	2070	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	21.4	21.8	35.9	34.6	0.0	28.4	12.4	10.9	35.8	23.2	21.7
Incr Delay (d2), s/veh	8.7	0.1	0.2	9.4	0.8	0.0	10.1	0.1	0.0	8.9	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.6	0.8	0.4	0.2	0.0	5.9	1.7	0.0	0.5	3.9	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	21.5	22.0	45.3	35.4	0.0	38.5	12.4	10.9	44.7	23.8	22.2
LnGrp LOS	D	C	C	D	D	A	D	B	B	D	C	C
Approach Vol, veh/h		472			28			941			754	
Approach Delay, s/veh		32.7			42.1			21.2			24.1	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	38.7	6.1	23.1	20.0	25.1	21.9	7.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.2	60.3	5.8	59.7	22.5	44.0	26.5	39.0				
Max Q Clear Time (g_c+1), s	13.0	7.6	2.8	4.3	15.0	12.6	16.7	2.3				
Green Ext Time (p_c), s	0.0	4.2	0.0	0.4	0.6	4.2	0.8	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											24.9	
HCM 6th LOS											C	



HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	138	75	290	172	58	75	522	244	45	549	96
Future Volume (veh/h)	124	138	75	290	172	58	75	522	244	45	549	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	146	162	10	341	202	16	88	614	158	53	646	106
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	184	380	164	387	758	333	112	1573	480	80	884	145
Arrive On Green	0.10	0.11	0.11	0.22	0.22	0.22	0.07	0.32	0.32	0.05	0.30	0.30
Sat Flow, veh/h	1767	3526	1526	1767	3526	1550	1725	4944	1507	1725	2951	483
Grp Volume(v), veh/h	146	162	10	341	202	16	88	614	158	53	376	376
Grp Sat Flow(s),veh/h/ln	1767	1763	1526	1767	1763	1550	1725	1648	1507	1725	1721	1713
Q Serve(g_s), s	5.5	2.9	0.4	12.7	3.2	0.6	3.4	6.6	5.4	2.1	13.3	13.4
Cycle Q Clear(g_c), s	5.5	2.9	0.4	12.7	3.2	0.6	3.4	6.6	5.4	2.1	13.3	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	184	380	164	387	758	333	112	1573	480	80	515	513
V/C Ratio(X)	0.79	0.43	0.06	0.88	0.27	0.05	0.78	0.39	0.33	0.66	0.73	0.73
Avail Cap(c_a), veh/h	649	2072	897	649	2072	911	760	3633	1107	760	1264	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	28.4	27.3	25.7	22.2	21.2	31.3	18.1	17.7	31.9	21.4	21.4
Incr Delay (d2), s/veh	2.9	0.8	0.2	4.1	0.2	0.1	4.4	0.2	0.4	3.4	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.2	0.1	5.2	1.2	0.2	1.4	2.1	1.7	0.9	4.8	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	29.2	27.4	29.8	22.4	21.2	35.7	18.2	18.1	35.3	23.4	23.4
LnGrp LOS	C	C	C	C	C	C	D	B	B	D	C	C
Approach Vol, veh/h		318			559			860			805	
Approach Delay, s/veh		30.7			26.9			20.0			24.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	28.7	18.9	12.8	8.9	27.4	11.6	20.1				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	50.0	25.0	40.0	30.0	50.0	25.0	40.0				
Max Q Clear Time (g_c+14), s	14.1	8.6	14.7	4.9	5.4	15.4	7.5	5.2				
Green Ext Time (p_c), s	0.0	4.7	0.2	1.0	0.1	4.5	0.1	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											24.2	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	188	54	483	120	257	63	226	277	384	455	50
Future Volume (veh/h)	41	188	54	483	120	257	63	226	277	384	455	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	196	5	314	390	80	66	235	73	400	474	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	10	10	2	2	2	4	4	4	4	4	4
Cap, veh/h	147	293	129	532	559	465	100	634	276	390	769	73
Arrive On Green	0.09	0.09	0.09	0.30	0.30	0.30	0.06	0.18	0.18	0.11	0.24	0.24
Sat Flow, veh/h	1668	3328	1459	1781	1870	1556	1753	3497	1525	3401	3218	304
Grp Volume(v), veh/h	43	196	5	314	390	80	66	235	73	400	257	262
Grp Sat Flow(s),veh/h/ln	1668	1664	1459	1781	1870	1556	1753	1749	1525	1700	1749	1774
Q Serve(g_s), s	1.4	3.2	0.2	8.5	10.5	2.2	2.1	3.3	2.3	6.5	7.4	7.5
Cycle Q Clear(g_c), s	1.4	3.2	0.2	8.5	10.5	2.2	2.1	3.3	2.3	6.5	7.4	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	147	293	129	532	559	465	100	634	276	390	418	424
V/C Ratio(X)	0.29	0.67	0.04	0.59	0.70	0.17	0.66	0.37	0.26	1.03	0.61	0.62
Avail Cap(c_a), veh/h	147	293	129	1162	1220	1015	232	2065	900	390	1002	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	25.1	23.7	16.9	17.6	14.7	26.2	20.4	20.0	25.1	19.3	19.3
Incr Delay (d2), s/veh	1.1	5.7	0.1	1.0	1.6	0.2	7.2	0.4	0.5	52.5	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.1	3.2	4.2	0.7	1.0	1.2	0.7	5.1	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	30.8	23.8	18.0	19.2	14.9	33.4	20.7	20.5	77.6	20.7	20.8
LnGrp LOS	C	C	C	B	B	B	C	C	C	F	C	C
Approach Vol, veh/h		244		784		374		919				
Approach Delay, s/veh		29.7		18.3		22.9		45.5				
Approach LOS		C		B		C		D				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	14.8		9.5	7.7	18.0		21.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	33.5	33.5		5.0	7.5	32.5		37.0				
Max Q Clear Time (g_c+1), s	19.5	5.3		5.2	4.1	9.5		12.5				
Green Ext Time (p_c), s	0.0	1.5		0.0	0.0	2.7		3.6				

Intersection Summary

HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↗	↗		↗	↑↑		↗	↑↑	↗
Traffic Volume (veh/h)	235	97	186	40	134	26	186	596	29	40	780	391
Future Volume (veh/h)	235	97	186	40	134	26	186	596	29	40	780	391
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	253	104	200	43	144	28	200	641	31	43	839	420
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	349	412	569	73	242	47	242	1450	70	70	1154	655
Arrive On Green	0.10	0.22	0.22	0.04	0.16	0.16	0.14	0.43	0.43	0.04	0.34	0.34
Sat Flow, veh/h	3456	1870	1574	1781	1512	294	1725	3336	161	1725	3441	1490
Grp Volume(v), veh/h	253	104	200	43	0	172	200	330	342	43	839	420
Grp Sat Flow(s),veh/h/ln	1728	1870	1574	1781	0	1806	1725	1721	1777	1725	1721	1490
Q Serve(g_s), s	4.9	3.1	6.4	1.6	0.0	6.0	7.7	9.2	9.2	1.7	14.7	15.1
Cycle Q Clear(g_c), s	4.9	3.1	6.4	1.6	0.0	6.0	7.7	9.2	9.2	1.7	14.7	15.1
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	349	412	569	73	0	289	242	748	772	70	1154	655
V/C Ratio(X)	0.72	0.25	0.35	0.59	0.00	0.59	0.83	0.44	0.44	0.61	0.73	0.64
Avail Cap(c_a), veh/h	409	968	1037	174	0	897	285	835	862	169	1439	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	22.0	16.0	32.2	0.0	26.7	28.6	13.5	13.5	32.3	20.0	15.1
Incr Delay (d2), s/veh	5.2	0.3	0.4	7.4	0.0	1.9	15.9	0.4	0.4	8.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.3	2.1	0.8	0.0	2.6	4.0	3.0	3.1	0.8	5.3	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	22.3	16.4	39.7	0.0	28.6	44.5	13.9	13.9	40.6	21.4	16.5
LnGrp LOS	D	C	B	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		557			215			872			1302	
Approach Delay, s/veh		26.0			30.8			20.9			20.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	27.4	7.3	19.6	7.3	34.2	11.4	15.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	1.3	28.6	6.7	35.4	6.7	33.2	8.1	34.0				
Max Q Clear Time (g_c+1/3), s	19.7	17.1	3.6	8.4	3.7	11.2	6.9	8.0				
Green Ext Time (p_c), s	0.1	5.3	0.0	1.2	0.0	3.7	0.1	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				22.4								
HCM 6th LOS				C								

# HCM 6th Signalized Intersection Summary

## 48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	625	240	49	1216	0	0	0	0	537	0	233
Future Volume (veh/h)	0	625	240	49	1216	0	0	0	0	537	0	233
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1707	1707	1707	0				1707	1707	1707
Adj Flow Rate, veh/h	0	718	168	56	1398	0				617	0	216
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	13	13	13	13	0				13	13	13
Cap, veh/h	0	2867	879	111	3214	0				698	0	311
Arrive On Green	0.00	0.62	0.62	0.04	0.69	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4815	1428	3155	4815	0				3252	0	1447
Grp Volume(v), veh/h	0	718	168	56	1398	0				617	0	216
Grp Sat Flow(s),veh/h/ln	0	1554	1428	1577	1554	0				1626	0	1447
Q Serve(g_s), s	0.0	8.4	6.2	2.1	16.0	0.0				22.1	0.0	16.5
Cycle Q Clear(g_c), s	0.0	8.4	6.2	2.1	16.0	0.0				22.1	0.0	16.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2867	879	111	3214	0				698	0	311
V/C Ratio(X)	0.00	0.25	0.19	0.50	0.43	0.00				0.88	0.00	0.70
Avail Cap(c_a), veh/h	0	2867	879	315	3214	0				1314	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.5	10.1	56.9	8.3	0.0				45.7	0.0	43.5
Incr Delay (d2), s/veh	0.0	0.2	0.5	1.3	0.4	0.0				1.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	1.9	0.8	4.6	0.0				9.0	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.7	10.6	58.2	8.7	0.0				47.2	0.0	44.6
LnGrp LOS	A	B	B	E	A	A				D	A	D
Approach Vol, veh/h		886			1454						833	
Approach Delay, s/veh		10.7			10.6						46.5	
Approach LOS		B			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	8.9	79.8		31.3		88.7						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	18	43.0		48.5		60.0						
Max Q Clear Time (g_c+I), s	14	10.4		24.1		18.0						
Green Ext Time (p_c), s	0.0	5.7		1.7		12.7						

### Intersection Summary

HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗		↑↑↑		↖	↖	↗	↖		↗
Traffic Volume (veh/h)	214	794	151	0	940	32	363	69	49	36	0	620
Future Volume (veh/h)	214	794	151	0	940	32	363	69	49	36	0	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	0	1707	1707	1707	1707	1707	1856	0	1856
Adj Flow Rate, veh/h	238	882	0	0	1044	34	458	0	12	40	0	249
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	13	13	13	0	13	13	13	13	13	3	0	3
Cap, veh/h	163	3362		0	3425	111	595	0	262	0	0	0
Arrive On Green	0.10	0.72	0.00	0.00	0.58	0.58	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1626	4661	2547	0	6122	191	3252	0	1435		0	
Grp Volume(v), veh/h	238	882	0	0	781	297	458	0	12		0.0	
Grp Sat Flow(s),veh/h/ln	1626	1554	1273	0	1468	1669	1626	0	1435			
Q Serve(g_s), s	12.0	7.8	0.0	0.0	10.8	10.9	16.1	0.0	0.8			
Cycle Q Clear(g_c), s	12.0	7.8	0.0	0.0	10.8	10.9	16.1	0.0	0.8			
Prop In Lane	1.00		1.00	0.00		0.11	1.00		1.00			
Lane Grp Cap(c), veh/h	163	3362		0	2564	972	595	0	262			
V/C Ratio(X)	1.46	0.26		0.00	0.30	0.31	0.77	0.00	0.05			
Avail Cap(c_a), veh/h	163	3362		0	2564	972	1165	0	514			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	54.0	5.7	0.0	0.0	12.7	12.7	46.6	0.0	40.4			
Incr Delay (d2), s/veh	239.1	0.2	0.0	0.0	0.3	0.8	2.1	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	15.6	2.1	0.0	0.0	3.5	4.1	6.7	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	293.1	5.9	0.0	0.0	13.0	13.6	48.8	0.0	40.5			
LnGrp LOS	F	A		A	B	B	D	A	D			
Approach Vol, veh/h		1120	A		1078			470				
Approach Delay, s/veh		67.0			13.2			48.6				
Approach LOS		E			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		92.6			16.7	75.9		27.4				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		51.0			* 12	34.0		43.0				
Max Q Clear Time (g_c+1), s		9.8			14.0	12.9		18.1				
Green Ext Time (p_c), s		4.1			0.0	4.9		2.2				

Intersection Summary

HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	596	49	42	703	31	48	316	46	18	350	77
Future Volume (veh/h)	67	596	49	42	703	31	48	316	46	18	350	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	72	641	23	45	756	31	52	340	15	19	376	21
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	137	1052	978	102	962	39	122	789	345	55	661	288
Arrive On Green	0.08	0.32	0.32	0.06	0.30	0.30	0.07	0.23	0.23	0.03	0.19	0.19
Sat Flow, veh/h	1626	3244	2471	1626	3173	130	1767	3441	1504	1725	3441	1501
Grp Volume(v), veh/h	72	641	23	45	386	401	52	340	15	19	376	21
Grp Sat Flow(s),veh/h/ln	1626	1622	1235	1626	1622	1681	1767	1721	1504	1725	1721	1501
Q Serve(g_s), s	2.4	9.3	0.3	1.5	12.2	12.2	1.6	4.7	0.4	0.6	5.6	0.6
Cycle Q Clear(g_c), s	2.4	9.3	0.3	1.5	12.2	12.2	1.6	4.7	0.4	0.6	5.6	0.6
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	1052	978	102	492	509	122	789	345	55	661	288
V/C Ratio(X)	0.53	0.61	0.02	0.44	0.79	0.79	0.42	0.43	0.04	0.34	0.57	0.07
Avail Cap(c_a), veh/h	435	1736	1499	435	868	900	473	1228	536	462	1228	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	15.9	10.4	25.3	17.9	17.9	25.0	18.5	16.8	26.6	20.5	18.6
Incr Delay (d2), s/veh	1.2	0.5	0.0	1.1	1.1	1.0	0.9	0.4	0.0	1.4	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.8	0.1	0.5	3.8	4.0	0.6	1.6	0.1	0.2	2.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	16.5	10.4	26.4	18.9	18.9	25.9	18.8	16.9	27.9	21.2	18.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	C	B
Approach Vol, veh/h		736			832			407			416	
Approach Delay, s/veh		17.2			19.3			19.7			21.4	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	18.9	7.5	23.9	7.9	16.8	8.7	22.7				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+1), s	12.6	6.7	3.5	11.3	3.6	7.6	4.4	14.2				
Green Ext Time (p_c), s	0.0	1.6	0.0	3.8	0.0	1.7	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	352	30	241	823	57	68	681	245	45	674	126
Future Volume (veh/h)	82	352	30	241	823	57	68	681	245	45	674	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	90	387	28	265	904	22	75	748	87	49	741	41
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	121	916	66	336	1073	470	124	1003	439	99	960	420
Arrive On Green	0.07	0.30	0.30	0.11	0.33	0.33	0.07	0.29	0.29	0.06	0.28	0.28
Sat Flow, veh/h	1626	3064	221	3155	3244	1421	1767	3441	1506	1725	3441	1506
Grp Volume(v), veh/h	90	204	211	265	904	22	75	748	87	49	741	41
Grp Sat Flow(s),veh/h/ln	1626	1622	1663	1577	1622	1421	1767	1721	1506	1725	1721	1506
Q Serve(g_s), s	4.4	8.2	8.3	6.7	21.1	0.9	3.4	16.0	3.5	2.2	16.1	1.6
Cycle Q Clear(g_c), s	4.4	8.2	8.3	6.7	21.1	0.9	3.4	16.0	3.5	2.2	16.1	1.6
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	485	497	336	1073	470	124	1003	439	99	960	420
V/C Ratio(X)	0.74	0.42	0.42	0.79	0.84	0.05	0.60	0.75	0.20	0.49	0.77	0.10
Avail Cap(c_a), veh/h	299	597	612	581	1194	523	325	1267	555	318	1267	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	22.9	22.9	35.5	25.3	18.5	36.8	26.1	21.7	37.2	27.0	21.8
Incr Delay (d2), s/veh	3.3	0.7	0.7	1.6	5.5	0.1	1.8	2.2	0.3	1.4	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.0	3.1	2.5	8.1	0.3	1.4	6.3	1.2	0.9	6.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	23.7	23.7	37.1	30.8	18.6	38.5	28.3	22.0	38.7	29.5	21.9
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		505			1191			910			831	
Approach Delay, s/veh		26.6			32.0			28.6			29.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	29.8	12.7	30.4	9.7	28.7	10.1	33.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	15.0	30.0				
Max Q Clear Time (g_c+1/2), s	14.2	18.0	8.7	10.3	5.4	18.1	6.4	23.1				
Green Ext Time (p_c), s	0.0	5.0	0.0	2.7	0.0	4.6	0.0	3.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											29.7	
HCM 6th LOS											C	



HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘	↖ ↗ ↘		↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘	↖ ↗ ↘
Traffic Volume (veh/h)	116	386	29	13	719	63	48	189	39	55	101	151
Future Volume (veh/h)	116	386	29	13	719	63	48	189	39	55	101	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	129	429	25	14	799	26	53	210	10	61	112	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	2	2	2
Cap, veh/h	164	1829	105	39	1069	468	120	326	270	131	340	282
Arrive On Green	0.10	0.41	0.41	0.02	0.33	0.33	0.07	0.18	0.18	0.07	0.18	0.18
Sat Flow, veh/h	1626	4500	259	1626	3244	1421	1767	1856	1537	1781	1870	1549
Grp Volume(v), veh/h	129	295	159	14	799	26	53	210	10	61	112	40
Grp Sat Flow(s),veh/h/ln	1626	1554	1652	1626	1622	1421	1767	1856	1537	1781	1870	1549
Q Serve(g_s), s	4.8	3.8	3.9	0.5	13.5	0.8	1.8	6.5	0.3	2.0	3.2	1.3
Cycle Q Clear(g_c), s	4.8	3.8	3.9	0.5	13.5	0.8	1.8	6.5	0.3	2.0	3.2	1.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	1263	671	39	1069	468	120	326	270	131	340	282
V/C Ratio(X)	0.78	0.23	0.24	0.36	0.75	0.06	0.44	0.64	0.04	0.47	0.33	0.14
Avail Cap(c_a), veh/h	396	1514	805	396	1580	692	430	603	499	434	607	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	12.0	12.0	29.6	18.4	14.1	27.6	23.6	21.1	27.4	21.9	21.2
Incr Delay (d2), s/veh	3.1	0.1	0.2	2.0	1.2	0.1	1.0	3.3	0.1	1.0	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.1	1.2	0.2	4.4	0.2	0.7	2.9	0.1	0.8	1.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	12.1	12.2	31.6	19.5	14.2	28.5	26.9	21.1	28.3	22.5	21.4
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		583			839			273			213	
Approach Delay, s/veh		16.1			19.6			27.0			24.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	16.5	5.5	31.0	8.2	16.9	10.2	26.3				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+14), s	14.0	8.5	2.5	5.9	3.8	5.2	6.8	15.5				
Green Ext Time (p_c), s	0.0	1.2	0.0	2.7	0.0	0.5	0.0	4.6				

Intersection Summary

HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	154	76	56	379	42	142	560	32	50	724	161
Future Volume (veh/h)	59	154	76	56	379	42	142	560	32	50	724	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	63	164	28	60	403	43	151	596	13	53	770	55
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	181	586	488	387	520	55	203	1132	490	145	1016	440
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.12	0.34	0.34	0.09	0.31	0.31
Sat Flow, veh/h	860	1707	1421	1084	1513	161	1668	3328	1441	1668	3328	1439
Grp Volume(v), veh/h	63	164	28	60	0	446	151	596	13	53	770	55
Grp Sat Flow(s),veh/h/ln	860	1707	1421	1084	0	1675	1668	1664	1441	1668	1664	1439
Q Serve(g_s), s	5.6	5.5	1.0	3.4	0.0	18.9	6.9	11.4	0.5	2.4	16.6	2.2
Cycle Q Clear(g_c), s	24.5	5.5	1.0	8.9	0.0	18.9	6.9	11.4	0.5	2.4	16.6	2.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	586	488	387	0	575	203	1132	490	145	1016	440
V/C Ratio(X)	0.35	0.28	0.06	0.15	0.00	0.78	0.74	0.53	0.03	0.37	0.76	0.13
Avail Cap(c_a), veh/h	211	646	538	426	0	634	526	1890	818	526	1890	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	18.9	17.4	22.1	0.0	23.3	33.6	21.0	17.4	34.1	24.9	19.9
Incr Delay (d2), s/veh	1.1	0.3	0.0	0.2	0.0	5.5	2.0	0.4	0.0	0.6	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.0	0.3	0.8	0.0	7.5	2.7	3.9	0.1	0.9	5.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	19.2	17.5	22.3	0.0	28.8	35.6	21.4	17.4	34.7	26.1	20.0
LnGrp LOS	D	B	B	C	A	C	D	C	B	C	C	C
Approach Vol, veh/h		255			506			760			878	
Approach Delay, s/veh		23.0			28.0			24.2			26.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.6	33.5		34.2	14.3	30.7		34.2				
Change Period (Y+Rc), s	4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	25	45.0		30.0	* 25	45.0		30.0				
Max Q Clear Time (g_c+I), s	14.4	13.4		26.5	8.9	18.6		20.9				
Green Ext Time (p_c), s	0.0	3.7		0.4	0.2	5.1		1.9				

Intersection Summary

HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	29.2											
Intersection LOS	D											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	76	151	14	39	328	28	146	239	9	34	174	31
Future Vol, veh/h	76	151	14	39	328	28	146	239	9	34	174	31
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	13	13	13	13	13	13	3	3	3	3	3	3
Mvmt Flow	78	154	14	40	335	29	149	244	9	35	178	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.8	35.9	34.5	18.8
HCM LOS	C	E	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	32%	10%	14%
Vol Thru, %	61%	63%	83%	73%
Vol Right, %	2%	6%	7%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	394	241	395	239
LT Vol	146	76	39	34
Through Vol	239	151	328	174
RT Vol	9	14	28	31
Lane Flow Rate	402	246	403	244
Geometry Grp	1	1	1	1
Degree of Util (X)	0.809	0.537	0.819	0.518
Departure Headway (Hd)	7.247	7.861	7.312	7.653
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	499	457	492	468
Service Time	5.325	5.954	5.389	5.749
HCM Lane V/C Ratio	0.806	0.538	0.819	0.521
HCM Control Delay	34.5	19.8	35.9	18.8
HCM Lane LOS	D	C	E	C
HCM 95th-tile Q	7.7	3.1	7.9	2.9

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	6	4	2	250	36	346	5	529	104	224	688	37
Future Volume (veh/h)	6	4	2	250	36	346	5	529	104	224	688	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	7	4	2	272	39	328	5	575	34	243	748	16
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
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	327	170	621	307	38	291	22	771	332	223	1173	508
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.01	0.23	0.23	0.13	0.35	0.35
Sat Flow, veh/h	617	423	1546	593	94	724	1668	3328	1434	1668	3328	1441
Grp Volume(v), veh/h	11	0	2	639	0	0	5	575	34	243	748	16
Grp Sat Flow(s),veh/h/ln1040		0	1546	1410	0	0	1668	1664	1434	1668	1664	1441
Q Serve(g_s), s	0.0	0.0	0.1	29.7	0.0	0.0	0.2	12.0	1.4	10.0	14.0	0.5
Cycle Q Clear(g_c), s	0.3	0.0	0.1	30.0	0.0	0.0	0.2	12.0	1.4	10.0	14.0	0.5
Prop In Lane	0.64		1.00	0.43		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	0	621	635	0	0	22	771	332	223	1173	508
V/C Ratio(X)	0.02	0.00	0.00	1.01	0.00	0.00	0.23	0.75	0.10	1.09	0.64	0.03
Avail Cap(c_a), veh/h	496	0	621	635	0	0	223	1336	576	223	1336	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	13.4	24.0	0.0	0.0	36.5	26.7	22.6	32.4	20.2	15.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	37.3	0.0	0.0	1.9	1.5	0.1	85.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	16.8	0.0	0.0	0.1	4.3	0.4	8.9	4.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	13.4	61.2	0.0	0.0	38.4	28.1	22.7	118.1	21.0	15.9
LnGrp LOS	B	A	B	F	A	A	D	C	C	F	C	B
Approach Vol, veh/h		13		639			614			1007		
Approach Delay, s/veh		13.5		61.2			27.9			44.4		
Approach LOS		B		E			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	23.8		36.2	5.7	32.8		36.2				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	30.0			25.0	* 10	30.0		30.0				
Max Q Clear Time (g_c+I), s	14.0			2.3	2.2	16.0		32.0				
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	3.8		0.0				

Intersection Summary

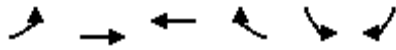
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	28	245	552	263	137	136	
Future Volume (veh/h)	28	245	552	263	137	136	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1856	1856	
Adj Flow Rate, veh/h	29	258	581	256	144	90	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	10	10	10	10	3	3	
Cap, veh/h	54	2225	641	282	177	110	
Arrive On Green	0.03	0.67	0.56	0.56	0.17	0.17	
Sat Flow, veh/h	1668	3416	1153	508	1034	646	
Grp Volume(v), veh/h	29	258	0	837	235	0	
Grp Sat Flow(s),veh/h/ln	1668	1664	0	1660	1688	0	
Q Serve(g_s), s	1.0	1.6	0.0	25.3	7.5	0.0	
Cycle Q Clear(g_c), s	1.0	1.6	0.0	25.3	7.5	0.0	
Prop In Lane	1.00			0.31	0.61	0.38	
Lane Grp Cap(c), veh/h	54	2225	0	923	288	0	
V/C Ratio(X)	0.54	0.12	0.00	0.91	0.82	0.00	
Avail Cap(c_a), veh/h	152	2737	0	1081	449	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	26.7	3.3	0.0	11.1	22.4	0.0	
Incr Delay (d2), s/veh	8.0	0.0	0.0	9.9	6.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	8.2	3.0	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	34.7	3.4	0.0	21.1	28.9	0.0	
LnGrp LOS	C	A	A	C	C	A	
Approach Vol, veh/h		287	837		235		
Approach Delay, s/veh		6.5	21.1		28.9		
Approach LOS		A	C		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				42.0	14.1	6.3	35.7
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				46.1	14.9	5.1	36.5
Max Q Clear Time (g_c+1), s				3.6	9.5	3.0	27.3
Green Ext Time (p_c), s				1.6	0.3	0.0	3.9
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			19.3				
HCM 6th LOS			B				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↗	↖	↑	↗	↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	122	15	86	17	9	10	332	518	6	21	503	376
Future Volume (veh/h)	122	15	86	17	9	10	332	518	6	21	503	376
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1618	1618	1618	1618	1618	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	128	16	13	18	9	0	349	545	4	22	529	162
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	19	19	19	19	19	19	10	10	10	10	10	10
Cap, veh/h	412	435	189	66	142	63	394	1423	688	163	805	562
Arrive On Green	0.14	0.14	0.14	0.04	0.05	0.00	0.24	0.43	0.43	0.05	0.24	0.24
Sat Flow, veh/h	2990	3075	1338	1541	3075	1372	1668	3328	1460	3237	3328	1475
Grp Volume(v), veh/h	128	16	13	18	9	0	349	545	4	22	529	162
Grp Sat Flow(s),veh/h/ln	1495	1537	1338	1541	1537	1372	1668	1664	1460	1618	1664	1475
Q Serve(g_s), s	2.5	0.3	0.6	0.7	0.2	0.0	13.2	7.3	0.1	0.4	9.4	5.0
Cycle Q Clear(g_c), s	2.5	0.3	0.6	0.7	0.2	0.0	13.2	7.3	0.1	0.4	9.4	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	435	189	66	142	63	394	1423	688	163	805	562
V/C Ratio(X)	0.31	0.04	0.07	0.27	0.06	0.00	0.89	0.38	0.01	0.13	0.66	0.29
Avail Cap(c_a), veh/h	914	1645	716	471	1645	734	510	1781	845	990	1781	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	24.2	24.3	30.3	29.8	0.0	24.1	12.8	9.2	29.7	22.3	14.1
Incr Delay (d2), s/veh	0.2	0.0	0.2	2.2	0.1	0.0	12.1	0.2	0.0	0.1	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	0.2	0.3	0.1	0.0	5.7	2.1	0.0	0.1	3.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	24.3	24.5	32.5	29.9	0.0	36.2	13.0	9.2	29.8	23.3	14.4
LnGrp LOS	C	C	C	C	C	A	D	B	A	C	C	B
Approach Vol, veh/h		157			27			898			713	
Approach Delay, s/veh		25.3			31.7			22.0			21.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	34.5	7.5	15.5	20.1	22.3	13.7	9.2				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	20	35.0	* 20	35.0	* 20	35.0	* 20	35.0				
Max Q Clear Time (g_c+1), s	12.4	9.3	2.7	2.6	15.2	11.4	4.5	2.2				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.1	0.2	3.6	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖		↖	↑↑	↗	↖	↑↗	
Traffic Volume (veh/h)	2	152	22	950	444	54	31	423	646	65	456	13
Future Volume (veh/h)	2	152	22	950	444	54	31	423	646	65	456	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	2	157	0	979	458	55	32	436	438	67	470	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	9	203		1059	670	80	98	789	826	140	869	22
Arrive On Green	0.01	0.12	0.00	0.33	0.44	0.44	0.06	0.24	0.24	0.08	0.26	0.26
Sat Flow, veh/h	1668	1752	0	3237	1531	184	1668	3328	1435	1668	3313	84
Grp Volume(v), veh/h	2	157	0	979	0	513	32	436	438	67	236	246
Grp Sat Flow(s),veh/h/ln	1668	1752	0	1618	0	1715	1668	1664	1435	1668	1664	1733
Q Serve(g_s), s	0.1	8.8	0.0	29.5	0.0	24.3	1.9	11.6	19.4	3.9	12.3	12.4
Cycle Q Clear(g_c), s	0.1	8.8	0.0	29.5	0.0	24.3	1.9	11.6	19.4	3.9	12.3	12.4
Prop In Lane	1.00		0.00	1.00		0.11	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	9	203		1059	0	750	98	789	826	140	437	455
V/C Ratio(X)	0.22	0.77		0.92	0.00	0.68	0.33	0.55	0.53	0.48	0.54	0.54
Avail Cap(c_a), veh/h	247	606		1279	0	750	247	1151	982	330	576	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	43.5	0.0	32.8	0.0	22.8	45.7	33.9	13.8	44.3	32.1	32.1
Incr Delay (d2), s/veh	4.5	8.6	0.0	9.3	0.0	2.9	0.7	0.2	0.2	0.9	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.2	0.0	12.2	0.0	9.6	0.8	4.4	5.5	1.6	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	52.1	0.0	42.2	0.0	25.7	46.4	34.1	14.0	45.2	32.5	32.5
LnGrp LOS	D	D		D	A	C	D	C	B	D	C	C
Approach Vol, veh/h		159	A		1492			906			549	
Approach Delay, s/veh		52.1			36.5			24.8			34.0	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	30.5	38.8	18.7	10.6	33.1	6.2	51.3				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	20.0	35.0	* 40	35.0	* 15	35.0	* 15	35.0				
Max Q Clear Time (g_c+1/3g), s	15.0	21.4	31.5	10.8	3.9	14.4	2.1	26.3				
Green Ext Time (p_c), s	0.0	2.1	1.6	1.1	0.0	1.4	0.0	2.6				

Intersection Summary

HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
 59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
 Existing (2021) AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↷	↶	↶↷		↶	↶↷
Traffic Volume (veh/h)	47	468	662	215	613	779
Future Volume (veh/h)	47	468	662	215	613	779
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	49	0	697	0	645	820
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	148		924		687	2542
Arrive On Green	0.05	0.00	0.28	0.00	0.41	0.76
Sat Flow, veh/h	3237	1485	3504	0	1668	3416
Grp Volume(v), veh/h	49	0	697	0	645	820
Grp Sat Flow(s),veh/h/ln	1618	1485	1664	0	1668	1664
Q Serve(g_s), s	0.9	0.0	12.0	0.0	23.4	4.9
Cycle Q Clear(g_c), s	0.9	0.0	12.0	0.0	23.4	4.9
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	148		924		687	2542
V/C Ratio(X)	0.33		0.75		0.94	0.32
Avail Cap(c_a), veh/h	1542		2114		795	2542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	20.8	0.0	17.8	2.3
Incr Delay (d2), s/veh	1.3	0.0	1.0	0.0	16.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.9	0.0	9.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.4	0.0	21.7	0.0	34.3	2.4
LnGrp LOS	C		C		C	A
Approach Vol, veh/h	49	A	697	A		1465
Approach Delay, s/veh	30.4		21.7			16.4
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	30.6	24.0			54.6	8.4
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30.0	40.0			40.0	30.0
Max Q Clear Time (g_c+Y), s	25.4	14.0			6.9	2.9
Green Ext Time (p_c), s	0.6	3.4			4.3	0.1

Intersection Summary





















HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	283	6	161	463	316	0	0	1066	291
Future Volume (veh/h)	0	0	0	283	6	161	463	316	0	0	1066	291
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No		No			
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				323	0	38	498	340	0	0	1146	96
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				429	0	191	598	3798	0	0	3317	796
Arrive On Green				0.12	0.00	0.12	0.06	0.25	0.00	0.00	0.52	0.52
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	6643	1531
Grp Volume(v), veh/h				323	0	38	498	340	0	0	1146	96
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1596	1531
Q Serve(g_s), s				8.0	0.0	2.0	12.9	4.6	0.0	0.0	9.5	2.9
Cycle Q Clear(g_c), s				8.0	0.0	2.0	12.9	4.6	0.0	0.0	9.5	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				429	0	191	598	3798	0	0	3317	796
V/C Ratio(X)				0.75	0.00	0.20	0.83	0.09	0.00	0.00	0.35	0.12
Avail Cap(c_a), veh/h				880	0	391	990	3798	0	0	3317	796
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.98	0.98	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.2	0.0	35.6	41.1	10.2	0.0	0.0	12.7	11.1
Incr Delay (d2), s/veh				2.7	0.0	0.5	1.2	0.0	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.4	0.0	1.8	5.9	1.2	0.0	0.0	3.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.9	0.0	36.1	42.3	10.3	0.0	0.0	12.9	11.4
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					361			838			1242	
Approach Delay, s/veh					40.4			29.3			12.8	
Approach LOS					D			C			B	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		73.3		16.7	20.7	52.6						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		56.0		22.4	26.0	25.0						
Max Q Clear Time (g_c+I1), s		6.6		10.0	14.9	11.5						
Green Ext Time (p_c), s		2.2		1.0	0.8	6.4						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				22.6								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↘	↙	↘	↘↙	↘↙↘			↘↙↘	↘
Traffic Volume (veh/h)	0	0	0	229	5	564	144	750	0	0	1459	546
Future Volume (veh/h)	0	0	0	229	5	564	144	750	0	0	1459	546
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				No
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				240	0	414	148	773	0	0	1504	200
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				844	0	376	231	3208	0	0	2642	807
Arrive On Green				0.24	0.00	0.24	0.02	0.21	0.00	0.00	0.52	0.52
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1548
Grp Volume(v), veh/h				240	0	414	148	773	0	0	1504	200
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1548
Q Serve(g_s), s				5.0	0.0	21.5	3.9	11.4	0.0	0.0	18.2	6.4
Cycle Q Clear(g_c), s				5.0	0.0	21.5	3.9	11.4	0.0	0.0	18.2	6.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				844	0	376	231	3208	0	0	2642	807
V/C Ratio(X)				0.28	0.00	1.10	0.64	0.24	0.00	0.00	0.57	0.25
Avail Cap(c_a), veh/h				844	0	376	800	3208	0	0	2642	807
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.84	0.84	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.0	0.0	34.3	42.9	17.6	0.0	0.0	14.6	11.8
Incr Delay (d2), s/veh				0.2	0.0	76.9	2.5	0.1	0.0	0.0	0.9	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	15.6	1.7	4.7	0.0	0.0	6.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.1	0.0	111.1	45.4	17.7	0.0	0.0	15.5	12.6
LnGrp LOS				C	A	F	D	B	A	A	B	B
Approach Vol, veh/h						654		921			1704	
Approach Delay, s/veh						80.7		22.2			15.2	
Approach LOS						F		C			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		62.7			10.1	52.6		27.3				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		57.0			21.0	32.0		21.5				
Max Q Clear Time (g_c+I1), s		13.4			5.9	20.2		23.5				
Green Ext Time (p_c), s		3.4			0.4	5.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	1	350	0	0	0	0	717	347	449	901	0
Future Volume (veh/h)	67	1	350	0	0	0	0	717	347	449	901	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	48	0	227				0	763	95	478	959	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	180	0	320				0	3528	847	552	3897	0
Arrive On Green	0.10	0.00	0.10				0.00	0.55	0.55	0.32	1.00	0.00
Sat Flow, veh/h	1767	0	3145				0	6643	1532	3428	5233	0
Grp Volume(v), veh/h	48	0	227				0	763	95	478	959	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1596	1532	1714	1689	0
Q Serve(g_s), s	2.3	0.0	6.3				0.0	5.5	2.7	11.8	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	6.3				0.0	5.5	2.7	11.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	180	0	320				0	3528	847	552	3897	0
V/C Ratio(X)	0.27	0.00	0.71				0.00	0.22	0.11	0.87	0.25	0.00
Avail Cap(c_a), veh/h	518	0	923				0	3528	847	914	3897	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	37.3	0.0	39.1				0.0	10.2	9.6	29.6	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	2.9				0.0	0.1	0.3	2.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.4				0.0	1.7	0.8	4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	0.0	42.0				0.0	10.4	9.9	31.8	0.1	0.0
LnGrp LOS	D	A	D				A	B	A	C	A	A
Approach Vol, veh/h		275						858			1437	
Approach Delay, s/veh		41.4						10.3			10.7	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	19.5	55.5				75.0		15.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	24.0	23.0				52.0		26.4				
Max Q Clear Time (g_c+I), s	11.8	7.5				2.0		8.3				
Green Ext Time (p_c), s	0.7	4.6				7.5		0.9				

Intersection Summary

HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	0	204	0	0	0	0	654	217	669	973	0
Future Volume (veh/h)	288	0	204	0	0	0	0	654	217	669	973	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	331	0	181				0	752	183	769	1118	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	535	0	238				0	1763	424	842	3669	0
Arrive On Green	0.15	0.00	0.15				0.00	0.43	0.43	0.49	1.00	0.00
Sat Flow, veh/h	3619	0	1610				0	4228	977	3428	5233	0
Grp Volume(v), veh/h	331	0	181				0	624	311	769	1118	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1660	1714	1689	0
Q Serve(g_s), s	7.7	0.0	9.7				0.0	11.5	11.7	18.6	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	9.7				0.0	11.5	11.7	18.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.59	1.00		0.00
Lane Grp Cap(c), veh/h	535	0	238				0	1466	721	842	3669	0
V/C Ratio(X)	0.62	0.00	0.76				0.00	0.43	0.43	0.91	0.30	0.00
Avail Cap(c_a), veh/h	1186	0	528				0	1466	721	990	3669	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	36.0	0.0	36.8				0.0	17.7	17.7	22.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	4.9				0.0	0.9	1.9	9.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	3.9				0.0	4.2	4.4	5.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	41.8				0.0	18.6	19.6	31.2	0.2	0.0
LnGrp LOS	D	A	D				A	B	B	C	A	A
Approach Vol, veh/h		512						935			1887	
Approach Delay, s/veh		38.8						18.9			12.8	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	36.1	44.8	19.1	70.9								
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7								
Max Green Setting (Gmax), s	26.0	19.0	29.5	49.0								
Max Q Clear Time (g_c+20), s	20.6	13.7	11.7	2.0								
Green Ext Time (p_c), s	1.5	1.9	1.6	5.2								

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	554	281	130	390	115	273	673	98	228	645	179
Future Volume (veh/h)	178	554	281	130	390	115	273	673	98	228	645	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	185	577	187	135	406	55	284	701	91	238	672	156
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	239	902	394	180	785	343	347	1338	172	297	1097	251
Arrive On Green	0.14	0.26	0.26	0.10	0.22	0.22	0.20	0.30	0.30	0.17	0.27	0.27
Sat Flow, veh/h	1767	3526	1542	1767	3526	1540	1767	4532	583	1767	4104	938
Grp Volume(v), veh/h	185	577	187	135	406	55	284	521	271	238	551	277
Grp Sat Flow(s),veh/h/ln	1767	1763	1542	1767	1763	1540	1767	1689	1738	1767	1689	1665
Q Serve(g_s), s	9.1	13.0	9.2	6.7	9.1	2.6	13.8	11.5	11.7	11.6	12.8	13.1
Cycle Q Clear(g_c), s	9.1	13.0	9.2	6.7	9.1	2.6	13.8	11.5	11.7	11.6	12.8	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		0.56
Lane Grp Cap(c), veh/h	239	902	394	180	785	343	347	997	513	297	902	445
V/C Ratio(X)	0.77	0.64	0.47	0.75	0.52	0.16	0.82	0.52	0.53	0.80	0.61	0.62
Avail Cap(c_a), veh/h	690	1378	602	690	1378	602	690	1320	679	690	1320	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	29.7	28.2	39.1	30.6	28.1	34.5	26.3	26.4	35.8	28.7	28.9
Incr Delay (d2), s/veh	10.8	1.6	1.9	12.3	1.1	0.5	9.7	0.9	1.8	10.1	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	5.3	3.3	3.3	3.7	0.9	6.4	4.4	4.7	5.5	4.9	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	31.3	30.1	51.4	31.7	28.5	44.2	27.2	28.2	45.9	30.2	31.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		949			596			1076			1066	
Approach Delay, s/veh		34.4			35.9			31.9			34.1	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	30.4	13.1	26.9	21.6	27.9	16.1	24.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+10), s	11.6	13.7	8.7	15.0	15.8	15.1	11.1	11.1				
Green Ext Time (p_c), s	1.5	8.4	0.8	7.4	1.8	8.6	1.2	4.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											33.8	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	364	33	66	326	85	25	232	48	166	346	390
Future Volume (veh/h)	276	364	33	66	326	85	25	232	48	166	346	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	279	368	32	67	329	67	25	234	44	168	349	88
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	313	456	40	122	475	95	29	271	51	382	401	333
Arrive On Green	0.18	0.27	0.27	0.07	0.16	0.16	0.20	0.20	0.20	0.22	0.22	0.22
Sat Flow, veh/h	1767	1678	146	1767	2912	585	148	1382	260	1767	1856	1540
Grp Volume(v), veh/h	279	0	400	67	197	199	303	0	0	168	349	88
Grp Sat Flow(s),veh/h/ln	1767	0	1824	1767	1763	1734	1790	0	0	1767	1856	1540
Q Serve(g_s), s	15.0	0.0	19.9	3.6	10.2	10.5	15.9	0.0	0.0	8.0	17.6	4.6
Cycle Q Clear(g_c), s	15.0	0.0	19.9	3.6	10.2	10.5	15.9	0.0	0.0	8.0	17.6	4.6
Prop In Lane	1.00		0.08	1.00		0.34	0.08		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	313	0	495	122	288	283	351	0	0	382	401	333
V/C Ratio(X)	0.89	0.00	0.81	0.55	0.69	0.70	0.86	0.00	0.00	0.44	0.87	0.26
Avail Cap(c_a), veh/h	455	0	563	377	544	535	461	0	0	455	478	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	33.0	43.8	38.3	38.4	37.8	0.0	0.0	33.0	36.7	31.6
Incr Delay (d2), s/veh	11.0	0.0	7.6	1.4	2.9	3.2	11.5	0.0	0.0	0.6	13.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	9.2	1.5	4.4	4.5	7.7	0.0	0.0	3.3	9.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	0.0	40.7	45.2	41.2	41.6	49.3	0.0	0.0	33.6	50.1	32.0
LnGrp LOS	D	A	D	D	D	D	D	A	A	C	D	C
Approach Vol, veh/h		679			463			303			605	
Approach Delay, s/veh		44.5			41.9			49.3			42.9	
Approach LOS		D			D			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.1	13.7	33.4		26.0	24.2	22.9				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.7	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+11), s		17.9	5.6	21.9		19.6	17.0	12.5				
Green Ext Time (p_c), s		0.7	0.0	1.3		1.1	0.2	1.8				

Intersection Summary

HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	216	126	6	53	67	78	736	14	73	839	47
Future Volume (veh/h)	101	216	126	6	53	67	78	736	14	73	839	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	106	227	119	6	56	16	82	775	15	77	883	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	131	260	137	296	598	500	104	1603	31	98	1054	56
Arrive On Green	0.07	0.23	0.23	0.17	0.32	0.32	0.06	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1767	1137	596	1767	1856	1551	1767	5114	99	1767	3400	181
Grp Volume(v), veh/h	106	0	346	6	56	16	82	511	279	77	458	472
Grp Sat Flow(s),veh/h/ln	1767	0	1734	1767	1856	1551	1767	1689	1836	1767	1763	1818
Q Serve(g_s), s	7.1	0.0	23.0	0.3	2.5	0.8	5.5	14.6	14.7	5.1	28.9	28.9
Cycle Q Clear(g_c), s	7.1	0.0	23.0	0.3	2.5	0.8	5.5	14.6	14.7	5.1	28.9	28.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.05	1.00		0.10
Lane Grp Cap(c), veh/h	131	0	397	296	598	500	104	1058	575	98	547	564
V/C Ratio(X)	0.81	0.00	0.87	0.02	0.09	0.03	0.79	0.48	0.48	0.78	0.84	0.84
Avail Cap(c_a), veh/h	296	0	508	296	598	500	370	1273	692	370	664	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	0.0	44.3	41.5	28.3	27.7	55.4	33.2	33.2	55.7	38.4	38.4
Incr Delay (d2), s/veh	4.4	0.0	13.9	0.1	0.1	0.0	4.9	0.5	0.9	5.0	8.7	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	11.1	0.2	1.1	0.3	2.5	5.8	6.4	2.4	13.1	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	0.0	58.2	41.7	28.4	27.7	60.3	33.7	34.1	60.7	47.0	46.8
LnGrp LOS	E	A	E	D	C	C	E	C	C	E	D	D
Approach Vol, veh/h		452			78			872			1007	
Approach Delay, s/veh		58.3			29.3			36.3			48.0	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.1	44.9	26.5	33.8	14.5	44.5	15.4	45.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0				
Max Q Clear Time (g_c+1), s	16.7	16.7	2.3	25.0	7.5	30.9	9.1	4.5				
Green Ext Time (p_c), s	0.1	7.0	0.0	1.9	0.1	6.1	0.1	0.4				

Intersection Summary

HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	69	57	271	382	44
Future Vol, veh/h	32	69	57	271	382	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	35	75	62	295	415	48



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	858	439	463	0	-	0
Stage 1	439	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	326	616	1093	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	307	616	1093	-	-	-
Mov Cap-2 Maneuver	307	-	-	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	661	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1093	-	307	616	-	-
HCM Lane V/C Ratio	0.057	-	0.113	0.122	-	-
HCM Control Delay (s)	8.5	-	18.2	11.7	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	0.4	-	-

HCM 6th Signalized Intersection Summary  
9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	13	0	23	0	712	16	71	987	0
Future Volume (veh/h)	0	0	0	13	0	23	0	712	16	71	987	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	14	0	1	0	742	16	74	1028	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	0	2	3	3	3	3	3	3
Cap, veh/h	0	4	0	57	0	0	4	1593	34	218	2162	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.31	0.31	0.12	0.61	0.00
Sat Flow, veh/h	0	140277	0	1781	14		1767	5101	110	1767	3618	0
Grp Volume(v), veh/h	0	0	0	14	22.1		0	491	267	74	1028	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	C		1767	1689	1833	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	0.3			0.0	4.9	5.0	1.6	6.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3			0.0	4.9	5.0	1.6	6.7	0.0
Prop In Lane	0.00		0.00	1.00			1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	57			4	1055	573	218	2162	0
V/C Ratio(X)	0.00	0.00	0.00	0.24			0.00	0.47	0.47	0.34	0.48	0.00
Avail Cap(c_a), veh/h	0	398	0	1263			376	2842	1543	434	3084	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00			0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	20.0			0.0	11.7	11.7	17.0	4.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2			0.0	0.4	0.7	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1			0.0	1.3	1.4	0.6	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	22.1			0.0	12.1	12.4	17.9	4.7	0.0
LnGrp LOS	A	A	A	C			A	B	B	B	A	A
Approach Vol, veh/h		0						758			1102	
Approach Delay, s/veh		0.0						12.2			5.6	
Approach LOS								B			A	
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	12.7	20.7	8.9	0.0	0.0	33.4						
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5						
Max Green Setting (Gmax), s	10.4	35.6	30.0	9.0	9.0	37.0						
Max Q Clear Time (g_c+I1), s	3.6	7.0	2.3	0.0	0.0	8.7						
Green Ext Time (p_c), s	0.1	5.6	0.0	0.0	0.0	8.9						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary  
10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖	↗			↖↗	
Traffic Volume (veh/h)	26	0	95	0	0	0	119	282	0	0	454	16
Future Volume (veh/h)	26	0	95	0	0	0	119	282	0	0	454	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	29	0	15	0	0	0	131	310	0	0	499	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	324	0	136	0	167	0	260	1045	0	0	842	27
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.15	0.56	0.00	0.00	0.24	0.24
Sat Flow, veh/h	1781	0	1550	0	1900	0	1767	1856	0	0	3577	112
Grp Volume(v), veh/h	29	0	15	0	0	0	131	310	0	0	252	263
Grp Sat Flow(s),veh/h/ln	1781	0	1550	0	1900	0	1767	1856	0	0	1763	1833
Q Serve(g_s), s	0.6	0.0	0.4	0.0	0.0	0.0	2.9	3.8	0.0	0.0	5.4	5.5
Cycle Q Clear(g_c), s	0.6	0.0	0.4	0.0	0.0	0.0	2.9	3.8	0.0	0.0	5.4	5.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	324	0	136	0	167	0	260	1045	0	0	426	443
V/C Ratio(X)	0.09	0.00	0.11	0.00	0.00	0.00	0.50	0.30	0.00	0.00	0.59	0.59
Avail Cap(c_a), veh/h	997	0	721	0	1105	0	617	1045	0	0	820	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	18.1	0.0	0.0	0.0	16.9	4.9	0.0	0.0	14.4	14.4
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	1.5	0.2	0.0	0.0	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.0	0.0	1.0	0.7	0.0	0.0	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	18.3	0.0	0.0	0.0	18.4	5.1	0.0	0.0	16.0	16.0
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		44			0			441			515	
Approach Delay, s/veh		18.3			0.0			9.1			16.0	
Approach LOS		B						A			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		31.7		11.3	13.8	17.9		11.3				
Change Period (Y+Rc), s		7.5		7.5	7.5	7.5		7.5				
Max Green Setting (Gmax), s		20.0		20.0	15.0	20.0		25.0				
Max Q Clear Time (g_c+1), s		5.8		2.6	4.9	7.5		0.0				
Green Ext Time (p_c), s		1.6		0.0	0.2	2.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑	↗	↗	↑↑	↗	↗	↑↑	↗
Traffic Volume (veh/h)	62	380	194	252	168	113	69	623	280	132	719	48
Future Volume (veh/h)	62	380	194	252	168	113	69	623	280	132	719	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	65	396	0	262	175	36	72	649	0	138	749	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	176	695		448	513	427	99	1059		194	1247	540
Arrive On Green	0.05	0.21	0.00	0.14	0.29	0.29	0.06	0.30	0.00	0.11	0.35	0.35
Sat Flow, veh/h	3291	3385	1510	3291	1781	1482	1767	3526	1572	1767	3526	1527
Grp Volume(v), veh/h	65	396	0	262	175	36	72	649	0	138	749	20
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1646	1781	1482	1767	1763	1572	1767	1763	1527
Q Serve(g_s), s	1.2	6.8	0.0	4.8	5.0	1.1	2.6	10.2	0.0	4.9	11.2	0.6
Cycle Q Clear(g_c), s	1.2	6.8	0.0	4.8	5.0	1.1	2.6	10.2	0.0	4.9	11.2	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	695		448	513	427	99	1059		194	1247	540
V/C Ratio(X)	0.37	0.57		0.59	0.34	0.08	0.72	0.61		0.71	0.60	0.04
Avail Cap(c_a), veh/h	1790	1840		1790	969	806	961	1917		961	1917	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	23.0	0.0	26.1	18.1	16.7	29.9	19.3	0.0	27.7	17.1	13.6
Incr Delay (d2), s/veh	2.8	1.6	0.0	2.6	0.8	0.2	19.1	1.2	0.0	9.9	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.5	0.0	1.8	1.9	0.4	1.5	3.6	0.0	2.3	3.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	24.6	0.0	28.7	18.9	16.9	49.0	20.5	0.0	37.5	18.1	13.7
LnGrp LOS	C	C		C	B	B	D	C		D	B	B
Approach Vol, veh/h		461	A		473			721	A		907	
Approach Delay, s/veh		25.7			24.2			23.4			20.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	23.3	12.8	17.2	7.6	26.8	7.4	22.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+1), s	10.5	12.2	6.8	8.8	4.6	13.2	3.2	7.0				
Green Ext Time (p_c), s	0.9	7.2	2.0	4.5	0.4	8.4	0.4	2.0				

Intersection Summary

HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	138	753	44	232	544	170	20	132	72	182	327	72
Future Volume (veh/h)	138	753	44	232	544	170	20	132	72	182	327	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	141	768	11	237	555	43	20	135	16	186	334	62
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	176	1332	406	329	1655	395	56	282	233	227	738	135
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.03	0.15	0.15	0.13	0.25	0.25
Sat Flow, veh/h	1697	4863	1481	3291	6128	1462	1767	1856	1534	1767	2964	543
Grp Volume(v), veh/h	141	768	11	237	555	43	20	135	16	186	197	199
Grp Sat Flow(s),veh/h/ln	1697	1621	1481	1646	1532	1462	1767	1856	1534	1767	1763	1745
Q Serve(g_s), s	6.1	10.2	0.4	5.3	5.5	1.7	0.8	5.0	0.7	7.7	7.1	7.3
Cycle Q Clear(g_c), s	6.1	10.2	0.4	5.3	5.5	1.7	0.8	5.0	0.7	7.7	7.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	176	1332	406	329	1655	395	56	282	233	227	439	434
V/C Ratio(X)	0.80	0.58	0.03	0.72	0.34	0.11	0.36	0.48	0.07	0.82	0.45	0.46
Avail Cap(c_a), veh/h	451	2585	787	875	3258	777	470	1159	958	470	1101	1090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	23.6	20.0	32.8	22.0	20.6	35.7	29.2	27.3	31.9	23.9	24.0
Incr Delay (d2), s/veh	3.2	0.6	0.0	1.1	0.2	0.2	1.4	0.5	0.0	2.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.5	0.1	1.9	1.7	0.5	0.4	2.1	0.2	3.2	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	24.1	20.0	34.0	22.2	20.8	37.1	29.6	27.4	34.7	24.2	24.2
LnGrp LOS	D	C	C	C	C	C	D	C	C	C	C	C
Approach Vol, veh/h		920			835			171			582	
Approach Delay, s/veh		25.9			25.5			30.3			27.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.2	17.9	14.0	27.1	8.9	25.2	14.3	26.8				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0				
Max Q Clear Time (g_c+1), s	19.5	7.0	7.3	12.2	2.8	9.3	8.1	7.5				
Green Ext Time (p_c), s	0.2	0.4	0.3	7.3	0.0	1.3	0.1	5.3				

Intersection Summary

HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour

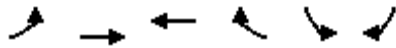


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↑ ↑		↖ ↗	↑ ↑	↖	↖ ↗	↑ ↑ ↑		↖ ↗	↑ ↑	↖
Traffic Volume (veh/h)	103	585	243	439	530	141	291	423	266	273	567	88
Future Volume (veh/h)	103	585	243	439	530	141	291	423	266	273	567	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	107	609	206	457	552	47	303	441	63	284	591	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	209	998	318	540	1074	470	382	1186	361	362	805	352
Arrive On Green	0.06	0.22	0.22	0.16	0.32	0.32	0.11	0.23	0.23	0.10	0.22	0.22
Sat Flow, veh/h	3291	4607	1469	3291	3385	1482	3483	5147	1565	3483	3582	1565
Grp Volume(v), veh/h	107	608	207	457	552	47	303	441	63	284	591	21
Grp Sat Flow(s),veh/h/ln	1646	1532	1480	1646	1692	1482	1742	1716	1565	1742	1791	1565
Q Serve(g_s), s	3.3	12.6	13.5	14.2	14.0	2.4	8.9	7.6	3.4	8.4	16.1	1.1
Cycle Q Clear(g_c), s	3.3	12.6	13.5	14.2	14.0	2.4	8.9	7.6	3.4	8.4	16.1	1.1
Prop In Lane	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	209	996	321	540	1074	470	382	1186	361	362	805	352
V/C Ratio(X)	0.51	0.61	0.65	0.85	0.51	0.10	0.79	0.37	0.17	0.78	0.73	0.06
Avail Cap(c_a), veh/h	1094	1527	492	1094	1125	493	827	1221	371	827	1190	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	37.2	37.6	42.7	29.3	25.4	45.7	34.1	32.5	46.0	37.9	32.1
Incr Delay (d2), s/veh	1.4	0.7	2.6	2.8	0.5	0.1	2.8	0.2	0.2	2.8	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.5	4.8	5.6	5.3	0.8	3.8	3.0	1.3	3.6	6.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	38.0	40.2	45.6	29.8	25.5	48.5	34.3	32.8	48.8	39.5	32.2
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	D	C
Approach Vol, veh/h		922			1056			807			896	
Approach Delay, s/veh		39.8			36.4			39.5			42.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.8	30.3	19.1	31.2	14.2	40.9	18.5	31.8				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0				
Max Q Clear Time (g_c+1/3), s	11.2	15.5	10.9	18.1	5.3	16.0	10.4	9.6				
Green Ext Time (p_c), s	1.1	5.6	0.6	3.9	0.2	3.8	0.6	2.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											39.4	
HCM 6th LOS											D	



HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour



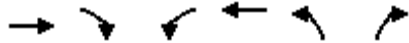
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1008	573	0	227	1129
Future Volume (veh/h)	0	1008	573	0	227	1129
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	1072	610	0	241	1028
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	1671	1163	0	718	1278
Arrive On Green	0.00	0.34	0.34	0.00	0.42	0.42
Sat Flow, veh/h	0	5184	3563	0	1697	3019
Grp Volume(v), veh/h	0	1072	610	0	241	1028
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1697	1510
Q Serve(g_s), s	0.0	9.8	7.6	0.0	5.0	15.7
Cycle Q Clear(g_c), s	0.0	9.8	7.6	0.0	5.0	15.7
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1671	1163	0	718	1278
V/C Ratio(X)	0.00	0.64	0.52	0.00	0.34	0.80
Avail Cap(c_a), veh/h	0	2765	1924	0	964	1716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.6	13.9	0.0	10.2	13.3
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.0	0.3	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.6	2.1	0.0	1.6	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	15.0	14.2	0.0	10.5	15.4
LnGrp LOS	A	B	B	A	B	B
Approach Vol, veh/h		1072	610		1269	
Approach Delay, s/veh		15.0	14.2		14.5	
Approach LOS		B	B		B	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		24.9		27.8		24.9
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		11.8		17.7		9.6
Green Ext Time (p_c), s		6.3		4.6		3.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			14.6			
HCM 6th LOS			B			

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	573	660	168	306	375	122
Future Volume (veh/h)	573	660	168	306	375	122
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	603	462	177	322	395	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1726	795	304	2736	617	275
Arrive On Green	0.35	0.35	0.09	0.56	0.18	0.18
Sat Flow, veh/h	5024	1466	3291	5024	3393	1510
Grp Volume(v), veh/h	603	462	177	322	395	128
Grp Sat Flow(s),veh/h/ln	1621	1466	1646	1621	1697	1510
Q Serve(g_s), s	4.8	11.1	2.7	1.6	5.6	3.9
Cycle Q Clear(g_c), s	4.8	11.1	2.7	1.6	5.6	3.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1726	795	304	2736	617	275
V/C Ratio(X)	0.35	0.58	0.58	0.12	0.64	0.47
Avail Cap(c_a), veh/h	2802	1119	1896	2802	1955	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	8.2	22.7	5.3	19.7	19.0
Incr Delay (d2), s/veh	0.1	0.7	1.8	0.0	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.7	0.9	0.3	2.1	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	8.8	24.4	5.4	20.8	20.3
LnGrp LOS	B	A	C	A	C	C
Approach Vol, veh/h	1065			499	523	
Approach Delay, s/veh	10.9			12.1	20.7	
Approach LOS	B			B	C	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	10.8	25.8		36.6	15.5	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	30.0	30.0		30.0	30.0	
Max Q Clear Time (g_c+14), s	14.7	13.1		3.6	7.6	
Green Ext Time (p_c), s	0.5	5.0		1.8	1.9	

Intersection Summary

HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕	↖	↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (veh/h)	0	0	0	10	0	49	0	896	18	99	1134	0
Future Volume (veh/h)	0	0	0	10	0	49	0	896	18	99	1134	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	11	0	0	0	963	9	106	1219	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	8	9	0	69	9	4	8	1524	669	411	3416	1060
Arrive On Green	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.43	0.43	0.12	0.67	0.00
Sat Flow, veh/h	3456	3647	0	3456	3554	1585	3428	3526	1547	3428	5066	1572
Grp Volume(v), veh/h	0	0	0	11	0	0	0	963	9	106	1219	0
Grp Sat Flow(s),veh/h/ln	1777	1777	0	1728	1777	1585	1714	1763	1547	1714	1689	1572
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	8.7	0.1	1.1	4.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	8.7	0.1	1.1	4.2	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	9	0	69	9	4	8	1524	669	411	3416	1060
V/C Ratio(X)	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.63	0.01	0.26	0.36	0.00
Avail Cap(c_a), veh/h	1689	1737	0	1689	1737	775	1676	3447	1512	1676	4953	1537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	19.7	0.0	0.0	0.0	9.1	6.6	16.4	2.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.7	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	20.8	0.0	0.0	0.0	9.5	6.6	16.7	2.9	0.0
LnGrp LOS	A	A	A	C	A	A	A	A	A	B	A	A
Approach Vol, veh/h	0			11			972			1325		
Approach Delay, s/veh	0.0			20.8			9.5			4.0		
Approach LOS				C			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	25.2	5.8	0.0	0.0	35.1	0.0	5.8				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	20.0	40.0	20.0	20.0	20.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	10.7	10.7	2.1	0.0	0.0	6.2	0.0	0.0				
Green Ext Time (p_c), s	0.2	6.6	0.0	0.0	0.0	9.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	93	23	31	41	19	16
Future Vol, veh/h	93	23	31	41	19	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	106	26	35	47	22	18

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	132	0	200
Stage 1	-	-	-	-	106
Stage 2	-	-	-	-	94
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1451	-	770
Stage 1	-	-	-	-	907
Stage 2	-	-	-	-	919
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1451	-	752
Mov Cap-2 Maneuver	-	-	-	-	752
Stage 1	-	-	-	-	907
Stage 2	-	-	-	-	897

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	849	-	-	1451	-
HCM Lane V/C Ratio	0.047	-	-	0.024	-
HCM Control Delay (s)	9.4	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour







Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	81	28	76	55	16	45
Future Volume (veh/h)	81	28	76	55	16	45
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	30	82	59	17	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	460	377	260	2022	38	106
Arrive On Green	0.25	0.25	0.15	0.57	0.09	0.09
Sat Flow, veh/h	1870	1533	1781	3647	421	1189
Grp Volume(v), veh/h	87	30	82	59	66	0
Grp Sat Flow(s),veh/h/ln	1870	1533	1781	1777	1635	0
Q Serve(g_s), s	1.6	0.6	1.7	0.3	1.6	0.0
Cycle Q Clear(g_c), s	1.6	0.6	1.7	0.3	1.6	0.0
Prop In Lane		1.00	1.00		0.26	0.73
Lane Grp Cap(c), veh/h	460	377	260	2022	146	0
V/C Ratio(X)	0.19	0.08	0.32	0.03	0.45	0.00
Avail Cap(c_a), veh/h	1543	1265	630	2932	1272	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.6	12.3	16.2	4.0	18.3	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.7	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.6	0.0	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	12.4	16.9	4.0	21.0	0.0
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	117			141	66	
Approach Delay, s/veh	12.8			11.5	21.0	
Approach LOS	B			B	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.8	13.7	17.9		31.6
Change Period (Y+Rc), s		7.0	7.5	7.5		7.5
Max Green Setting (Gmax), s		33.0	15.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		3.6	3.7	3.6		2.3
Green Ext Time (p_c), s		0.2	0.1	0.6		0.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			13.9			
HCM 6th LOS			B			

**Intersection**

Intersection Delay, s/veh 14.2

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	78	33	199	407	101
Future Vol, veh/h	62	78	33	199	407	101
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	66	83	35	212	433	107
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	9.8	10.7	17
HCM LOS	A	B	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	14%	100%	0%	0%
Vol Thru, %	86%	0%	0%	80%
Vol Right, %	0%	0%	100%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	232	62	78	508
LT Vol	33	62	0	0
Through Vol	199	0	0	407
RT Vol	0	0	78	101
Lane Flow Rate	247	66	83	540
Geometry Grp	2	7	7	2
Degree of Util (X)	0.343	0.126	0.131	0.684
Departure Headway (Hd)	5.008	6.898	5.678	4.558
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	523	636	789
Service Time	3.093	4.598	3.378	2.623
HCM Lane V/C Ratio	0.347	0.126	0.131	0.684
HCM Control Delay	10.7	10.6	9.2	17
HCM Lane LOS	B	B	A	C
HCM 95th-tile Q	1.5	0.4	0.4	5.5

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	1	0	39	1	1
Future Vol, veh/h	25	1	0	39	1	1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	32	1	0	51	1	1
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	8	6.9	7.7
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	39	25	1	1	1
LT Vol	0	0	25	0	1	0
Through Vol	0	0	0	0	0	1
RT Vol	0	39	0	1	0	0
Lane Flow Rate	0	51	32	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0	0.055	0.046	0.001	0.002	0.002
Departure Headway (Hd)	4.611	3.911	5.125	3.924	5.135	4.635
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	913	700	912	696	770
Service Time	2.346	1.645	2.848	1.647	2.875	2.374
HCM Lane V/C Ratio	0	0.056	0.046	0.001	0.001	0.001
HCM Control Delay	7.3	6.9	8.1	6.7	7.9	7.4
HCM Lane LOS	N	A	A	A	A	A
HCM 95th-tile Q	0	0.2	0.1	0	0	0



HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔				↔	↔		↔	↔	
Traffic Volume (veh/h)	33	0	13	0	0	0	10	1089	0	0	1249	57
Future Volume (veh/h)	33	0	13	0	0	0	10	1089	0	0	1249	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	0	0	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	34	0	14	0	0	0	10	1134	0	0	1301	59
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	185	0	0	0	0	0	33	3488	0	4	2620	119
Arrive On Green	0.05	0.00	0.00	0.00	0.00	0.00	0.02	0.68	0.00	0.00	0.52	0.52
Sat Flow, veh/h	3456	34			0		1795	5316	0	1795	5039	229
Grp Volume(v), veh/h	34	21.7			0.0		10	1134	0	0	886	474
Grp Sat Flow(s),veh/h/ln	1728	C					1795	1716	0	1795	1716	1837
Q Serve(g_s), s	0.4						0.3	4.2	0.0	0.0	7.8	7.8
Cycle Q Clear(g_c), s	0.4						0.3	4.2	0.0	0.0	7.8	7.8
Prop In Lane	1.00						1.00		0.00	1.00		0.12
Lane Grp Cap(c), veh/h	185						33	3488	0	4	1784	955
V/C Ratio(X)	0.18						0.31	0.33	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	2600						1351	4425	0	1351	2950	1579
HCM Platoon Ratio	1.00						1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00						1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.0						22.5	3.1	0.0	0.0	7.2	7.2
Incr Delay (d2), s/veh	0.7						6.2	0.1	0.0	0.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0						0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2						0.1	0.2	0.0	0.0	1.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7						28.7	3.2	0.0	0.0	7.5	7.8
LnGrp LOS	C						C	A	A	A	A	A
Approach Vol, veh/h								1144			1360	
Approach Delay, s/veh								3.4			7.6	
Approach LOS								A			A	
Timer - Assigned Phs	1	2			5	6	7					
Phs Duration (G+Y+Rc), s	7.3	30.7			0.0	38.0	8.5					
Change Period (Y+Rc), s	6.5	6.5			6.5	6.5	6.0					
Max Green Setting (Gmax), s	35.0	40.0			35.0	40.0	35.0					
Max Q Clear Time (g_c+1), s	12.3	9.8			0.0	6.2	2.4					
Green Ext Time (p_c), s	0.0	14.1			0.0	12.3	0.1					

Intersection Summary

HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	34	1	24	26	2	40	7	868	38	48	1049	25
Future Volume (veh/h)	34	1	24	26	2	40	7	868	38	48	1049	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	1	2	28	2	4	8	933	21	52	1128	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	392	95	191	395	95	191	37	1389	417	185	1813	547
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	0.27	0.27	0.10	0.36	0.36
Sat Flow, veh/h	1398	548	1097	1402	548	1097	1767	5066	1523	1767	5066	1527
Grp Volume(v), veh/h	37	0	3	28	0	6	8	933	21	52	1128	14
Grp Sat Flow(s),veh/h/ln	1398	0	1645	1402	0	1645	1767	1689	1523	1767	1689	1527
Q Serve(g_s), s	1.1	0.0	0.1	0.8	0.0	0.1	0.2	7.7	0.5	1.3	8.6	0.3
Cycle Q Clear(g_c), s	1.2	0.0	0.1	0.9	0.0	0.1	0.2	7.7	0.5	1.3	8.6	0.3
Prop In Lane	1.00		0.67	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	0	286	395	0	286	37	1389	417	185	1813	547
V/C Ratio(X)	0.09	0.00	0.01	0.07	0.00	0.02	0.21	0.67	0.05	0.28	0.62	0.03
Avail Cap(c_a), veh/h	1250	0	1296	1255	0	1296	376	1617	486	376	1813	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	16.1	16.4	0.0	16.1	22.6	15.2	12.6	19.4	12.5	9.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	3.4	1.1	0.1	1.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.2	0.0	0.1	0.1	2.2	0.1	0.5	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	16.1	16.5	0.0	16.1	26.0	16.3	12.6	20.4	13.2	9.8
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	A
Approach Vol, veh/h		40			34			962			1194	
Approach Delay, s/veh		16.7			16.4			16.3			13.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.4	20.4		14.2	8.5	24.3		14.2				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	15.0		37.0	10.0	15.0		37.0				
Max Q Clear Time (g_c+1), s	13.3	9.7		3.2	2.2	10.6		2.9				
Green Ext Time (p_c), s	0.0	3.1		0.1	0.0	3.0		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.8								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑↑	
Traffic Vol, veh/h	3	4	10	223	491	2
Future Vol, veh/h	3	4	10	223	491	2
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	-	225	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	3	4	11	235	517	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	775	260	519	0	-	0
Stage 1	518	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.145	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.2285	-	-	-
Pot Cap-1 Maneuver	350	740	1039	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	346	740	1039	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1039	-	497	-	-
HCM Lane V/C Ratio	0.01	-	0.015	-	-
HCM Control Delay (s)	8.5	-	12.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↔	↕
Traffic Vol, veh/h	13	15	25	3	0	27
Future Vol, veh/h	13	15	25	3	0	27
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	-	-	-	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	16	19	31	4	0	34
































Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	67	18	0	0	35
Stage 1	33	-	-	-	-
Stage 2	34	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.145
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.2285
Pot Cap-1 Maneuver	934	1056	-	-	1569
Stage 1	986	-	-	-	-
Stage 2	988	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	934	1056	-	-	1569
Mov Cap-2 Maneuver	934	-	-	-	-
Stage 1	986	-	-	-	-
Stage 2	988	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1569
HCM Lane V/C Ratio	-	-	0.035	-
HCM Control Delay (s)	-	-	8.7	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th Signalized Intersection Summary  
28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 				  			  	
Traffic Volume (veh/h)	376	311	112	253	194	123	47	709	213	101	799	442
Future Volume (veh/h)	376	311	112	253	194	123	47	709	213	101	799	442
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	384	317	26	258	198	24	48	723	106	103	815	148
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	473	723	316	346	312	258	75	1415	431	132	1579	481
Arrive On Green	0.14	0.21	0.21	0.10	0.17	0.17	0.04	0.28	0.28	0.07	0.31	0.31
Sat Flow, veh/h	3428	3526	1539	3428	1856	1536	1795	5147	1567	1795	5147	1568
Grp Volume(v), veh/h	384	317	26	258	198	24	48	723	106	103	815	148
Grp Sat Flow(s),veh/h/ln	1714	1763	1539	1714	1856	1536	1795	1716	1567	1795	1716	1568
Q Serve(g_s), s	8.3	6.0	1.0	5.6	7.6	1.0	2.0	9.1	4.0	4.3	10.0	5.5
Cycle Q Clear(g_c), s	8.3	6.0	1.0	5.6	7.6	1.0	2.0	9.1	4.0	4.3	10.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	723	316	346	312	258	75	1415	431	132	1579	481
V/C Ratio(X)	0.81	0.44	0.08	0.75	0.64	0.09	0.64	0.51	0.25	0.78	0.52	0.31
Avail Cap(c_a), veh/h	673	2122	926	583	1068	884	117	2600	792	258	3004	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	26.5	24.6	33.4	29.6	26.9	36.0	23.4	21.5	34.8	21.8	20.3
Incr Delay (d2), s/veh	3.3	0.6	0.2	1.2	3.0	0.2	3.3	0.4	0.4	3.7	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.3	0.4	2.2	3.3	0.4	0.9	3.4	1.4	1.9	3.6	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	27.1	24.7	34.6	32.6	27.1	39.4	23.8	22.0	38.5	22.2	20.8
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		727			480			877			1066	
Approach Delay, s/veh		31.4			33.4			24.4			23.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	28.2	13.7	22.9	9.2	30.6	16.5	20.0				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	11.0	38.6	13.0	46.0	5.0	44.6	15.0	44.0				
Max Q Clear Time (g_c+I1), s	6.3	11.1	7.6	8.0	4.0	12.0	10.3	9.6				
Green Ext Time (p_c), s	0.0	7.6	0.1	2.9	0.0	9.1	0.2	1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				27.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	983	0	4	483	28	14	0	40	17	0	15
Future Volume (veh/h)	18	983	0	4	483	28	14	0	40	17	0	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.97		1.00	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	20	1117	0	5	549	21	16	0	0	19	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	59	1880	839	16	944	779	258	0	0	260	0	0
Arrive On Green	0.03	0.54	0.00	0.01	0.52	0.52	0.08	0.00	0.00	0.08	0.00	0.00
Sat Flow, veh/h	1739	3469	1547	1739	1826	1507	1411	0	0	1432	0	0
Grp Volume(v), veh/h	20	1117	0	5	549	21	16	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1826	1507	1411	0	0	1432	0	0
Q Serve(g_s), s	0.5	10.6	0.0	0.1	10.1	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.5	10.6	0.0	0.1	10.1	0.3	0.4	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	59	1880	839	16	944	779	258	0	0	260	0	0
V/C Ratio(X)	0.34	0.59	0.00	0.31	0.58	0.03	0.06	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	716	2500	1115	716	1316	1086	714	0	0	725	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	7.5	0.0	23.9	8.1	5.7	20.8	0.0	0.0	20.9	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.6	0.0	10.2	1.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	0.0	0.1	3.0	0.1	0.2	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	8.2	0.0	34.0	9.3	5.8	20.9	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1137			575			16			19	
Approach Delay, s/veh		8.5			9.4			20.9			21.0	
Approach LOS		A			A			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.8	5.5	33.3		9.8	6.7	32.1				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		20.0	20.0	35.0		20.0	20.0	35.0				
Max Q Clear Time (g_c+1), s		2.4	2.1	12.6		2.5	2.5	12.1				
Green Ext Time (p_c), s		0.0	0.0	13.8		0.0	0.0	6.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.0								
HCM 6th LOS				A								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	339	404	295	60	169	41	90	576	77	50	750	259
Future Volume (veh/h)	339	404	295	60	169	41	90	576	77	50	750	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	361	430	0	64	180	7	96	613	31	53	798	106
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	3	3	3
Cap, veh/h	456	637		126	424	184	276	1769	540	223	1177	516
Arrive On Green	0.14	0.18	0.00	0.07	0.12	0.12	0.08	0.35	0.35	0.07	0.33	0.33
Sat Flow, veh/h	3374	3469	1547	1781	3554	1541	3428	5066	1545	3428	3526	1545
Grp Volume(v), veh/h	361	430	0	64	180	7	96	613	31	53	798	106
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1781	1777	1541	1714	1689	1545	1714	1763	1545
Q Serve(g_s), s	9.4	10.5	0.0	3.1	4.3	0.4	2.4	8.1	1.2	1.3	17.6	4.4
Cycle Q Clear(g_c), s	9.4	10.5	0.0	3.1	4.3	0.4	2.4	8.1	1.2	1.3	17.6	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	637		126	424	184	276	1769	540	223	1177	516
V/C Ratio(X)	0.79	0.67		0.51	0.42	0.04	0.35	0.35	0.06	0.24	0.68	0.21
Avail Cap(c_a), veh/h	745	958		393	785	340	947	2238	682	568	1557	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	34.4	0.0	40.6	37.0	35.3	39.4	21.8	19.6	40.2	26.0	21.6
Incr Delay (d2), s/veh	3.1	2.7	0.0	2.3	0.5	0.1	0.6	0.2	0.1	0.4	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.5	0.0	1.4	1.8	0.1	1.0	2.9	0.4	0.5	6.8	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.1	37.1	0.0	42.9	37.5	35.3	39.9	22.1	19.7	40.6	27.5	22.0
LnGrp LOS	D	D		D	D	D	D	C	B	D	C	C
Approach Vol, veh/h		791	A		251			740			957	
Approach Delay, s/veh		38.9			38.8			24.3			27.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	39.1	13.9	24.1	14.8	37.7	19.7	18.3				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	15.0	40.0	20.0	25.0	25.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	13.3	10.1	5.1	12.5	4.4	19.6	11.4	6.3				
Green Ext Time (p_c), s	0.1	7.7	0.1	3.6	0.2	9.3	0.9	0.7				

Intersection Summary

HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	480	36	7	213	15	30	4	13	15	6	12
Future Volume (veh/h)	32	480	36	7	213	15	30	4	13	15	6	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	500	18	7	222	9	31	4	2	16	6	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	1028	444	24	875	378	382	36	201	312	87	9
Arrive On Green	0.06	0.29	0.29	0.01	0.25	0.25	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1536	1781	3554	1533	1193	277	1553	832	672	68
Grp Volume(v), veh/h	33	500	18	7	222	9	35	0	2	23	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1533	1470	0	1553	1573	0	0
Q Serve(g_s), s	0.5	3.5	0.3	0.1	1.5	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	3.5	0.3	0.1	1.5	0.1	0.6	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.89		1.00	0.70		0.04
Lane Grp Cap(c), veh/h	100	1028	444	24	875	378	417	0	201	408	0	0
V/C Ratio(X)	0.33	0.49	0.04	0.30	0.25	0.02	0.08	0.00	0.01	0.06	0.00	0.00
Avail Cap(c_a), veh/h	417	1899	821	417	1899	819	1669	0	1556	1718	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.6	8.8	7.7	14.6	9.1	8.6	11.6	0.0	11.4	11.5	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.4	0.0	6.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.1	0.1	0.4	0.0	0.2	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	9.2	7.7	21.5	9.2	8.6	11.6	0.0	11.4	11.5	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		551			238			37				23
Approach Delay, s/veh		9.5			9.6			11.6				11.5
Approach LOS		A			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.9	5.4	14.7		9.9	6.7	13.4				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+1), s		2.6	2.1	5.5		2.3	2.5	3.5				
Green Ext Time (p_c), s		0.1	0.0	2.4		0.0	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					9.7							
HCM 6th LOS					A							

HCM 6th Signalized Intersection Summary  
 32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	444	13	36	229	45	11	8	25	44	11	17
Future Volume (veh/h)	42	444	13	36	229	45	11	8	25	44	11	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	453	7	37	234	20	11	8	4	45	11	5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	957	413	109	928	401	270	142	224	327	68	18
Arrive On Green	0.07	0.27	0.27	0.06	0.26	0.26	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1535	1781	3554	1534	657	983	1552	926	472	125
Grp Volume(v), veh/h	43	453	7	37	234	20	19	0	4	61	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1535	1781	1777	1534	1640	0	1552	1523	0	0
Q Serve(g_s), s	0.7	3.5	0.1	0.6	1.7	0.3	0.0	0.0	0.1	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.7	3.5	0.1	0.6	1.7	0.3	0.3	0.0	0.1	1.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.58		1.00	0.74		0.08
Lane Grp Cap(c), veh/h	124	957	413	109	928	401	412	0	224	413	0	0
V/C Ratio(X)	0.35	0.47	0.02	0.34	0.25	0.05	0.05	0.00	0.02	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1101	3843	1660	1101	3843	1659	1389	0	1199	1336	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.4	9.9	8.7	14.6	9.5	8.9	12.0	0.0	11.9	12.3	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.4	0.0	1.8	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	0.0	0.3	0.5	0.1	0.1	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	10.3	8.7	16.4	9.6	9.0	12.0	0.0	11.9	12.3	0.0	0.0
LnGrp LOS	B	B	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		503			291			23			61	
Approach Delay, s/veh		10.7			10.4			12.0			12.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.7	7.0	14.7		10.7	7.2	14.5				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+1), s		2.3	2.6	5.5		3.0	2.7	3.7				
Green Ext Time (p_c), s		0.0	0.0	3.1		0.2	0.1	1.6				

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	366	117	309	200	45	59	155	245	129	343	28
Future Volume (veh/h)	29	366	117	309	200	45	59	155	245	129	343	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	377	114	319	206	42	61	160	38	133	354	24
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	74	417	126	356	691	141	109	246	204	165	549	37
Arrive On Green	0.04	0.30	0.30	0.20	0.46	0.46	0.06	0.13	0.13	0.09	0.16	0.16
Sat Flow, veh/h	1781	1372	415	1767	1489	304	1767	1856	1532	1767	3346	226
Grp Volume(v), veh/h	30	0	491	319	0	248	61	160	38	133	186	192
Grp Sat Flow(s),veh/h/ln	1781	0	1787	1767	0	1793	1767	1856	1532	1767	1763	1808
Q Serve(g_s), s	1.4	0.0	23.1	15.4	0.0	7.5	2.9	7.2	1.9	6.5	8.6	8.7
Cycle Q Clear(g_c), s	1.4	0.0	23.1	15.4	0.0	7.5	2.9	7.2	1.9	6.5	8.6	8.7
Prop In Lane	1.00		0.23	1.00		0.17	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	74	0	543	356	0	832	109	246	204	165	289	297
V/C Ratio(X)	0.41	0.00	0.90	0.90	0.00	0.30	0.56	0.65	0.19	0.81	0.64	0.65
Avail Cap(c_a), veh/h	142	0	704	464	0	1035	182	827	683	202	806	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	29.2	34.1	0.0	14.6	39.9	36.0	33.7	38.9	34.2	34.2
Incr Delay (d2), s/veh	1.3	0.0	11.0	14.2	0.0	0.1	1.7	2.9	0.4	14.7	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	11.0	7.5	0.0	2.7	1.3	3.3	0.7	3.3	3.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	0.0	40.2	48.3	0.0	14.7	41.5	38.9	34.2	53.6	36.5	36.6
LnGrp LOS	D	A	D	D	A	B	D	D	C	D	D	D
Approach Vol, veh/h		521		567		259		511				
Approach Delay, s/veh		40.3		33.6		38.8		41.0				
Approach LOS		D		C		D		D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	18.6	22.6	33.1	10.4	21.4	8.6	47.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	10.0	39.0	23.0	34.5	9.0	40.0	7.0	50.5				
Max Q Clear Time (g_c+1/5), s	10.5	9.2	17.4	25.1	4.9	10.7	3.4	9.5				
Green Ext Time (p_c), s	0.0	0.9	0.2	1.4	0.0	2.0	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				38.2								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	705	45	110	551	2	24	5	81	3	15	22
Future Volume (veh/h)	17	705	45	110	551	2	24	5	81	3	15	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	18	750	30	117	586	2	26	5	10	3	16	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	406	1013	836	294	1013	845	74	211	171	10	145	117
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.04	0.11	0.11	0.01	0.08	0.08
Sat Flow, veh/h	821	1856	1532	687	1856	1548	1767	1856	1502	1767	1856	1502
Grp Volume(v), veh/h	18	750	30	117	586	2	26	5	10	3	16	3
Grp Sat Flow(s),veh/h/ln	821	1856	1532	687	1856	1548	1767	1856	1502	1767	1856	1502
Q Serve(g_s), s	0.8	17.0	0.5	8.7	11.6	0.0	0.8	0.1	0.3	0.1	0.4	0.1
Cycle Q Clear(g_c), s	12.4	17.0	0.5	25.7	11.6	0.0	0.8	0.1	0.3	0.1	0.4	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	406	1013	836	294	1013	845	74	211	171	10	145	117
V/C Ratio(X)	0.04	0.74	0.04	0.40	0.58	0.00	0.35	0.02	0.06	0.30	0.11	0.03
Avail Cap(c_a), veh/h	477	1174	969	353	1174	979	639	671	543	639	671	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	9.6	5.8	19.4	8.3	5.7	25.8	21.8	21.9	27.4	23.7	23.6
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.9	0.5	0.0	1.1	0.0	0.1	6.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.6	0.1	1.2	2.9	0.0	0.3	0.1	0.1	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.5	11.7	5.8	20.2	8.9	5.7	26.9	21.8	21.9	33.4	23.8	23.6
LnGrp LOS	B	B	A	C	A	A	C	C	C	C	C	C
Approach Vol, veh/h		798			705			41			22	
Approach Delay, s/veh		11.5			10.7			25.0			25.1	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	10.8		37.2	5.3	12.8		37.2				
Change Period (Y+Rc), s	5.0	6.5		7.0	5.0	6.5		7.0				
Max Green Setting (Gmax), s	20.0	20.0		35.0	20.0	20.0		35.0				
Max Q Clear Time (g_c+1), s	12.8	2.4		27.7	2.1	2.3		19.0				
Green Ext Time (p_c), s	0.0	0.0		2.5	0.0	0.0		4.4				

Intersection Summary

HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↷	↷	↶↷	↷	↶↷	↶
Traffic Volume (veh/h)	534	239	414	432	430	687
Future Volume (veh/h)	534	239	414	432	430	687
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1856	1856	1856	1856
Adj Flow Rate, veh/h	551	185	427	349	443	708
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	3	3	3	3
Cap, veh/h	685	786	931	721	521	1193
Arrive On Green	0.20	0.20	0.26	0.26	0.30	0.64
Sat Flow, veh/h	3483	1598	3618	1558	1767	1856
Grp Volume(v), veh/h	551	185	427	349	443	708
Grp Sat Flow(s),veh/h/ln	1742	1598	1763	1558	1767	1856
Q Serve(g_s), s	10.8	4.8	7.3	11.2	16.9	15.8
Cycle Q Clear(g_c), s	10.8	4.8	7.3	11.2	16.9	15.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	685	786	931	721	521	1193
V/C Ratio(X)	0.80	0.24	0.46	0.48	0.85	0.59
Avail Cap(c_a), veh/h	1944	1363	1967	1178	1109	1193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	10.5	22.1	13.4	23.8	7.4
Incr Delay (d2), s/veh	0.9	0.1	0.4	0.6	5.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	5.6	2.6	4.9	6.7	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.3	10.5	22.5	14.0	29.3	8.3
LnGrp LOS	C	B	C	B	C	A
Approach Vol, veh/h	736		776			1151
Approach Delay, s/veh	23.9		18.7			16.4
Approach LOS	C		B			B
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.2	24.9		19.6		52.1
Change Period (Y+Rc), s	6.0	6.0		5.5		6.0
Max Green Setting (Gmax), s	45.0	40.0		40.0		45.0
Max Q Clear Time (g_c+1/3g), s	11.9	13.2		12.8		17.8
Green Ext Time (p_c), s	2.2	4.7		1.3		6.7

Intersection Summary

HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	193	791	71	243	727	96	45	230	155	208	412	167
Future Volume (veh/h)	193	791	71	243	727	96	45	230	155	208	412	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	199	815	19	251	749	30	46	237	27	214	425	94
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	306	1418	432	382	1531	473	78	506	220	262	872	381
Arrive On Green	0.09	0.28	0.28	0.11	0.30	0.30	0.04	0.14	0.14	0.15	0.25	0.25
Sat Flow, veh/h	3483	5147	1567	3483	5147	1590	1767	3526	1533	1767	3526	1541
Grp Volume(v), veh/h	199	815	19	251	749	30	46	237	27	214	425	94
Grp Sat Flow(s),veh/h/ln	1742	1716	1567	1742	1716	1590	1767	1763	1533	1767	1763	1541
Q Serve(g_s), s	3.4	8.4	0.6	4.3	7.4	0.8	1.6	3.8	1.0	7.3	6.4	3.0
Cycle Q Clear(g_c), s	3.4	8.4	0.6	4.3	7.4	0.8	1.6	3.8	1.0	7.3	6.4	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	1418	432	382	1531	473	78	506	220	262	872	381
V/C Ratio(X)	0.65	0.57	0.04	0.66	0.49	0.06	0.59	0.47	0.12	0.82	0.49	0.25
Avail Cap(c_a), veh/h	1407	3742	1140	1970	3742	1156	714	1709	743	714	1709	747
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	19.3	16.4	26.4	17.9	15.6	29.0	24.3	23.1	25.6	19.9	18.7
Incr Delay (d2), s/veh	0.9	0.4	0.0	1.4	0.2	0.1	2.6	0.5	0.2	2.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.9	0.2	1.7	2.5	0.3	0.7	1.5	0.3	2.9	2.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	19.7	16.5	27.9	18.1	15.6	31.6	24.8	23.3	27.9	20.2	18.9
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	B
Approach Vol, veh/h		1033			1030			310			733	
Approach Delay, s/veh		21.3			20.4			25.7			22.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	22.6	7.2	20.8	9.9	23.9	13.7	14.4				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	35.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0				
Max Q Clear Time (g_c+1), s	10.3	10.4	3.6	8.4	5.4	9.4	9.3	5.8				
Green Ext Time (p_c), s	0.6	5.9	0.0	2.2	0.2	5.4	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1092	58	132	1025	69	55	85	112	62	124	35
Future Volume (veh/h)	28	1092	58	132	1025	69	55	85	112	62	124	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	29	1149	32	139	1079	44	58	89	12	65	131	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	56	1594	692	177	1837	817	87	197	162	92	385	167
Arrive On Green	0.03	0.45	0.45	0.10	0.51	0.51	0.05	0.11	0.11	0.05	0.11	0.11
Sat Flow, veh/h	1795	3582	1554	1795	3582	1593	1767	1856	1525	1767	3526	1526
Grp Volume(v), veh/h	29	1149	32	139	1079	44	58	89	12	65	131	37
Grp Sat Flow(s),veh/h/ln	1795	1791	1554	1795	1791	1593	1767	1856	1525	1767	1763	1526
Q Serve(g_s), s	1.1	17.6	0.8	5.1	14.1	0.9	2.2	3.0	0.5	2.4	2.3	1.5
Cycle Q Clear(g_c), s	1.1	17.6	0.8	5.1	14.1	0.9	2.2	3.0	0.5	2.4	2.3	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	1594	692	177	1837	817	87	197	162	92	385	167
V/C Ratio(X)	0.52	0.72	0.05	0.78	0.59	0.05	0.67	0.45	0.07	0.70	0.34	0.22
Avail Cap(c_a), veh/h	802	2399	1041	802	2399	1067	789	1105	908	789	2099	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	15.2	10.6	29.6	11.4	8.2	31.4	28.2	27.1	31.3	27.7	27.3
Incr Delay (d2), s/veh	2.8	0.8	0.0	2.9	0.4	0.0	3.2	0.6	0.1	3.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	0.2	2.1	4.4	0.3	1.0	1.3	0.2	1.1	0.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	16.0	10.6	32.4	11.8	8.2	34.6	28.8	27.1	34.9	27.9	27.6
LnGrp LOS	C	B	B	C	B	A	C	C	C	C	C	C
Approach Vol, veh/h		1210			1262			159			233	
Approach Delay, s/veh		16.3			13.9			30.8			29.8	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	39.9	7.8	12.8	11.1	35.4	8.0	12.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.0	45.0	30.0	40.0	30.0	45.0	30.0	40.0				
Max Q Clear Time (g_c+1), s	13.1	16.1	4.2	4.3	7.1	19.6	4.4	5.0				
Green Ext Time (p_c), s	0.0	10.1	0.0	0.6	0.1	10.3	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	314	836	84	527	745	272	221	513	253	314	571	236
Future Volume (veh/h)	314	836	84	527	745	272	221	513	253	314	571	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	320	853	35	538	760	120	226	523	42	320	583	44
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	378	2139	661	491	1604	713	286	765	235	378	902	278
Arrive On Green	0.11	0.42	0.42	0.14	0.45	0.45	0.08	0.15	0.15	0.11	0.18	0.18
Sat Flow, veh/h	3483	5147	1592	3483	3582	1592	3483	5147	1581	3483	5147	1584
Grp Volume(v), veh/h	320	853	35	538	760	120	226	523	42	320	583	44
Grp Sat Flow(s),veh/h/ln	1742	1716	1592	1742	1791	1592	1742	1716	1581	1742	1716	1584
Q Serve(g_s), s	9.9	12.8	1.4	15.5	16.4	5.0	7.0	10.6	2.6	9.9	11.6	2.6
Cycle Q Clear(g_c), s	9.9	12.8	1.4	15.5	16.4	5.0	7.0	10.6	2.6	9.9	11.6	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	2139	661	491	1604	713	286	765	235	378	902	278
V/C Ratio(X)	0.85	0.40	0.05	1.10	0.47	0.17	0.79	0.68	0.18	0.85	0.65	0.16
Avail Cap(c_a), veh/h	491	2139	661	491	1604	713	491	1380	424	491	1380	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	22.5	19.2	47.2	21.3	18.1	49.6	44.4	41.0	48.1	42.2	38.5
Incr Delay (d2), s/veh	8.4	0.6	0.2	69.4	1.0	0.5	1.9	0.4	0.1	8.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	5.0	0.5	11.2	6.6	1.8	3.0	4.4	1.0	4.6	4.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	23.1	19.4	116.6	22.3	18.6	51.4	44.8	41.1	56.5	42.5	38.6
LnGrp LOS	E	C	B	F	C	B	D	D	D	E	D	D
Approach Vol, veh/h		1208			1418			791			947	
Approach Delay, s/veh		31.8			57.8			46.5			47.1	
Approach LOS		C			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	51.6	13.5	24.9	16.4	55.2	16.4	21.9				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	15.5	29.0	15.5	29.5	15.5	29.0	15.5	29.5				
Max Q Clear Time (g_c+1/7), s	11.5	14.8	9.0	13.6	11.9	18.4	11.9	12.6				
Green Ext Time (p_c), s	0.0	2.5	0.0	1.7	0.0	2.0	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1187	540	0	1268	534	0	0	0	287	1	660
Future Volume (veh/h)	0	1187	540	0	1268	534	0	0	0	287	1	660
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	1885	1885
Adj Flow Rate, veh/h	0	1211	263	0	1294	545				294	0	628
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	1	1				1	1	1
Cap, veh/h	0	2752	852	0	2752	1242				880	0	783
Arrive On Green	0.00	0.53	0.53	0.00	1.00	1.00				0.25	0.00	0.25
Sat Flow, veh/h	0	5316	1593	0	5316	1590				3591	0	3195
Grp Volume(v), veh/h	0	1211	263	0	1294	545				294	0	628
Grp Sat Flow(s),veh/h/ln	0	1716	1593	0	1716	1590				1795	0	1598
Q Serve(g_s), s	0.0	7.9	5.1	0.0	0.0	0.0				3.7	0.0	10.2
Cycle Q Clear(g_c), s	0.0	7.9	5.1	0.0	0.0	0.0				3.7	0.0	10.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2752	852	0	2752	1242				880	0	783
V/C Ratio(X)	0.00	0.44	0.31	0.00	0.47	0.44				0.33	0.00	0.80
Avail Cap(c_a), veh/h	0	2752	852	0	2752	1242				1169	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.82	0.82				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.8	7.1	0.0	0.0	0.0				17.1	0.0	19.5
Incr Delay (d2), s/veh	0.0	0.5	0.9	0.0	0.5	0.9				0.1	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	1.3	0.0	0.1	0.3				1.4	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.3	8.1	0.0	0.5	0.9				17.1	0.0	22.0
LnGrp LOS	A	A	A	A	A	A				B	A	C
Approach Vol, veh/h		1474			1839						922	
Approach Delay, s/veh		8.3			0.6						20.4	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		35.7		19.3		35.7						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		25.0		17.9		25.0						
Max Q Clear Time (g_c+I1), s		9.9		12.2		2.0						
Green Ext Time (p_c), s		5.3		1.3		7.4						

Intersection Summary

HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	1197	275	0	1532	154	274	0	433	0	0	0
Future Volume (veh/h)	0	1197	275	0	1532	154	274	0	433	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	1885	1885			
Adj Flow Rate, veh/h	0	1234	284	0	1579	87	282	0	397			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	1	1			
Cap, veh/h	0	3124	1242	0	3124	967	621	0	553			
Arrive On Green	0.00	1.00	1.00	0.00	0.61	0.61	0.17	0.00	0.17			
Sat Flow, veh/h	0	5316	1591	0	5316	1594	3591	0	3195			
Grp Volume(v), veh/h	0	1234	284	0	1579	87	282	0	397			
Grp Sat Flow(s),veh/h/ln	0	1716	1591	0	1716	1594	1795	0	1598			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	9.6	1.2	3.9	0.0	6.5			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	9.6	1.2	3.9	0.0	6.5			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3124	1242	0	3124	967	621	0	553			
V/C Ratio(X)	0.00	0.39	0.23	0.00	0.51	0.09	0.45	0.00	0.72			
Avail Cap(c_a), veh/h	0	3124	1242	0	3124	967	1038	0	924			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.88	0.88	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	6.1	4.5	20.4	0.0	21.5			
Incr Delay (d2), s/veh	0.0	0.3	0.4	0.0	0.6	0.2	0.2	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	2.0	0.3	1.5	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.4	0.0	6.7	4.7	20.6	0.0	22.1			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1518			1666			679				
Approach Delay, s/veh		0.3			6.6			21.5				
Approach LOS		A			A			C				
Timer - Assigned Phs		2			6			8				
Phs Duration (G+Y+Rc), s		39.7			39.7			15.3				
Change Period (Y+Rc), s		6.3			6.3			5.8				
Max Green Setting (Gmax), s		27.0			27.0			15.9				
Max Q Clear Time (g_c+I1), s		2.0			11.6			8.5				
Green Ext Time (p_c), s		6.4			6.8			1.1				

Intersection Summary

HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	370	901	191	140	298	46	263	521	112	145	590	432
Future Volume (veh/h)	370	901	191	140	298	46	263	521	112	145	590	432
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	385	939	58	146	310	11	274	543	32	151	615	101
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	3	3	3
Cap, veh/h	498	1471	454	304	1196	364	382	1155	356	305	1042	321
Arrive On Green	0.15	0.30	0.30	0.09	0.24	0.24	0.11	0.23	0.23	0.09	0.21	0.21
Sat Flow, veh/h	3374	4985	1540	3428	5066	1541	3428	5066	1562	3428	5066	1561
Grp Volume(v), veh/h	385	939	58	146	310	11	274	543	32	151	615	101
Grp Sat Flow(s),veh/h/ln	1687	1662	1540	1714	1689	1541	1714	1689	1562	1714	1689	1561
Q Serve(g_s), s	8.3	12.3	2.1	3.0	3.7	0.4	5.8	7.0	1.2	3.2	8.3	4.1
Cycle Q Clear(g_c), s	8.3	12.3	2.1	3.0	3.7	0.4	5.8	7.0	1.2	3.2	8.3	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	1471	454	304	1196	364	382	1155	356	305	1042	321
V/C Ratio(X)	0.77	0.64	0.13	0.48	0.26	0.03	0.72	0.47	0.09	0.49	0.59	0.31
Avail Cap(c_a), veh/h	1121	2982	921	1140	3031	922	1140	2357	727	1140	2357	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	23.0	19.4	32.6	23.4	22.1	32.3	25.1	22.9	32.6	27.0	25.4
Incr Delay (d2), s/veh	1.9	0.5	0.1	0.9	0.1	0.0	1.9	0.3	0.1	0.9	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.3	0.7	1.2	1.4	0.1	2.3	2.5	0.4	1.2	3.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	23.5	19.5	33.5	23.5	22.1	34.2	25.4	23.0	33.6	27.5	25.9
LnGrp LOS	C	C	B	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		1382			467			849			867	
Approach Delay, s/veh		25.9			26.6			28.1			28.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	29.2	11.7	22.6	16.1	24.8	13.4	21.0				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	25.0	45.0	25.0	35.0	25.0	45.0	25.0	35.0				
Max Q Clear Time (g_c+1), s	11.0	14.3	5.2	9.0	10.3	5.7	7.8	10.3				
Green Ext Time (p_c), s	0.3	6.8	0.3	3.5	0.8	2.0	0.6	4.2				

Intersection Summary

HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	198	35	166	216	89	77	589	175	98	571	89
Future Volume (veh/h)	71	198	35	166	216	89	77	589	175	98	571	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	74	206	6	173	225	20	80	614	98	102	595	46
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	94	279	230	200	397	334	101	2506	766	126	2577	779
Arrive On Green	0.05	0.15	0.15	0.11	0.21	0.21	0.06	0.49	0.49	0.07	0.50	0.50
Sat Flow, veh/h	1781	1870	1546	1781	1870	1574	1795	5147	1572	1795	5147	1555
Grp Volume(v), veh/h	74	206	6	173	225	20	80	614	98	102	595	46
Grp Sat Flow(s),veh/h/ln	1781	1870	1546	1781	1870	1574	1795	1716	1572	1795	1716	1555
Q Serve(g_s), s	4.9	12.6	0.4	11.5	12.9	1.2	5.3	8.3	4.1	6.7	7.8	1.8
Cycle Q Clear(g_c), s	4.9	12.6	0.4	11.5	12.9	1.2	5.3	8.3	4.1	6.7	7.8	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	279	230	200	397	334	101	2506	766	126	2577	779
V/C Ratio(X)	0.79	0.74	0.03	0.87	0.57	0.06	0.79	0.24	0.13	0.81	0.23	0.06
Avail Cap(c_a), veh/h	193	541	447	304	670	564	157	2506	766	157	2577	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	48.8	43.6	52.4	42.3	37.7	55.9	17.9	16.8	55.0	16.9	15.4
Incr Delay (d2), s/veh	5.3	1.4	0.0	10.3	0.5	0.0	6.0	0.2	0.3	17.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.9	0.2	5.6	5.9	0.5	2.5	3.2	1.5	3.6	3.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	50.3	43.6	62.7	42.8	37.7	61.9	18.2	17.2	72.7	17.1	15.6
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		286			418			792			743	
Approach Delay, s/veh		53.0			50.8			22.5			24.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.9	65.9	17.9	23.2	11.3	67.6	10.3	30.8				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	10.5	* 33	20.5	34.7	10.5	32.5	13.0	* 43				
Max Q Clear Time (g_c+1/2), s	10.3	10.3	13.5	14.6	7.3	9.8	6.9	14.9				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.1	0.0	2.5	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	6	150	11	4	9	232	738	5	21	457	208
Future Volume (veh/h)	195	6	150	11	4	9	232	738	5	21	457	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	197	6	34	11	4	1	234	745	3	21	462	61
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	259	308	258	25	62	52	305	2173	652	46	995	435
Arrive On Green	0.15	0.17	0.17	0.01	0.03	0.03	0.17	0.42	0.42	0.03	0.28	0.28
Sat Flow, veh/h	1767	1856	1558	1767	1856	1550	1795	5147	1544	1795	3582	1567
Grp Volume(v), veh/h	197	6	34	11	4	1	234	745	3	21	462	61
Grp Sat Flow(s),veh/h/ln	1767	1856	1558	1767	1856	1550	1795	1716	1544	1795	1791	1567
Q Serve(g_s), s	5.2	0.1	0.9	0.3	0.1	0.0	6.0	4.7	0.1	0.6	5.2	1.4
Cycle Q Clear(g_c), s	5.2	0.1	0.9	0.3	0.1	0.0	6.0	4.7	0.1	0.6	5.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	308	258	25	62	52	305	2173	652	46	995	435
V/C Ratio(X)	0.76	0.02	0.13	0.44	0.06	0.02	0.77	0.34	0.00	0.46	0.46	0.14
Avail Cap(c_a), veh/h	823	2169	1821	183	1497	1250	984	6867	2061	223	3260	1427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	16.9	17.2	23.6	22.6	22.6	19.2	9.4	8.1	23.2	14.5	13.1
Incr Delay (d2), s/veh	4.6	0.0	0.2	11.6	0.4	0.1	4.0	0.1	0.0	7.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.3	0.2	0.0	0.0	2.3	1.2	0.0	0.3	1.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	16.9	17.4	35.2	23.0	22.7	23.2	9.5	8.1	30.3	14.8	13.3
LnGrp LOS	C	B	B	D	C	C	C	A	A	C	B	B
Approach Vol, veh/h		237			16			982			544	
Approach Delay, s/veh		23.2			31.4			12.8			15.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	24.9	5.2	12.5	12.7	17.9	11.6	6.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	64.5	64.5	5.0	56.5	26.5	44.0	22.5	39.0				
Max Q Clear Time (g_c+1), s	12.6	6.7	2.3	2.9	8.0	7.2	7.2	2.1				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.1	0.6	3.1	0.4	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											15.1	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	127	64	196	77	31	77	498	221	56	544	94
Future Volume (veh/h)	93	127	64	196	77	31	77	498	221	56	544	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	100	137	11	211	83	5	83	535	109	60	585	93
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	129	424	184	262	658	289	115	1514	461	96	876	139
Arrive On Green	0.07	0.12	0.12	0.15	0.19	0.19	0.07	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1767	3526	1529	1767	3526	1550	1767	5066	1544	1767	3039	482
Grp Volume(v), veh/h	100	137	11	211	83	5	83	535	109	60	339	339
Grp Sat Flow(s),veh/h/ln	1767	1763	1529	1767	1763	1550	1767	1689	1544	1767	1763	1758
Q Serve(g_s), s	3.1	2.0	0.4	6.4	1.1	0.1	2.6	4.6	3.0	1.8	9.4	9.5
Cycle Q Clear(g_c), s	3.1	2.0	0.4	6.4	1.1	0.1	2.6	4.6	3.0	1.8	9.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	129	424	184	262	658	289	115	1514	461	96	508	507
V/C Ratio(X)	0.78	0.32	0.06	0.81	0.13	0.02	0.72	0.35	0.24	0.62	0.67	0.67
Avail Cap(c_a), veh/h	796	2540	1102	796	2540	1117	955	4563	1390	955	1588	1583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	22.3	21.6	22.9	18.8	18.4	25.5	15.3	14.7	25.7	17.4	17.4
Incr Delay (d2), s/veh	3.7	0.4	0.1	2.2	0.1	0.0	3.2	0.1	0.3	2.5	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.7	0.1	2.4	0.4	0.0	1.0	1.4	0.9	0.7	3.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	22.8	21.8	25.1	18.9	18.4	28.6	15.4	14.9	28.2	18.9	19.0
LnGrp LOS	C	C	C	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		248			299			727			738	
Approach Delay, s/veh		25.3			23.3			16.8			19.7	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	23.6	12.2	12.2	8.1	23.0	8.5	15.9				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	50.0	25.0	40.0	30.0	50.0	25.0	40.0				
Max Q Clear Time (g_c+1), s	13.8	6.6	8.4	4.0	4.6	11.5	5.1	3.1				
Green Ext Time (p_c), s	0.0	3.9	0.1	0.8	0.0	4.0	0.1	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											19.9	
HCM 6th LOS											B	



HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	179	45	326	91	390	67	647	484	309	427	19
Future Volume (veh/h)	38	179	45	326	91	390	67	647	484	309	427	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	40	186	3	218	266	212	70	674	247	322	445	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	1	1	1
Cap, veh/h	141	281	123	402	422	350	102	1063	465	366	1211	49
Arrive On Green	0.08	0.08	0.08	0.23	0.23	0.23	0.06	0.30	0.30	0.11	0.35	0.35
Sat Flow, veh/h	1739	3469	1520	1781	1870	1553	1795	3582	1568	3483	3504	141
Grp Volume(v), veh/h	40	186	3	218	266	212	70	674	247	322	227	236
Grp Sat Flow(s),veh/h/ln	1739	1735	1520	1781	1870	1553	1795	1791	1568	1742	1791	1855
Q Serve(g_s), s	1.3	3.2	0.1	6.7	7.9	7.6	2.4	10.1	8.1	5.6	5.9	5.9
Cycle Q Clear(g_c), s	1.3	3.2	0.1	6.7	7.9	7.6	2.4	10.1	8.1	5.6	5.9	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	141	281	123	402	422	350	102	1063	465	366	619	641
V/C Ratio(X)	0.28	0.66	0.02	0.54	0.63	0.61	0.69	0.63	0.53	0.88	0.37	0.37
Avail Cap(c_a), veh/h	141	281	123	1067	1120	930	195	1942	850	366	965	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	27.6	26.1	21.1	21.6	21.4	28.6	18.8	18.1	27.3	15.2	15.2
Incr Delay (d2), s/veh	1.1	5.7	0.1	1.1	1.6	1.7	8.0	0.6	0.9	20.8	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	0.0	2.7	3.3	2.7	1.1	3.5	2.5	3.1	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	33.3	26.2	22.2	23.1	23.1	36.6	19.4	19.1	48.1	15.5	15.5
LnGrp LOS	C	C	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		229			696			991			785	
Approach Delay, s/veh		32.2			22.9			20.6			28.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.0	22.8		9.5	8.0	25.8		18.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5	33.5		5.0	6.7	33.3		37.0				
Max Q Clear Time (g_c+1), s	17.6	12.1		5.2	4.4	7.9		9.9				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	2.4		3.0				

Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↖	↗		↖	↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	351	143	103	39	117	26	215	674	46	93	779	268
Future Volume (veh/h)	351	143	103	39	117	26	215	674	46	93	779	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	366	149	41	41	122	18	224	702	45	97	811	122
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	438	425	597	71	223	33	267	1323	85	125	1106	678
Arrive On Green	0.13	0.23	0.23	0.04	0.14	0.14	0.15	0.39	0.39	0.07	0.31	0.31
Sat Flow, veh/h	3456	1870	1575	1781	1584	234	1767	3357	215	1767	3526	1525
Grp Volume(v), veh/h	366	149	41	41	0	140	224	368	379	97	811	122
Grp Sat Flow(s),veh/h/ln	1728	1870	1575	1781	0	1818	1767	1763	1809	1767	1763	1525
Q Serve(g_s), s	6.9	4.5	1.1	1.5	0.0	4.8	8.3	10.7	10.8	3.6	13.8	3.3
Cycle Q Clear(g_c), s	6.9	4.5	1.1	1.5	0.0	4.8	8.3	10.7	10.8	3.6	13.8	3.3
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	438	425	597	71	0	255	267	694	713	125	1106	678
V/C Ratio(X)	0.84	0.35	0.07	0.58	0.00	0.55	0.84	0.53	0.53	0.78	0.73	0.18
Avail Cap(c_a), veh/h	438	1000	1082	175	0	921	276	804	825	234	1523	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	21.8	13.3	31.7	0.0	26.9	27.7	15.6	15.6	30.7	20.5	11.4
Incr Delay (d2), s/veh	13.2	0.5	0.0	7.2	0.0	1.8	19.6	0.6	0.6	9.8	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	1.9	0.4	0.8	0.0	2.1	4.6	3.7	3.8	1.8	5.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	22.3	13.4	38.9	0.0	28.7	47.3	16.2	16.2	40.5	21.7	11.5
LnGrp LOS	D	C	B	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		556			181			971			1030	
Approach Delay, s/veh		34.5			31.0			23.4			22.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	25.6	7.2	19.8	9.2	30.9	13.0	13.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	29.0	6.6	35.9	8.9	30.6	8.5	34.0				
Max Q Clear Time (g_c+I), s	10.3	15.8	3.5	6.5	5.6	12.8	8.9	6.8				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.9	0.1	4.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											25.7	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1284	475	264	1216	0	0	0	0	607	3	419
Future Volume (veh/h)	0	1284	475	264	1216	0	0	0	0	607	3	419
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1781	1781	1781
Adj Flow Rate, veh/h	0	1297	353	267	1228	0				615	0	375
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	8	8	8	8	0				8	8	8
Cap, veh/h	0	2409	738	318	3069	0				927	0	412
Arrive On Green	0.00	0.50	0.50	0.10	0.63	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	5024	1490	3291	5024	0				3393	0	1510
Grp Volume(v), veh/h	0	1297	353	267	1228	0				615	0	375
Grp Sat Flow(s),veh/h/ln	0	1621	1490	1646	1621	0				1697	0	1510
Q Serve(g_s), s	0.0	22.0	18.8	9.6	15.0	0.0				19.3	0.0	28.8
Cycle Q Clear(g_c), s	0.0	22.0	18.8	9.6	15.0	0.0				19.3	0.0	28.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2409	738	318	3069	0				927	0	412
V/C Ratio(X)	0.00	0.54	0.48	0.84	0.40	0.00				0.66	0.00	0.91
Avail Cap(c_a), veh/h	0	2409	738	329	3069	0				1371	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.8	20.0	53.3	10.9	0.0				38.7	0.0	42.2
Incr Delay (d2), s/veh	0.0	0.9	2.2	15.9	0.4	0.0				0.3	0.0	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.0	6.6	4.6	4.9	0.0				8.1	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.7	22.2	69.1	11.3	0.0				39.0	0.0	52.4
LnGrp LOS		A	C	C	E	B	A			D	A	D
Approach Vol, veh/h		1650			1495					990		
Approach Delay, s/veh		21.8			21.6					44.1		
Approach LOS		C			C					D		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	66.3	65.4		38.3		81.7						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	43.0	43.0		48.5		60.0						
Max Q Clear Time (g_c+I1), s	24.0	24.0		30.8		17.0						
Green Ext Time (p_c), s	0.0	9.8		1.9		10.5						

Intersection Summary

HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑		↘	↙	↗	↘		↗
Traffic Volume (veh/h)	338	1329	242	0	1432	91	288	121	199	139	0	648
Future Volume (veh/h)	338	1329	242	0	1432	91	288	121	199	139	0	648
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	0	1781	1781	1781	1781	1781	1856	0	1856
Adj Flow Rate, veh/h	341	1342	0	0	1446	87	206	240	103	140	0	128
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	0	8	8	8	8	8	3	0	3
Cap, veh/h	141	3518		0	3575	215	307	322	271	0	0	0
Arrive On Green	0.08	0.72	0.00	0.00	0.60	0.60	0.18	0.18	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1697	4863	2657	0	6199	357	1697	1781	1497		0	
Grp Volume(v), veh/h	341	1342	0	0	1117	416	206	240	103		0.0	
Grp Sat Flow(s),veh/h/ln	1697	1621	1329	0	1532	1711	1697	1781	1497			
Q Serve(g_s), s	10.0	12.6	0.0	0.0	15.4	15.4	13.6	15.3	7.3			
Cycle Q Clear(g_c), s	10.0	12.6	0.0	0.0	15.4	15.4	13.6	15.3	7.3			
Prop In Lane	1.00		1.00	0.00		0.21	1.00		1.00			
Lane Grp Cap(c), veh/h	141	3518		0	2762	1028	307	322	271			
V/C Ratio(X)	2.41	0.38		0.00	0.40	0.40	0.67	0.75	0.38			
Avail Cap(c_a), veh/h	141	3518		0	2762	1028	636	668	561			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	55.0	6.3	0.0	0.0	12.6	12.6	45.8	46.5	43.3			
Incr Delay (d2), s/veh	656.4	0.3	0.0	0.0	0.4	1.2	2.6	3.4	0.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh	29.9	3.6	0.0	0.0	5.1	5.9	5.9	7.1	2.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	711.4	6.7	0.0	0.0	13.1	13.8	48.4	50.0	44.1			
LnGrp LOS	F	A		A	B	B	D	D	D			
Approach Vol, veh/h		1683	A		1533			549				
Approach Delay, s/veh		149.4			13.3			48.3				
Approach LOS		F			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		92.8			14.7	78.1		27.2				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		49.0			* 10	34.0		45.0				
Max Q Clear Time (g_c+1), s		14.6			12.0	17.4		17.3				
Green Ext Time (p_c), s		7.0			0.0	6.8		2.7				

Intersection Summary

HCM 6th Ctrl Delay	79.2
HCM 6th LOS	E

Notes

- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	877	99	72	705	27	87	349	39	43	320	94
Future Volume (veh/h)	114	877	99	72	705	27	87	349	39	43	320	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	127	974	52	80	783	28	97	388	12	48	356	22
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	162	1240	1180	138	1173	42	157	674	294	110	582	254
Arrive On Green	0.10	0.37	0.37	0.08	0.35	0.35	0.09	0.19	0.19	0.06	0.17	0.17
Sat Flow, veh/h	1697	3385	2581	1697	3331	119	1781	3526	1538	1767	3526	1535
Grp Volume(v), veh/h	127	974	52	80	398	413	97	388	12	48	356	22
Grp Sat Flow(s),veh/h/ln	1697	1692	1290	1697	1692	1758	1781	1763	1538	1767	1763	1535
Q Serve(g_s), s	4.8	16.9	0.7	3.0	13.1	13.1	3.5	6.6	0.4	1.7	6.2	0.8
Cycle Q Clear(g_c), s	4.8	16.9	0.7	3.0	13.1	13.1	3.5	6.6	0.4	1.7	6.2	0.8
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	1240	1180	138	596	619	157	674	294	110	582	254
V/C Ratio(X)	0.78	0.79	0.04	0.58	0.67	0.67	0.62	0.58	0.04	0.44	0.61	0.09
Avail Cap(c_a), veh/h	386	1539	1408	386	770	799	405	1069	466	402	1069	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	18.6	10.0	29.2	18.1	18.1	29.0	24.2	21.7	29.8	25.6	23.3
Incr Delay (d2), s/veh	3.1	2.2	0.0	1.4	0.7	0.6	1.5	0.7	0.1	1.0	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.9	0.2	1.2	4.4	4.6	1.4	2.5	0.1	0.7	2.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	20.8	10.0	30.6	18.8	18.7	30.5	25.0	21.8	30.8	26.5	23.5
LnGrp LOS	C	C	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1153			891			497			426	
Approach Delay, s/veh		21.5			19.8			26.0			26.8	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	18.6	9.4	29.9	9.8	16.9	10.3	28.9				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+1), s	13.7	8.6	5.0	18.9	5.5	8.2	6.8	15.1				
Green Ext Time (p_c), s	0.0	1.7	0.0	4.7	0.0	1.5	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	801	80	253	469	60	85	847	471	102	639	107
Future Volume (veh/h)	166	801	80	253	469	60	85	847	471	102	639	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	175	843	79	266	494	19	89	892	233	107	673	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	206	952	89	332	963	421	121	1061	464	135	1089	477
Arrive On Green	0.12	0.31	0.31	0.10	0.28	0.28	0.07	0.30	0.30	0.08	0.31	0.31
Sat Flow, veh/h	1697	3122	293	3291	3385	1481	1781	3526	1544	1767	3526	1544
Grp Volume(v), veh/h	175	457	465	266	494	19	89	892	233	107	673	37
Grp Sat Flow(s),veh/h/ln	1697	1692	1722	1646	1692	1481	1781	1763	1544	1767	1763	1544
Q Serve(g_s), s	9.3	23.7	23.7	7.3	11.3	0.9	4.5	21.8	11.5	5.5	15.0	1.6
Cycle Q Clear(g_c), s	9.3	23.7	23.7	7.3	11.3	0.9	4.5	21.8	11.5	5.5	15.0	1.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	516	525	332	963	421	121	1061	464	135	1089	477
V/C Ratio(X)	0.85	0.89	0.89	0.80	0.51	0.05	0.73	0.84	0.50	0.80	0.62	0.08
Avail Cap(c_a), veh/h	276	551	561	536	1102	482	290	1148	503	288	1148	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	30.5	30.5	40.5	27.6	23.9	42.1	30.1	26.5	41.9	27.2	22.6
Incr Delay (d2), s/veh	13.3	15.6	15.3	1.7	0.6	0.1	3.2	5.7	1.2	4.0	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	11.1	11.3	2.9	4.3	0.3	2.0	9.4	4.1	2.4	6.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	46.0	45.8	42.2	28.2	24.0	45.3	35.9	27.7	45.8	28.3	22.6
LnGrp LOS	D	D	D	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		1097			779			1214			817	
Approach Delay, s/veh		47.0			32.9			35.0			30.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	33.7	13.3	34.1	10.3	34.4	15.2	32.2				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	15.0	30.0				
Max Q Clear Time (g_c+1), s	17.5	23.8	9.3	25.7	6.5	17.0	11.3	13.3				
Green Ext Time (p_c), s	0.0	3.9	0.0	2.4	0.0	4.3	0.0	3.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											37.0	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↑	↘	↖ ↗	↑ ↑	↘	↖ ↗	↑	↘ ↗	↖ ↗	↑	↘ ↗
Traffic Volume (veh/h)	269	895	57	30	422	73	21	85	27	61	142	162
Future Volume (veh/h)	269	895	57	30	422	73	21	85	27	61	142	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	286	952	56	32	449	21	22	90	6	65	151	36
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	332	1696	100	82	726	317	64	338	280	138	416	346
Arrive On Green	0.20	0.36	0.36	0.05	0.21	0.21	0.04	0.18	0.18	0.08	0.22	0.22
Sat Flow, veh/h	1697	4689	275	1697	3385	1478	1781	1870	1549	1781	1870	1552
Grp Volume(v), veh/h	286	658	350	32	449	21	22	90	6	65	151	36
Grp Sat Flow(s),veh/h/ln	1697	1621	1722	1697	1692	1478	1781	1870	1549	1781	1870	1552
Q Serve(g_s), s	9.7	9.6	9.7	1.1	7.1	0.7	0.7	2.5	0.2	2.1	4.1	1.1
Cycle Q Clear(g_c), s	9.7	9.6	9.7	1.1	7.1	0.7	0.7	2.5	0.2	2.1	4.1	1.1
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	1172	623	82	726	317	64	338	280	138	416	346
V/C Ratio(X)	0.86	0.56	0.56	0.39	0.62	0.07	0.34	0.27	0.02	0.47	0.36	0.10
Avail Cap(c_a), veh/h	428	1637	870	428	1709	746	450	630	522	450	630	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	15.2	15.2	27.4	21.1	18.6	28.0	20.9	20.0	26.2	19.5	18.4
Incr Delay (d2), s/veh	11.2	0.4	0.8	1.1	0.9	0.1	1.2	0.7	0.0	0.9	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	2.9	3.2	0.4	2.5	0.2	0.3	1.0	0.1	0.8	1.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	15.6	16.0	28.5	22.0	18.7	29.1	21.6	20.1	27.2	20.1	18.5
LnGrp LOS	C	B	B	C	C	B	C	C	C	C	C	B
Approach Vol, veh/h		1294			502			118			252	
Approach Delay, s/veh		19.9			22.3			22.9			21.7	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	16.4	6.9	27.5	6.1	18.9	15.6	18.7				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+14), s	14.5	4.5	3.1	11.7	2.7	6.1	11.7	9.1				
Green Ext Time (p_c), s	0.0	0.5	0.0	6.1	0.0	0.6	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	346	199	42	198	41	99	830	99	50	726	114
Future Volume (veh/h)	147	346	199	42	198	41	99	830	99	50	726	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	153	360	63	44	206	38	103	865	55	52	756	43
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	319	560	466	230	458	85	208	1147	496	153	1038	449
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.12	0.34	0.34	0.09	0.31	0.31
Sat Flow, veh/h	1079	1781	1482	917	1458	269	1697	3385	1465	1697	3385	1464
Grp Volume(v), veh/h	153	360	63	44	0	244	103	865	55	52	756	43
Grp Sat Flow(s),veh/h/ln	1079	1781	1482	917	0	1727	1697	1692	1465	1697	1692	1464
Q Serve(g_s), s	9.4	12.3	2.2	3.1	0.0	8.0	4.0	16.1	1.8	2.0	14.1	1.5
Cycle Q Clear(g_c), s	17.4	12.3	2.2	15.4	0.0	8.0	4.0	16.1	1.8	2.0	14.1	1.5
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	560	466	230	0	543	208	1147	496	153	1038	449
V/C Ratio(X)	0.48	0.64	0.14	0.19	0.00	0.45	0.50	0.75	0.11	0.34	0.73	0.10
Avail Cap(c_a), veh/h	436	753	627	330	0	730	598	2146	929	598	2146	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	20.9	17.4	27.5	0.0	19.4	29.1	20.8	16.1	30.3	22.0	17.6
Incr Delay (d2), s/veh	1.1	1.2	0.1	0.4	0.0	0.6	0.7	1.0	0.1	0.5	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	4.7	0.7	0.6	0.0	2.9	1.5	5.4	0.5	0.8	4.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	22.1	17.6	27.9	0.0	20.0	29.8	21.9	16.2	30.8	23.0	17.7
LnGrp LOS	C	C	B	C	A	C	C	C	B	C	C	B
Approach Vol, veh/h		576			288			1023			851	
Approach Delay, s/veh		23.1			21.2			22.4			23.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	30.5		29.3	13.4	28.3		29.3				
Change Period (Y+Rc), s	4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	25	45.0		30.0	* 25	45.0		30.0				
Max Q Clear Time (g_c+1/3), s	14.0	18.1		19.4	6.0	16.1		17.4				
Green Ext Time (p_c), s	0.0	5.8		2.1	0.1	5.0		1.2				

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	46.8											
Intersection LOS	E											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	350	49	15	204	33	40	278	26	69	183	30
Future Vol, veh/h	36	350	49	15	204	33	40	278	26	69	183	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	3	3	3	3	3	3
Mvmt Flow	38	372	52	16	217	35	43	296	28	73	195	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	74.6	25.9	41.2	29.5
HCM LOS	F	D	E	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	8%	6%	24%
Vol Thru, %	81%	80%	81%	65%
Vol Right, %	8%	11%	13%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	344	435	252	282
LT Vol	40	36	15	69
Through Vol	278	350	204	183
RT Vol	26	49	33	30
Lane Flow Rate	366	463	268	300
Geometry Grp	1	1	1	1
Degree of Util (X)	0.836	1.015	0.64	0.705
Departure Headway (Hd)	8.221	7.895	8.591	8.46
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	443	463	418	426
Service Time	6.26	5.926	6.686	6.552
HCM Lane V/C Ratio	0.826	1	0.641	0.704
HCM Control Delay	41.2	74.6	25.9	29.5
HCM Lane LOS	E	F	D	D
HCM 95th-tile Q	8	13.6	4.3	5.3

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	6	40	8	176	1	271	3	787	302	357	870	25
Future Volume (veh/h)	6	40	8	176	1	271	3	787	302	357	870	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	6	42	4	185	1	220	3	828	141	376	916	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	92	539	500	269	14	251	14	1040	450	228	1469	637
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.01	0.31	0.31	0.13	0.43	0.43
Sat Flow, veh/h	114	1665	1544	613	43	775	1697	3385	1464	1697	3385	1468
Grp Volume(v), veh/h	48	0	4	406	0	0	3	828	141	376	916	12
Grp Sat Flow(s),veh/h/ln	1779	0	1544	1431	0	0	1697	1692	1464	1697	1692	1468
Q Serve(g_s), s	0.0	0.0	0.1	18.5	0.0	0.0	0.1	16.7	5.5	10.0	15.6	0.3
Cycle Q Clear(g_c), s	1.3	0.0	0.1	19.9	0.0	0.0	0.1	16.7	5.5	10.0	15.6	0.3
Prop In Lane	0.12		1.00	0.46		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	630	0	500	534	0	0	14	1040	450	228	1469	637
V/C Ratio(X)	0.08	0.00	0.01	0.76	0.00	0.00	0.22	0.80	0.31	1.65	0.62	0.02
Avail Cap(c_a), veh/h	653	0	520	648	0	0	228	1367	591	228	1469	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	17.0	23.6	0.0	0.0	36.6	23.6	19.7	32.1	16.3	12.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.3	0.0	0.0	2.9	2.5	0.4	309.5	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	6.5	0.0	0.0	0.1	6.0	1.7	23.3	5.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	0.0	17.0	27.9	0.0	0.0	39.5	26.1	20.1	341.6	17.1	12.0
LnGrp LOS	B	A	B	C	A	A	D	C	C	F	B	B
Approach Vol, veh/h		52		406			972			1304		
Approach Delay, s/veh		17.4		27.9			25.3			110.7		
Approach LOS		B		C			C			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	29.3		30.2	5.3	38.7		30.2				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	30.0			25.0	* 10	30.0		30.0				
Max Q Clear Time (g_c+1/2g), s	18.7			3.3	2.1	17.6		21.9				
Green Ext Time (p_c), s	0.0	4.2		0.1	0.0	4.5		1.5				

Intersection Summary

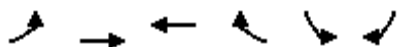
HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	133	658	372	193	198	56	
Future Volume (veh/h)	133	658	372	193	198	56	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1856	1856	
Adj Flow Rate, veh/h	140	693	392	178	208	44	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	5	5	5	5	3	3	
Cap, veh/h	180	2115	481	218	266	56	
Arrive On Green	0.10	0.61	0.40	0.40	0.19	0.19	
Sat Flow, veh/h	1739	3561	1189	540	1422	301	
Grp Volume(v), veh/h	140	693	0	570	253	0	
Grp Sat Flow(s),veh/h/ln	1739	1735	0	1729	1730	0	
Q Serve(g_s), s	3.5	4.3	0.0	13.0	6.2	0.0	
Cycle Q Clear(g_c), s	3.5	4.3	0.0	13.0	6.2	0.0	
Prop In Lane	1.00			0.31	0.82	0.17	
Lane Grp Cap(c), veh/h	180	2115	0	699	324	0	
V/C Ratio(X)	0.78	0.33	0.00	0.82	0.78	0.00	
Avail Cap(c_a), veh/h	373	3330	0	1113	723	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	19.3	4.2	0.0	11.7	17.1	0.0	
Incr Delay (d2), s/veh	7.0	0.1	0.0	2.6	4.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.5	0.6	0.0	3.7	2.2	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.4	4.3	0.0	14.3	21.3	0.0	
LnGrp LOS	C	A	A	B	C	A	
Approach Vol, veh/h		833	570		253		
Approach Delay, s/veh		8.0	14.3		21.3		
Approach LOS		A	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				31.5	12.8	9.1	22.4
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				42.5	18.5	9.5	28.5
Max Q Clear Time (g_c+1), s				6.3	8.2	5.5	15.0
Green Ext Time (p_c), s				4.8	0.5	0.1	2.9
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			12.2				
HCM 6th LOS			B				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	364	74	396	28	19	62	199	539	4	24	692	213
Future Volume (veh/h)	364	74	396	28	19	62	199	539	4	24	692	213
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	368	75	82	28	19	5	201	544	3	24	699	106
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	509	575	251	106	262	114	250	1305	664	177	988	666
Arrive On Green	0.15	0.17	0.17	0.06	0.08	0.08	0.15	0.39	0.39	0.05	0.29	0.29
Sat Flow, veh/h	3374	3469	1511	1739	3469	1509	1697	3385	1484	3291	3385	1502
Grp Volume(v), veh/h	368	75	82	28	19	5	201	544	3	24	699	106
Grp Sat Flow(s),veh/h/ln	1687	1735	1511	1739	1735	1509	1697	1692	1484	1646	1692	1502
Q Serve(g_s), s	6.9	1.2	3.2	1.0	0.3	0.2	7.6	7.8	0.1	0.5	12.2	2.8
Cycle Q Clear(g_c), s	6.9	1.2	3.2	1.0	0.3	0.2	7.6	7.8	0.1	0.5	12.2	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	509	575	251	106	262	114	250	1305	664	177	988	666
V/C Ratio(X)	0.72	0.13	0.33	0.26	0.07	0.04	0.80	0.42	0.00	0.14	0.71	0.16
Avail Cap(c_a), veh/h	1020	1835	799	526	1835	798	513	1791	877	995	1791	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	23.5	24.3	29.7	28.4	28.4	27.3	14.9	10.2	29.8	20.9	11.0
Incr Delay (d2), s/veh	0.7	0.1	0.8	1.3	0.0	0.1	2.3	0.2	0.0	0.1	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.4	1.1	0.4	0.1	0.1	2.8	2.4	0.0	0.2	4.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	23.6	25.1	31.0	28.5	28.4	29.6	15.1	10.2	30.0	21.8	11.2
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		525			52			748			829	
Approach Delay, s/veh		26.6			29.8			19.0			20.7	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	32.0	8.7	17.2	14.5	25.8	14.7	11.2				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	20	35.0	* 20	35.0	* 20	35.0	* 20	35.0				
Max Q Clear Time (g_c+1), s	12.5	9.8	3.0	5.2	9.6	14.2	8.9	2.3				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.6	0.2	4.4	0.5	0.0				

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖↗	↖		↖	↕	↗	↖	↕↗	
Traffic Volume (veh/h)	6	375	41	656	210	75	29	485	854	266	572	2
Future Volume (veh/h)	6	375	41	656	210	75	29	485	854	266	572	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	6	403	0	705	226	75	31	522	866	286	615	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	26	426		760	580	193	83	812	691	233	1135	4
Arrive On Green	0.01	0.23	0.00	0.23	0.44	0.44	0.05	0.24	0.24	0.14	0.33	0.33
Sat Flow, veh/h	1739	1826	0	3374	1306	433	1697	3385	1459	1697	3460	11
Grp Volume(v), veh/h	6	403	0	705	0	301	31	522	866	286	301	316
Grp Sat Flow(s),veh/h/ln	1739	1826	0	1687	0	1739	1697	1692	1459	1697	1692	1779
Q Serve(g_s), s	0.5	31.7	0.0	29.8	0.0	17.0	2.6	20.2	35.0	20.0	21.2	21.2
Cycle Q Clear(g_c), s	0.5	31.7	0.0	29.8	0.0	17.0	2.6	20.2	35.0	20.0	21.2	21.2
Prop In Lane	1.00		0.00	1.00		0.25	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	26	426		760	0	773	83	812	691	233	555	584
V/C Ratio(X)	0.23	0.95		0.93	0.00	0.39	0.37	0.64	1.25	1.23	0.54	0.54
Avail Cap(c_a), veh/h	179	438		925	0	773	175	812	691	233	555	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	55.0	0.0	55.3	0.0	27.2	67.2	49.8	39.3	62.9	40.0	40.0
Incr Delay (d2), s/veh	1.7	29.4	0.0	12.3	0.0	0.5	1.0	1.4	126.0	134.8	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	17.7	0.0	13.7	0.0	7.0	1.1	8.4	47.6	17.1	8.6	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	84.4	0.0	67.6	0.0	27.7	68.2	51.1	165.2	197.8	40.6	40.6
LnGrp LOS	E	F		E	A	C	E	D	F	F	D	D
Approach Vol, veh/h		409	A		1006			1419			903	
Approach Delay, s/veh		84.2			55.7			121.2			90.4	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.7	41.5	38.6	41.1	11.9	54.3	7.9	71.8				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	20	35.0	* 40	35.0	* 15	35.0	* 15	35.0				
Max Q Clear Time (g_c+Q), s	20	37.0	31.8	33.7	4.6	23.2	2.5	19.0				
Green Ext Time (p_c), s	0.0	0.0	1.0	0.4	0.0	1.6	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	92.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↗	↕		↙	↕↕
Traffic Volume (veh/h)	87	659	809	116	450	776
Future Volume (veh/h)	87	659	809	116	450	776
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	93	0	861	0	479	826
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	219		1136		532	2468
Arrive On Green	0.07	0.00	0.34	0.00	0.31	0.73
Sat Flow, veh/h	3291	1510	3563	0	1697	3474
Grp Volume(v), veh/h	93	0	861	0	479	826
Grp Sat Flow(s),veh/h/ln	1646	1510	1692	0	1697	1692
Q Serve(g_s), s	1.6	0.0	13.3	0.0	15.9	5.1
Cycle Q Clear(g_c), s	1.6	0.0	13.3	0.0	15.9	5.1
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	219		1136		532	2468
V/C Ratio(X)	0.43		0.76		0.90	0.33
Avail Cap(c_a), veh/h	1681		2305		867	2468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	17.4	0.0	19.3	2.8
Incr Delay (d2), s/veh	1.3	0.0	0.8	0.0	4.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	4.1	0.0	5.5	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.6	0.0	18.2	0.0	24.1	2.9
LnGrp LOS	C		B		C	A
Approach Vol, veh/h	93	A	861	A		1305
Approach Delay, s/veh	27.6		18.2			10.7
Approach LOS	C		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.1	26.2			49.3	9.4
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30	40.0			40.0	30.0
Max Q Clear Time (g_c+I1), s	11.7	15.3			7.1	3.6
Green Ext Time (p_c), s	0.6	4.4			4.3	0.3

Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B





















Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
 1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	501	9	295	900	924	0	0	408	157
Future Volume (veh/h)	0	0	0	501	9	295	900	924	0	0	408	157
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1811	1811	1811	1811	1811	0	0	1811	1811
Adj Flow Rate, veh/h				617	0	148	978	1004	0	0	443	46
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				6	6	6	6	6	0	0	6	6
Cap, veh/h				729	0	324	1065	3262	0	0	1781	425
Arrive On Green				0.21	0.00	0.21	0.11	0.22	0.00	0.00	0.29	0.29
Sat Flow, veh/h				3450	0	1535	3346	5107	0	0	6484	1487
Grp Volume(v), veh/h				617	0	148	978	1004	0	0	443	46
Grp Sat Flow(s),veh/h/ln				1725	0	1535	1673	1648	0	0	1558	1487
Q Serve(g_s), s				15.5	0.0	7.6	26.1	15.3	0.0	0.0	4.9	2.1
Cycle Q Clear(g_c), s				15.5	0.0	7.6	26.1	15.3	0.0	0.0	4.9	2.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				729	0	324	1065	3262	0	0	1781	425
V/C Ratio(X)				0.85	0.00	0.46	0.92	0.31	0.00	0.00	0.25	0.11
Avail Cap(c_a), veh/h				897	0	399	1115	3262	0	0	1781	425
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.1	0.0	31.0	39.1	18.0	0.0	0.0	24.7	23.7
Incr Delay (d2), s/veh				6.3	0.0	1.0	9.6	0.2	0.0	0.0	0.3	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.7	0.0	6.7	12.9	6.7	0.0	0.0	1.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.4	0.0	32.0	48.7	18.2	0.0	0.0	25.0	24.2
LnGrp LOS				D	A	C	D	B	A	A	C	C
Approach Vol, veh/h					765			1982			489	
Approach Delay, s/veh					38.8			33.2			25.0	
Approach LOS					D			C			C	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		65.2		24.8	33.6	31.5						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		55.0		23.4	30.0	20.0						
Max Q Clear Time (g_c+I1), s		17.3		17.5	28.1	6.9						
Green Ext Time (p_c), s		7.7		1.6	0.6	2.3						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				33.3								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

# HCM 6th Signalized Intersection Summary

## 2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	184	12	563	661	1541	0	0	783	383
Future Volume (veh/h)	0	0	0	184	12	563	661	1541	0	0	783	383
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				195	0	496	668	1557	0	0	791	129
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				872	0	388	731	3039	0	0	1689	515
Arrive On Green				0.25	0.00	0.25	0.07	0.20	0.00	0.00	0.33	0.33
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1545
Grp Volume(v), veh/h				195	0	496	668	1557	0	0	791	129
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1545
Q Serve(g_s), s				3.3	0.0	18.5	14.5	20.6	0.0	0.0	9.3	4.6
Cycle Q Clear(g_c), s				3.3	0.0	18.5	14.5	20.6	0.0	0.0	9.3	4.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				872	0	388	731	3039	0	0	1689	515
V/C Ratio(X)				0.22	0.00	1.28	0.91	0.51	0.00	0.00	0.47	0.25
Avail Cap(c_a), veh/h				872	0	388	731	3039	0	0	1689	515
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.11	0.11	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.5	0.0	28.3	34.2	20.3	0.0	0.0	19.8	18.2
Incr Delay (d2), s/veh				0.1	0.0	144.0	2.3	0.1	0.0	0.0	0.9	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.3	0.0	21.8	6.7	9.0	0.0	0.0	3.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				22.7	0.0	172.2	36.5	20.3	0.0	0.0	20.7	19.4
LnGrp LOS				C	A	F	D	C	A	A	C	B
Approach Vol, veh/h				691			2225			920		
Approach Delay, s/veh				130.0			25.2			20.5		
Approach LOS				F			C			C		
Timer - Assigned Phs		2		5	6		8					
Phs Duration (G+Y+Rc), s		50.7		20.0	30.7		24.3					
Change Period (Y+Rc), s		5.7		4.0	5.7		5.8					
Max Green Setting (Gmax), s		45.0		16.0	25.0		18.5					
Max Q Clear Time (g_c+I1), s		22.6		16.5	11.3		20.5					
Green Ext Time (p_c), s		7.7		0.0	3.0		0.0					

### Intersection Summary

HCM 6th Ctrl Delay	43.0
HCM 6th LOS	D

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	3	615	0	0	0	0	1563	833	84	821	0
Future Volume (veh/h)	267	3	615	0	0	0	0	1563	833	84	821	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811				0	1811	1811	1811	1811	0
Adj Flow Rate, veh/h	192	0	584				0	1681	447	90	883	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	6	6	6	6	0
Cap, veh/h	397	0	707				0	3336	801	166	3168	0
Arrive On Green	0.23	0.00	0.23				0.00	0.54	0.54	0.10	1.00	0.00
Sat Flow, veh/h	1725	0	3070				0	6484	1495	3346	5107	0
Grp Volume(v), veh/h	192	0	584				0	1681	447	90	883	0
Grp Sat Flow(s),veh/h/ln	1725	0	1535				0	1558	1495	1673	1648	0
Q Serve(g_s), s	8.7	0.0	16.3				0.0	15.4	17.8	2.3	0.0	0.0
Cycle Q Clear(g_c), s	8.7	0.0	16.3				0.0	15.4	17.8	2.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	397	0	707				0	3336	801	166	3168	0
V/C Ratio(X)	0.48	0.00	0.83				0.00	0.50	0.56	0.54	0.28	0.00
Avail Cap(c_a), veh/h	583	0	1037				0	3336	801	521	3168	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	30.0	0.0	32.9				0.0	13.3	13.9	39.6	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	3.6				0.0	0.5	2.8	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	6.0				0.0	4.8	5.8	0.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	36.6				0.0	13.8	16.7	40.4	0.2	0.0
LnGrp LOS	C	A	D				A	B	B	D	A	A
Approach Vol, veh/h		776						2128			973	
Approach Delay, s/veh		35.2						14.4			3.9	
Approach LOS		D						B			A	
Timer - Assigned Phs	1	2					6	8				
Phs Duration (G+Y+Rc), s	9.5	54.0					63.5	26.5				
Change Period (Y+Rc), s	5.0	5.8					5.8	5.8				
Max Green Setting (Gmax), s	14.0	29.0					48.0	30.4				
Max Q Clear Time (g_c+14), s	14.3	19.8					2.0	18.3				
Green Ext Time (p_c), s	0.1	7.2					6.7	2.5				

Intersection Summary

HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	626	5	361	0	0	0	0	1579	371	253	714	0	
Future Volume (veh/h)	626	5	361	0	0	0	0	1579	371	253	714	0	
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No						No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0	
Adj Flow Rate, veh/h	656	0	226				0	1645	342	264	744	0	
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96	
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0	
Cap, veh/h	804	0	357				0	1947	401	368	3164	0	
Arrive On Green	0.22	0.00	0.22				0.00	0.46	0.46	0.14	0.83	0.00	
Sat Flow, veh/h	3619	0	1610				0	4363	864	3428	5233	0	
Grp Volume(v), veh/h	656	0	226				0	1321	666	264	744	0	
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1683	1714	1689	0	
Q Serve(g_s), s	12.9	0.0	9.5				0.0	25.8	26.3	5.5	2.3	0.0	
Cycle Q Clear(g_c), s	12.9	0.0	9.5				0.0	25.8	26.3	5.5	2.3	0.0	
Prop In Lane	1.00		1.00				0.00		0.51	1.00		0.00	
Lane Grp Cap(c), veh/h	804	0	357				0	1566	781	368	3164	0	
V/C Ratio(X)	0.82	0.00	0.63				0.00	0.84	0.85	0.72	0.24	0.00	
Avail Cap(c_a), veh/h	989	0	440				0	1566	781	777	3164	0	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00	
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00	
Uniform Delay (d), s/veh	27.7	0.0	26.4				0.0	17.7	17.8	31.0	2.6	0.0	
Incr Delay (d2), s/veh	4.5	0.0	2.0				0.0	5.7	11.4	2.4	0.2	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.6	0.0	3.5				0.0	9.5	10.9	2.1	0.5	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	32.2	0.0	28.4				0.0	23.4	29.3	33.4	2.7	0.0	
LnGrp LOS	C	A	C				A	C	C	C	A	A	
Approach Vol, veh/h		882						1987			1008		
Approach Delay, s/veh		31.2						25.4			10.8		
Approach LOS		C						C			B		
Timer - Assigned Phs	1	2	4	6									
Phs Duration (G+Y+Rc), s	22.1	40.5	22.5	52.5									
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7									
Max Green Setting (Gmax), s	22.0	22.0	20.5	43.0									
Max Q Clear Time (g_c+1), s	28.3	28.3	14.9	4.3									
Green Ext Time (p_c), s	0.6	0.0	1.7	3.1									

### Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	478	212	119	726	269	336	1630	98	185	911	235
Future Volume (veh/h)	279	478	212	119	726	269	336	1630	98	185	911	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	300	514	143	128	781	208	361	1753	102	199	980	225
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	333	1187	520	158	838	366	386	1575	92	231	961	220
Arrive On Green	0.19	0.34	0.34	0.09	0.24	0.24	0.22	0.33	0.33	0.13	0.24	0.24
Sat Flow, veh/h	1767	3526	1545	1767	3526	1541	1725	4774	277	1725	4003	917
Grp Volume(v), veh/h	300	514	143	128	781	208	361	1209	646	199	806	399
Grp Sat Flow(s),veh/h/ln	1767	1763	1545	1767	1763	1541	1725	1648	1755	1725	1648	1624
Q Serve(g_s), s	24.2	16.5	9.9	10.4	31.6	17.3	29.9	48.1	48.1	16.5	35.0	35.0
Cycle Q Clear(g_c), s	24.2	16.5	9.9	10.4	31.6	17.3	29.9	48.1	48.1	16.5	35.0	35.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.56
Lane Grp Cap(c), veh/h	333	1187	520	158	838	366	386	1088	579	231	792	390
V/C Ratio(X)	0.90	0.43	0.27	0.81	0.93	0.57	0.93	1.11	1.11	0.86	1.02	1.02
Avail Cap(c_a), veh/h	424	1187	520	424	847	370	414	1088	579	414	792	390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	37.5	35.3	65.2	54.4	49.0	55.5	48.8	48.8	61.8	55.4	55.4
Incr Delay (d2), s/veh	22.4	0.5	0.6	18.6	17.2	3.4	28.9	63.4	72.9	17.4	36.8	51.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	7.0	3.7	5.4	15.6	6.9	15.7	28.5	31.9	8.1	18.1	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.2	38.1	35.9	83.7	71.6	52.3	84.4	112.3	121.7	79.1	92.2	106.7
LnGrp LOS	F	D	D	F	E	D	F	F	F	E	F	F
Approach Vol, veh/h		957			1117			2216			1404	
Approach Delay, s/veh		51.0			69.4			110.5			94.4	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	52.1	17.0	53.1	36.6	39.0	31.5	38.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+1.5p_c), s	119.5	50.1	12.4	18.5	31.9	37.0	26.2	33.6				
Green Ext Time (p_c), s	1.1	0.0	0.7	5.8	0.7	0.0	1.3	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											88.5	
HCM 6th LOS											F	

HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	516	117	169	540	211	156	890	296	286	465	307
Future Volume (veh/h)	348	516	117	169	540	211	156	890	296	286	465	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	387	573	126	188	600	206	173	989	308	318	517	181
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	380	84	127	553	189	199	795	246	343	712	593
Arrive On Green	0.12	0.26	0.26	0.07	0.22	0.22	0.11	0.30	0.30	0.19	0.38	0.38
Sat Flow, veh/h	1767	1467	323	1767	2561	877	1767	2629	813	1767	1856	1546
Grp Volume(v), veh/h	387	0	699	188	413	393	173	661	636	318	517	181
Grp Sat Flow(s),veh/h/ln	1767	0	1790	1767	1763	1676	1767	1763	1679	1767	1856	1546
Q Serve(g_s), s	16.0	0.0	36.0	10.0	30.0	30.0	13.4	42.0	42.0	24.6	33.1	11.4
Cycle Q Clear(g_c), s	16.0	0.0	36.0	10.0	30.0	30.0	13.4	42.0	42.0	24.6	33.1	11.4
Prop In Lane	1.00		0.18	1.00		0.52	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	203	0	464	127	381	362	199	533	507	343	712	593
V/C Ratio(X)	1.90	0.00	1.51	1.48	1.08	1.09	0.87	1.24	1.25	0.93	0.73	0.31
Avail Cap(c_a), veh/h	203	0	464	127	381	362	420	533	507	420	712	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	0.0	51.5	64.5	54.5	54.5	60.7	48.5	48.5	55.0	36.6	29.9
Incr Delay (d2), s/veh	423.7	0.0	239.3	252.5	70.6	72.8	8.4	123.4	129.5	23.3	3.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	30.9	0.0	46.3	13.3	20.3	19.5	6.4	36.1	35.2	12.9	15.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	485.2	0.0	290.8	317.0	125.1	127.3	69.1	171.9	178.0	78.3	40.1	30.1
LnGrp LOS	F	A	F	F	F	F	E	F	F	E	D	C
Approach Vol, veh/h		1086			994			1470			1016	
Approach Delay, s/veh		360.1			162.2			162.5			50.3	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	47.0	17.0	43.0	20.6	58.3	23.0	37.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	42.0	10.0	36.0	33.0	42.0	16.0	30.0				
Max Q Clear Time (g_c+20.6), s	20.6	44.0	12.0	38.0	15.4	35.1	18.0	32.0				
Green Ext Time (p_c), s	0.4	0.0	0.0	0.0	0.3	1.7	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	184.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	190	114	77	264	249	271	1579	91	86	992	75
Future Volume (veh/h)	128	190	114	77	264	249	271	1579	91	86	992	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	149	221	119	90	307	61	315	1836	103	100	1153	85
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	173	252	136	112	351	293	314	2098	117	122	1062	78
Arrive On Green	0.10	0.22	0.22	0.06	0.19	0.19	0.18	0.44	0.44	0.07	0.33	0.33
Sat Flow, veh/h	1767	1125	606	1767	1856	1550	1725	4786	268	1725	3243	239
Grp Volume(v), veh/h	149	0	340	90	307	61	315	1263	676	100	611	627
Grp Sat Flow(s),veh/h/ln	1767	0	1731	1767	1856	1550	1725	1648	1758	1725	1721	1762
Q Serve(g_s), s	11.4	0.0	26.1	6.9	22.1	4.6	25.0	48.0	48.2	7.9	45.0	45.0
Cycle Q Clear(g_c), s	11.4	0.0	26.1	6.9	22.1	4.6	25.0	48.0	48.2	7.9	45.0	45.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.15	1.00		0.14
Lane Grp Cap(c), veh/h	173	0	388	112	351	293	314	1445	770	122	563	577
V/C Ratio(X)	0.86	0.00	0.88	0.81	0.87	0.21	1.00	0.87	0.88	0.82	1.09	1.09
Avail Cap(c_a), veh/h	257	0	441	257	472	395	314	1445	770	314	563	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.1	0.0	51.5	63.6	54.1	47.0	56.2	35.2	35.2	63.0	46.2	46.2
Incr Delay (d2), s/veh	12.2	0.0	17.2	5.1	14.6	0.5	51.9	6.4	11.5	5.0	63.1	63.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	13.0	3.2	11.6	1.8	15.0	19.4	21.9	3.5	28.2	28.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	0.0	68.7	68.6	68.7	47.5	108.2	41.6	46.7	68.1	109.3	109.6
LnGrp LOS	E	A	E	E	E	D	F	D	D	E	F	F
Approach Vol, veh/h		489			458			2254			1338	
Approach Delay, s/veh		70.1			65.9			52.4			106.4	
Approach LOS		E			E			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.2	67.8	15.2	37.3	32.5	52.5	20.0	32.5				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0				
Max Q Clear Time (g_c+1.9), s	19.9	50.2	8.9	28.1	27.0	47.0	13.4	24.1				
Green Ext Time (p_c), s	0.1	0.0	0.1	1.4	0.0	0.0	0.1	1.9				

Intersection Summary

HCM 6th Ctrl Delay				71.6								
HCM 6th LOS				E								



HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	68	114	148	165	225	176	886	61	92	609	53
Future Volume (veh/h)	92	68	114	148	165	225	176	886	61	92	609	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	95	70	34	153	170	166	181	913	58	95	628	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	121	233	113	193	205	200	224	1125	71	121	918	69
Arrive On Green	0.07	0.20	0.20	0.11	0.24	0.24	0.13	0.33	0.33	0.07	0.28	0.28
Sat Flow, veh/h	1767	1180	573	1767	862	842	1767	3366	214	1767	3325	249
Grp Volume(v), veh/h	95	0	104	153	0	336	181	478	493	95	333	342
Grp Sat Flow(s),veh/h/ln	1767	0	1752	1767	0	1704	1767	1763	1817	1767	1763	1811
Q Serve(g_s), s	3.3	0.0	3.1	5.2	0.0	11.6	6.2	15.4	15.4	3.3	10.4	10.5
Cycle Q Clear(g_c), s	3.3	0.0	3.1	5.2	0.0	11.6	6.2	15.4	15.4	3.3	10.4	10.5
Prop In Lane	1.00		0.33	1.00		0.49	1.00		0.12	1.00		0.14
Lane Grp Cap(c), veh/h	121	0	346	193	0	406	224	589	607	121	486	500
V/C Ratio(X)	0.78	0.00	0.30	0.79	0.00	0.83	0.81	0.81	0.81	0.78	0.68	0.69
Avail Cap(c_a), veh/h	157	0	509	242	0	577	271	711	733	157	597	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	21.2	26.9	0.0	22.4	26.3	18.8	18.8	28.4	20.0	20.0
Incr Delay (d2), s/veh	17.4	0.0	0.5	13.3	0.0	6.8	13.9	6.0	5.8	17.4	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.2	2.8	0.0	5.0	3.2	6.2	6.3	1.8	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	0.0	21.7	40.2	0.0	29.2	40.2	24.8	24.7	45.8	22.4	22.4
LnGrp LOS	D	A	C	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		199			489			1152			770	
Approach Delay, s/veh		33.2			32.6			27.2			25.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	25.2	11.3	16.8	12.4	21.6	8.8	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	25.0	8.5	18.0	9.5	21.0	5.5	21.0				
Max Q Clear Time (g_c+1), s	15.3	17.4	7.2	5.1	8.2	12.5	5.3	13.6				
Green Ext Time (p_c), s	0.0	3.4	0.0	0.3	0.1	2.4	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕	↕↕↕		↕	↕	
Traffic Volume (veh/h)	0	0	0	36	0	84	0	1681	22	21	1199	0
Future Volume (veh/h)	0	0	0	36	0	84	0	1681	22	21	1199	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	41	0	13	0	1932	25	24	1378	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	0	2	6	6	6	6	6	6
Cap, veh/h	0	3	0	130	0	0	3	2622	34	84	2371	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.52	0.52	0.05	0.69	0.00
Sat Flow, veh/h	0	1402	0	1781	41		1725	5029	65	1725	3532	0
Grp Volume(v), veh/h	0	0	0	41	29.1		0	1266	691	24	1378	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	C		1725	1648	1798	1725	1721	0
Q Serve(g_s), s	0.0	0.0	0.0	1.4			0.0	18.8	18.9	0.8	13.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.4			0.0	18.8	18.9	0.8	13.1	0.0
Prop In Lane	0.00		0.00	1.00			1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	130			3	1718	937	84	2371	0
V/C Ratio(X)	0.00	0.00	0.00	0.31			0.00	0.74	0.74	0.28	0.58	0.00
Avail Cap(c_a), veh/h	0	267	0	850			246	1922	1049	249	2371	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00			0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	27.7			0.0	11.7	11.7	28.9	5.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4			0.0	1.4	2.6	1.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.6			0.0	5.1	5.9	0.4	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	29.1			0.0	13.2	14.4	30.8	5.5	0.0
LnGrp LOS	A	A	A	C			A	B	B	C	A	A
Approach Vol, veh/h		0						1957			1402	
Approach Delay, s/veh		0.0						13.6			5.9	
Approach LOS								B			A	
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	40.6	40.4	12.1	0.0	0.0	51.0						
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5						
Max Green Setting (Gmax), s	36.8	30.1	9.0	9.0	36.9							
Max Q Clear Time (g_c+I), s	20.9	3.4	0.0	0.0	15.1							
Green Ext Time (p_c), s	0.0	12.0	0.1	0.0	11.4							
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.6								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	0	88	0	0	0	114	1010	0	0	1021	30
Future Volume (veh/h)	49	0	88	0	0	0	114	1010	0	0	1021	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	52	0	13	0	0	0	120	1063	0	0	1075	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	305	0	161	0	195	0	206	2268	0	0	1398	40
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.12	0.64	0.00	0.00	0.40	0.40
Sat Flow, veh/h	1781	0	1568	0	1900	0	1767	3618	0	0	3590	101
Grp Volume(v), veh/h	52	0	13	0	0	0	120	1063	0	0	542	564
Grp Sat Flow(s),veh/h/ln	1781	0	1568	0	1900	0	1767	1763	0	0	1763	1835
Q Serve(g_s), s	1.6	0.0	0.4	0.0	0.0	0.0	3.8	9.1	0.0	0.0	15.7	15.7
Cycle Q Clear(g_c), s	1.6	0.0	0.4	0.0	0.0	0.0	3.8	9.1	0.0	0.0	15.7	15.7
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h	305	0	161	0	195	0	206	2268	0	0	704	733
V/C Ratio(X)	0.17	0.00	0.08	0.00	0.00	0.00	0.58	0.47	0.00	0.00	0.77	0.77
Avail Cap(c_a), veh/h	877	0	664	0	805	0	249	2688	0	0	872	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	24.0	0.0	0.0	0.0	24.7	5.4	0.0	0.0	15.4	15.4
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.0	0.0	0.0	2.6	0.2	0.0	0.0	3.6	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.2	0.0	0.0	0.0	1.6	1.8	0.0	0.0	5.6	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	24.1	0.0	0.0	0.0	27.3	5.6	0.0	0.0	19.0	18.8
LnGrp LOS	C	A	C	A	A	A	C	A	A	A	B	B
Approach Vol, veh/h	65			0			1183			1106		
Approach Delay, s/veh	24.6			0.0			7.8			18.9		
Approach LOS	C						A			B		
Timer - Assigned Phs	2		4		5		6		8			
Phs Duration (G+Y+Rc), s	45.5		13.6		14.4		31.1		13.6			
Change Period (Y+Rc), s	7.5		7.5		7.5		7.5		7.5			
Max Green Setting (Gmax), s	45.0		25.0		8.3		29.2		25.0			
Max Q Clear Time (g_c+I1), s	11.1		3.6		5.8		17.7		0.0			
Green Ext Time (p_c), s	10.2		0.0		0.1		5.8		0.0			

Intersection Summary

HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑	↗	↗	↑↑	↗	↗	↑↑	↗
Traffic Volume (veh/h)	60	498	138	520	828	267	202	1390	636	267	741	129
Future Volume (veh/h)	60	498	138	520	828	267	202	1390	636	267	741	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	65	541	0	565	900	226	220	1511	0	290	805	94
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
Percent Heavy Veh, %	13	13	13	13	13	13	6	6	6	6	6	6
Cap, veh/h	110	672		667	655	546	257	924		328	1065	461
Arrive On Green	0.03	0.21	0.00	0.21	0.38	0.38	0.15	0.27	0.00	0.19	0.31	0.31
Sat Flow, veh/h	3155	3244	1447	3155	1707	1422	1725	3441	1535	1725	3441	1488
Grp Volume(v), veh/h	65	541	0	565	900	226	220	1511	0	290	805	94
Grp Sat Flow(s),veh/h/ln	1577	1622	1447	1577	1707	1422	1725	1721	1535	1725	1721	1488
Q Serve(g_s), s	2.6	20.7	0.0	22.4	50.0	15.2	16.2	35.0	0.0	21.3	27.5	6.1
Cycle Q Clear(g_c), s	2.6	20.7	0.0	22.4	50.0	15.2	16.2	35.0	0.0	21.3	27.5	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	110	672		667	655	546	257	924		328	1065	461
V/C Ratio(X)	0.59	0.81		0.85	1.37	0.41	0.85	1.64		0.88	0.76	0.20
Avail Cap(c_a), veh/h	847	871		847	655	546	463	924		463	1065	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	49.2	0.0	49.4	40.2	29.4	54.1	47.7	0.0	51.4	40.6	33.2
Incr Delay (d2), s/veh	10.2	6.1	0.0	8.5	177.8	1.1	15.4	290.9	0.0	18.5	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.7	0.0	9.3	52.0	5.1	7.9	51.5	0.0	10.5	11.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	55.3	0.0	57.9	218.0	30.5	69.5	338.6	0.0	69.9	44.3	33.6
LnGrp LOS	E	E		E	F	C	E	F		E	D	C
Approach Vol, veh/h		606			1691			1731			1189	
Approach Delay, s/veh		57.1			139.4			304.4			49.7	
Approach LOS		E			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.8	39.0	31.6	31.0	23.4	44.3	8.6	54.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+Y), s	20.3	37.0	24.4	22.7	18.2	29.5	4.6	52.0				
Green Ext Time (p_c), s	1.4	0.0	3.2	4.3	1.2	3.5	0.4	0.0				

Intersection Summary

HCM 6th Ctrl Delay	164.2
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖↗	↑↑↑	↗	↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	219	1292	53	103	1362	409	48	433	129	517	444	185
Future Volume (veh/h)	219	1292	53	103	1362	409	48	433	129	517	444	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	226	1332	20	106	1404	161	49	446	47	533	458	163
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	227	1693	510	152	1597	386	74	497	413	246	929	328
Arrive On Green	0.14	0.36	0.36	0.05	0.27	0.27	0.04	0.27	0.27	0.14	0.37	0.37
Sat Flow, veh/h	1626	4661	1405	3155	5873	1419	1767	1856	1542	1767	2542	897
Grp Volume(v), veh/h	226	1332	20	106	1404	161	49	446	47	533	316	305
Grp Sat Flow(s),veh/h/ln	1626	1554	1405	1577	1468	1419	1767	1856	1542	1767	1763	1676
Q Serve(g_s), s	19.9	36.6	1.3	4.7	32.8	13.4	3.9	33.2	3.3	20.0	19.9	20.2
Cycle Q Clear(g_c), s	19.9	36.6	1.3	4.7	32.8	13.4	3.9	33.2	3.3	20.0	19.9	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	227	1693	510	152	1597	386	74	497	413	246	645	613
V/C Ratio(X)	1.00	0.79	0.04	0.70	0.88	0.42	0.66	0.90	0.11	2.16	0.49	0.50
Avail Cap(c_a), veh/h	227	1693	510	440	1638	396	246	608	505	246	645	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.7	40.7	29.5	67.3	50.0	42.9	67.7	50.6	39.6	61.7	35.2	35.3
Incr Delay (d2), s/veh	58.8	2.7	0.0	2.2	5.9	1.0	3.7	12.6	0.0	536.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	13.8	0.4	1.9	12.2	4.6	1.8	16.8	1.2	45.5	8.4	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.5	43.4	29.6	69.4	55.9	43.9	71.5	63.2	39.7	598.5	35.4	35.5
LnGrp LOS	F	D	C	E	E	D	E	E	D	F	D	D
Approach Vol, veh/h		1578			1671			542			1154	
Approach Delay, s/veh		54.3			55.6			61.9			295.5	
Approach LOS		D			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.5	45.0	13.4	58.6	12.5	58.9	26.5	45.5				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0				
Max Q Clear Time (g_c+Y), s	20.0	35.2	6.7	38.6	5.9	22.2	21.9	34.8				
Green Ext Time (p_c), s	0.0	1.3	0.1	1.2	0.0	2.2	0.0	4.2				

Intersection Summary

HCM 6th Ctrl Delay	111.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

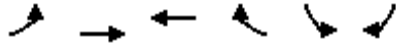
Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑↑		↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑	↔
Traffic Volume (veh/h)	287	1584	175	352	1389	293	191	746	387	264	392	135
Future Volume (veh/h)	287	1584	175	352	1389	293	191	746	387	264	392	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	302	1667	173	371	1462	215	201	785	83	278	413	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	369	1652	171	440	1060	464	267	973	295	347	759	332
Arrive On Green	0.12	0.30	0.30	0.14	0.33	0.33	0.08	0.19	0.19	0.10	0.22	0.22
Sat Flow, veh/h	3155	5434	564	3155	3244	1421	3401	5025	1526	3401	3497	1527
Grp Volume(v), veh/h	302	1351	489	371	1462	215	201	785	83	278	413	114
Grp Sat Flow(s),veh/h/ln	1577	1468	1593	1577	1622	1421	1700	1675	1526	1700	1749	1527
Q Serve(g_s), s	10.8	35.0	35.0	13.2	37.6	13.8	6.7	17.2	5.3	9.2	12.1	7.3
Cycle Q Clear(g_c), s	10.8	35.0	35.0	13.2	37.6	13.8	6.7	17.2	5.3	9.2	12.1	7.3
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	369	1339	484	440	1060	464	267	973	295	347	759	332
V/C Ratio(X)	0.82	1.01	1.01	0.84	1.38	0.46	0.75	0.81	0.28	0.80	0.54	0.34
Avail Cap(c_a), veh/h	959	1339	484	959	1060	464	739	1091	331	739	1063	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	40.1	40.1	48.3	38.8	30.7	51.9	44.4	39.6	50.5	40.0	38.1
Incr Delay (d2), s/veh	3.4	26.8	43.2	3.3	176.8	0.9	3.2	4.2	0.6	3.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	15.0	18.5	5.1	39.8	4.6	2.9	7.2	2.0	3.9	5.1	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	66.8	83.2	51.6	215.6	31.6	55.1	48.6	40.1	53.7	40.7	38.9
LnGrp LOS	D	F	F	D	F	C	E	D	D	D	D	D
Approach Vol, veh/h		2142			2048			1069			805	
Approach Delay, s/veh		68.6			166.5			49.1			45.0	
Approach LOS		E			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.6	42.5	16.6	32.5	21.0	45.1	19.3	29.8				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0				
Max Q Clear Time (g_c+1/2), s	11.2	37.0	8.7	14.1	12.8	39.6	11.2	19.2				
Green Ext Time (p_c), s	0.9	0.0	0.4	3.2	0.7	0.0	0.6	2.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											95.1	
HCM 6th LOS											F	

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1599	1133	0	213	1457
Future Volume (veh/h)	0	1599	1133	0	213	1457
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	1701	1205	0	227	1527
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	1905	1326	0	682	1214
Arrive On Green	0.00	0.41	0.41	0.00	0.42	0.42
Sat Flow, veh/h	0	4968	3415	0	1626	2894
Grp Volume(v), veh/h	0	1701	1205	0	227	1527
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1626	1447
Q Serve(g_s), s	0.0	24.3	25.0	0.0	6.7	30.0
Cycle Q Clear(g_c), s	0.0	24.3	25.0	0.0	6.7	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1905	1326	0	682	1214
V/C Ratio(X)	0.00	0.89	0.91	0.00	0.33	1.26
Avail Cap(c_a), veh/h	0	1955	1360	0	682	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.7	19.9	0.0	14.0	20.8
Incr Delay (d2), s/veh	0.0	5.6	9.1	0.0	0.3	123.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.9	9.1	0.0	2.3	29.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	25.3	29.0	0.0	14.3	143.8
LnGrp LOS	A	C	C	A	B	F
Approach Vol, veh/h		1701	1205		1754	
Approach Delay, s/veh		25.3	29.0		127.1	
Approach LOS		C	C		F	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		36.0		35.5		36.0
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		26.3		32.0		27.0
Green Ext Time (p_c), s		2.9		0.0		2.0

Intersection Summary

HCM 6th Ctrl Delay	64.6
HCM 6th LOS	E

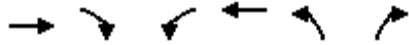
Notes

User approved volume balancing among the lanes for turning movement.



HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	529	1335	154	416	769	432
Future Volume (veh/h)	529	1335	154	416	769	432
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	569	1253	166	447	827	219
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1755	965	253	2480	979	436
Arrive On Green	0.38	0.38	0.08	0.53	0.30	0.30
Sat Flow, veh/h	4815	1406	3155	4815	3252	1447
Grp Volume(v), veh/h	569	1253	166	447	827	219
Grp Sat Flow(s),veh/h/ln	1554	1406	1577	1554	1626	1447
Q Serve(g_s), s	6.9	30.0	4.1	4.0	19.0	9.9
Cycle Q Clear(g_c), s	6.9	30.0	4.1	4.0	19.0	9.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1755	965	253	2480	979	436
V/C Ratio(X)	0.32	1.30	0.66	0.18	0.84	0.50
Avail Cap(c_a), veh/h	1755	965	1188	2480	1224	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	9.0	35.6	9.7	26.1	22.9
Incr Delay (d2), s/veh	0.1	142.1	2.9	0.0	4.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	55.5	1.5	1.1	7.6	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.7	151.0	38.5	9.7	30.7	23.8
LnGrp LOS	B	F	D	A	C	C
Approach Vol, veh/h	1822			613	1046	
Approach Delay, s/veh	109.4			17.5	29.3	
Approach LOS	F			B	C	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	22.4	37.3		49.7	30.0	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	30.0	30.0		30.0	30.0	
Max Q Clear Time (g_c+1/2), s	10.5	32.0		6.0	21.0	
Green Ext Time (p_c), s	0.5	0.0		2.6	3.0	

Intersection Summary

HCM 6th Ctrl Delay	69.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
 User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	23	0	0	0	0	68	0	0	0
Future Volume (veh/h)	0	0	0	23	0	0	0	0	68	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	34	0	0	0	0	17	0	0	0
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	36	16	80	84	71	0	0	71	0	84	0
Arrive On Green	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	0	0	1580	0	1870	0
Grp Volume(v), veh/h	0	0	0	34	0	0	0	0	17	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	0	0	1580	0	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	18	36	16	80	84	71	0	0	71	0	84	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00
Avail Cap(c_a), veh/h	901	6828	3045	1009	3707	3142	0	0	5098	0	6034	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			34			17			0		
Approach Delay, s/veh	0.0			8.1			6.3			0.0		
Approach LOS				A			A					
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	4.9		4.9		0.0		4.9		0.0		4.9	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	31.9		5.6		19.0		31.9		5.0		19.6	
Max Q Clear Time (g_c+I1), s	2.1		2.2		0.0		0.0		0.0		0.0	
Green Ext Time (p_c), s	0.1		0.0		0.0		0.0		0.0		0.0	
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				7.5								
HCM 6th LOS				A								

HCM 6th Signalized Intersection Summary  
 17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶↷	↶↷		↶↷	↶↷	↶	↶↷	↶↷	↶	↶↷	↶↷↷	↶
Traffic Volume (veh/h)	51	2	24	23	9	162	11	1802	15	60	1295	17
Future Volume (veh/h)	51	2	24	23	9	162	11	1802	15	60	1295	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	54	2	4	24	10	24	12	1917	9	64	1378	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	208	194	168	124	302	130	68	1672	734	219	2624	802
Arrive On Green	0.06	0.11	0.11	0.04	0.08	0.08	0.02	0.49	0.49	0.07	0.53	0.53
Sat Flow, veh/h	3456	1777	1538	3456	3554	1531	3346	3441	1510	3346	4944	1511
Grp Volume(v), veh/h	54	2	4	24	10	24	12	1917	9	64	1378	11
Grp Sat Flow(s),veh/h/ln	1728	1777	1538	1728	1777	1531	1673	1721	1510	1673	1648	1511
Q Serve(g_s), s	1.2	0.1	0.2	0.6	0.2	1.2	0.3	40.0	0.3	1.5	14.9	0.3
Cycle Q Clear(g_c), s	1.2	0.1	0.2	0.6	0.2	1.2	0.3	40.0	0.3	1.5	14.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	194	168	124	302	130	68	1672	734	219	2624	802
V/C Ratio(X)	0.26	0.01	0.02	0.19	0.03	0.18	0.18	1.15	0.01	0.29	0.53	0.01
Avail Cap(c_a), veh/h	839	432	374	839	863	372	813	1672	734	813	2624	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	32.7	32.7	38.5	34.6	35.0	39.6	21.2	10.9	36.7	12.6	9.1
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.7	0.0	0.3	1.2	73.6	0.0	0.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.2	0.1	0.4	0.1	29.7	0.1	0.6	4.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	32.7	32.8	39.3	34.6	35.3	40.9	94.7	11.0	37.4	12.8	9.1
LnGrp LOS	D	C	C	D	C	D	D	F	B	D	B	A
Approach Vol, veh/h		60			58			1938			1453	
Approach Delay, s/veh		37.1			36.8			94.0			13.8	
Approach LOS		D			D			F			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.4	47.5	8.0	16.5	6.7	51.2	10.0	14.5				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	20.0	40.0	20.0	20.0	20.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	13.5	42.0	2.6	2.2	2.3	16.9	3.2	3.2				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	9.5	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	68	10	22	152	47	41
Future Vol, veh/h	68	10	22	152	47	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	81	12	26	181	56	49

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	93	0	224 41
Stage 1	-	-	-	-	81 -
Stage 2	-	-	-	-	143 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1499	-	744 1021
Stage 1	-	-	-	-	933 -
Stage 2	-	-	-	-	869 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1499	-	731 1021
Mov Cap-2 Maneuver	-	-	-	-	731 -
Stage 1	-	-	-	-	933 -
Stage 2	-	-	-	-	854 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	842	-	-	1499	-
HCM Lane V/C Ratio	0.124	-	-	0.017	-
HCM Control Delay (s)	9.9	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (veh/h)	78	31	46	108	62	111
Future Volume (veh/h)	78	31	46	108	62	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	11	51	119	68	54
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	858	370	189	1851	134	106
Arrive On Green	0.24	0.24	0.11	0.52	0.14	0.14
Sat Flow, veh/h	3647	1532	1781	3647	928	737
Grp Volume(v), veh/h	86	11	51	119	123	0
Grp Sat Flow(s),veh/h/ln	1777	1532	1781	1777	1678	0
Q Serve(g_s), s	0.8	0.2	1.1	0.7	2.9	0.0
Cycle Q Clear(g_c), s	0.8	0.2	1.1	0.7	2.9	0.0
Prop In Lane		1.00	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	858	370	189	1851	242	0
V/C Ratio(X)	0.10	0.03	0.27	0.06	0.51	0.00
Avail Cap(c_a), veh/h	2874	1239	617	2874	1279	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.8	12.5	17.8	5.1	17.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.0	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.4	0.1	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.8	12.6	18.6	5.2	19.1	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	97			170	123	
Approach Delay, s/veh	12.8			9.2	19.1	
Approach LOS	B			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.2	12.1	18.0		30.0
Change Period (Y+Rc), s		7.0	7.5	7.5		7.5
Max Green Setting (Gmax), s		33.0	15.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		4.9	3.1	2.8		2.7
Green Ext Time (p_c), s		0.5	0.1	0.5		0.7
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			13.2			
HCM 6th LOS			B			
<b>Notes</b>						
User approved volume balancing among the lanes for turning movement.						

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	164	0	0	147	0	0
Future Vol, veh/h	164	0	0	147	0	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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	178	0	0	160	0	0

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	178	0	338	178
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1410	-	662	870
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1410	-	662	870
Mov Cap-2 Maneuver	-	-	-	-	662	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	874	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1410	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	44.9
Intersection LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷		↶	↷	
Traffic Vol, veh/h	122	42	84	495	458	63
Future Vol, veh/h	122	42	84	495	458	63
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	137	47	94	556	515	71
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	13.4	59.3	38.8
HCM LOS	B	F	E

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	15%	100%	0%	0%
Vol Thru, %	85%	0%	0%	88%
Vol Right, %	0%	0%	100%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	579	122	42	521
LT Vol	84	122	0	0
Through Vol	495	0	0	458
RT Vol	0	0	42	63
Lane Flow Rate	651	137	47	585
Geometry Grp	2	7	7	2
Degree of Util (X)	1.002	0.308	0.09	0.9
Departure Headway (Hd)	5.542	8.079	6.845	5.537
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	443	520	650
Service Time	3.603	5.866	4.63	3.602
HCM Lane V/C Ratio	1	0.309	0.09	0.9
HCM Control Delay	59.3	14.5	10.3	38.8
HCM Lane LOS	F	B	B	E
HCM 95th-tile Q	15.6	1.3	0.3	11.2



HCM 6th Signalized Intersection Summary  
 23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	65	1	1	25	1	1
Future Volume (veh/h)	65	1	1	25	1	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1856	1856
Adj Flow Rate, veh/h	77	1	1	3	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	3	3	3	3
Cap, veh/h	466	414	58	48	9	497
Arrive On Green	0.26	0.26	0.03	0.03	0.00	0.27
Sat Flow, veh/h	1781	1585	1856	1522	1767	1856
Grp Volume(v), veh/h	77	1	1	3	1	1
Grp Sat Flow(s),veh/h/ln	1781	1585	1856	1522	1767	1856
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	466	414	58	48	9	497
V/C Ratio(X)	0.17	0.00	0.02	0.06	0.11	0.00
Avail Cap(c_a), veh/h	1723	1533	3638	2984	508	4608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.5	5.2	9.0	9.0	9.5	5.1
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.5	5.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.6	5.2	9.1	9.5	14.6	5.1
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h	78		4			2
Approach Delay, s/veh	5.6		9.4			9.8
Approach LOS	A		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	4.5	5.1			9.6	9.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	37.5			47.5	18.5
Max Q Clear Time (g_c+1.0), s	12.0	2.0			2.0	2.6
Green Ext Time (p_c), s	0.0	0.0			0.0	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			5.9			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔		↔	↔		↔↑↑↑	↔↑↑↑		↔↑↑↑	↔↑↑↑	
Traffic Volume (veh/h)	59	0	11	2	0	19	21	1247	5	0	693	61
Future Volume (veh/h)	59	0	11	2	0	19	21	1247	5	0	693	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	66	0	2	2	0	2	23	1386	6	0	770	65
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	0	0	4	4	4	4	4	4
Cap, veh/h	316	0	142	5	0	4	69	3051	13	4	1819	153
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.59	0.59	0.00	0.39	0.39
Sat Flow, veh/h	3456	0	1549	1810	0	1610	1753	5164	22	1753	4711	395
Grp Volume(v), veh/h	66	0	2	2	0	2	23	899	493	0	546	289
Grp Sat Flow(s),veh/h/ln	1728	0	1549	1810	0	1610	1753	1675	1837	1753	1675	1756
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.5	5.9	5.9	0.0	4.7	4.8
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.0	0.0	0.0	0.5	5.9	5.9	0.0	4.7	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		0.23
Lane Grp Cap(c), veh/h	316	0	142	5	0	4	69	1979	1085	4	1293	678
V/C Ratio(X)	0.21	0.00	0.01	0.43	0.00	0.49	0.33	0.45	0.45	0.00	0.42	0.43
Avail Cap(c_a), veh/h	3074	0	1378	1610	0	1432	1560	3406	1867	1560	3406	1785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	16.3	19.6	0.0	19.6	18.4	4.5	4.5	0.0	8.9	8.9
Incr Delay (d2), s/veh	0.4	0.0	0.1	63.0	0.0	92.4	3.3	0.2	0.4	0.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.1	0.2	0.5	0.6	0.0	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	16.3	82.6	0.0	112.0	21.7	4.7	4.9	0.0	9.2	9.5
LnGrp LOS	B	A	B	F	A	F	C	A	A	A	A	A
Approach Vol, veh/h		68			4			1415			835	
Approach Delay, s/veh		16.9			97.3			5.1			9.3	
Approach LOS		B			F			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	21.7	0.0	9.6	0.0	29.7	9.6	0.0				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	35.0	40.0	35.0	35.0	35.0	40.0	35.0	35.0				
Max Q Clear Time (g_c+1), s	12.5	6.8	0.0	0.0	0.0	7.9	2.7	0.0				
Green Ext Time (p_c), s	0.0	7.9	0.0	0.0	0.0	14.9	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	118	5	45	39	14	124	25	1587	17	58	1198	85
Future Volume (veh/h)	118	5	45	39	14	124	25	1587	17	58	1198	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	124	5	9	41	15	27	26	1671	7	61	1261	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	401	128	230	427	128	230	103	1384	416	192	1638	493
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.06	0.28	0.28	0.11	0.33	0.33
Sat Flow, veh/h	1356	590	1062	1390	590	1062	1725	4944	1487	1725	4944	1489
Grp Volume(v), veh/h	124	0	14	41	0	42	26	1671	7	61	1261	40
Grp Sat Flow(s),veh/h/ln	1356	0	1653	1390	0	1653	1725	1648	1487	1725	1648	1489
Q Serve(g_s), s	4.3	0.0	0.4	1.3	0.0	1.1	0.8	15.0	0.2	1.7	12.3	1.0
Cycle Q Clear(g_c), s	5.4	0.0	0.4	1.6	0.0	1.1	0.8	15.0	0.2	1.7	12.3	1.0
Prop In Lane	1.00		0.64	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	0	359	427	0	359	103	1384	416	192	1638	493
V/C Ratio(X)	0.31	0.00	0.04	0.10	0.00	0.12	0.25	1.21	0.02	0.32	0.77	0.08
Avail Cap(c_a), veh/h	1043	0	1141	1085	0	1141	322	1384	416	322	1638	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	0.0	16.6	17.2	0.0	16.9	24.0	19.3	14.0	21.9	16.1	12.3
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.2	1.5	100.5	0.0	1.1	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	0.4	0.0	0.4	0.3	17.2	0.0	0.6	3.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	0.0	16.6	17.3	0.0	17.0	25.6	119.8	14.0	23.1	18.5	12.4
LnGrp LOS	B	A	B	B	A	B	C	F	B	C	B	B
Approach Vol, veh/h		138			83			1704			1362	
Approach Delay, s/veh		19.3			17.2			117.9			18.6	
Approach LOS		B			B			F			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.5	22.5		17.6	10.7	25.3		17.6				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	15.0		37.0	10.0	15.0		37.0				
Max Q Clear Time (g_c+1), s	13.7	17.0		7.4	2.8	14.3		3.6				
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	0.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	70.0
HCM 6th LOS	E

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	13	9	549	487	13
Future Vol, veh/h	32	13	9	549	487	13
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	-	225	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	37	15	10	631	560	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1219	288	575	0	-	0
Stage 1	568	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.145	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.2285	-	-	-
Pot Cap-1 Maneuver	185	709	990	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	183	709	990	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.8	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	990	-	233	-	-
HCM Lane V/C Ratio	0.01	-	0.222	-	-
HCM Control Delay (s)	8.7	-	24.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↕	↕
Traffic Vol, veh/h	5	8	17	23	36	29
Future Vol, veh/h	5	8	17	23	36	29
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	-	-	-	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	7	11	22	30	47	38

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	169	26	0	0	52	0
Stage 1	37	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.145	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.2285	-
Pot Cap-1 Maneuver	813	1044	-	-	1546	-
Stage 1	981	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	789	1044	-	-	1546	-
Mov Cap-2 Maneuver	789	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	929	1546
HCM Lane V/C Ratio	-	-	0.018	0.031
HCM Control Delay (s)	-	-	8.9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑	↗	↗	↑↑↑	↗	↗	↑↑↑	↗
Traffic Volume (veh/h)	506	295	42	148	316	132	69	691	186	53	371	296
Future Volume (veh/h)	506	295	42	148	316	132	69	691	186	53	371	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	527	307	15	154	329	40	72	720	91	55	386	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	580	1196	524	225	437	363	92	1283	391	73	1230	374
Arrive On Green	0.17	0.34	0.34	0.07	0.24	0.24	0.05	0.26	0.26	0.04	0.24	0.24
Sat Flow, veh/h	3428	3526	1545	3428	1856	1541	1753	5025	1530	1753	5025	1529
Grp Volume(v), veh/h	527	307	15	154	329	40	72	720	91	55	386	83
Grp Sat Flow(s),veh/h/ln	1714	1763	1545	1714	1856	1541	1753	1675	1530	1753	1675	1529
Q Serve(g_s), s	13.4	5.6	0.6	3.9	14.6	1.8	3.6	11.0	4.2	2.7	5.6	3.8
Cycle Q Clear(g_c), s	13.4	5.6	0.6	3.9	14.6	1.8	3.6	11.0	4.2	2.7	5.6	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	580	1196	524	225	437	363	92	1283	391	73	1230	374
V/C Ratio(X)	0.91	0.26	0.03	0.68	0.75	0.11	0.78	0.56	0.23	0.75	0.31	0.22
Avail Cap(c_a), veh/h	580	1950	854	387	922	765	99	2360	718	158	2530	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	21.2	19.5	40.5	31.5	26.6	41.5	28.7	26.1	42.0	27.4	26.7
Incr Delay (d2), s/veh	17.8	0.2	0.0	1.4	3.7	0.2	27.6	0.6	0.4	5.6	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	2.1	0.2	1.6	6.5	0.6	2.2	4.2	1.5	1.2	2.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	21.3	19.6	41.9	35.2	26.8	69.0	29.2	26.5	47.6	27.6	27.1
LnGrp LOS	D	C	B	D	D	C	E	C	C	D	C	C
Approach Vol, veh/h		849			523			883			524	
Approach Delay, s/veh		41.5			36.5			32.2			29.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	29.8	11.8	37.2	10.6	28.9	21.0	28.1				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	8.0	41.6	10.0	49.0	5.0	44.6	15.0	44.0				
Max Q Clear Time (g_c+I1), s	4.7	13.0	5.9	7.6	5.6	7.6	15.4	16.6				
Green Ext Time (p_c), s	0.0	7.5	0.1	2.8	0.0	4.0	0.0	2.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			35.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	622	13	16	1394	45	0	0	3	58	0	52
Future Volume (veh/h)	11	622	13	16	1394	45	0	0	3	58	0	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	12	684	10	18	1532	49	0	0	1	64	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	10	10	10	10	10	3	3	3	2	2	2
Cap, veh/h	35	1999	869	49	2004	64	0	0	162	253	0	0
Arrive On Green	0.02	0.60	0.60	0.03	0.61	0.61	0.00	0.00	0.11	0.11	0.00	0.00
Sat Flow, veh/h	1668	3328	1447	1668	3289	105	0	0	1525	1389	0	0
Grp Volume(v), veh/h	12	684	10	18	773	808	0	0	1	64	0	0
Grp Sat Flow(s),veh/h/ln	1668	1664	1447	1668	1664	1730	0	0	1526	1389	0	0
Q Serve(g_s), s	0.5	7.1	0.2	0.7	23.2	23.4	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	0.5	7.1	0.2	0.7	23.2	23.4	0.0	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	35	1999	869	49	1014	1054	0	0	162	253	0	0
V/C Ratio(X)	0.34	0.34	0.01	0.36	0.76	0.77	0.00	0.00	0.01	0.25	0.00	0.00
Avail Cap(c_a), veh/h	171	2191	953	171	1096	1139	0	0	669	717	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.0	6.9	5.5	32.5	9.7	9.8	0.0	0.0	27.3	28.6	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.2	0.0	4.4	3.8	3.7	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	0.0	0.3	7.3	7.6	0.0	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	7.1	5.5	37.0	13.5	13.5	0.0	0.0	27.3	29.2	0.0	0.0
LnGrp LOS	D	A	A	D	B	B	A	A	C	C	A	A
Approach Vol, veh/h	706			1599			1			64		
Approach Delay, s/veh	7.6			13.8			27.3			29.2		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	13.3		7.0		48.1		13.3		6.4		48.7	
Change Period (Y+Rc), s	6.0		5.0		7.0		6.0		5.0		7.0	
Max Green Setting (Gmax), s	30.0		7.0		45.0		30.0		7.0		45.0	
Max Q Clear Time (g_c+1), s	2.0		2.7		9.1		5.0		2.5		25.4	
Green Ext Time (p_c), s	0.0		0.0		10.2		0.3		0.0		16.3	

Intersection Summary

HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	328	210	143	88	553	82	403	1194	63	62	749	508
Future Volume (veh/h)	328	210	143	88	553	82	403	1194	63	62	749	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	357	228	0	96	601	16	438	1298	29	67	814	299
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
Percent Heavy Veh, %	10	10	10	2	2	2	6	6	6	6	6	6
Cap, veh/h	419	761		121	593	258	505	1945	594	199	1040	455
Arrive On Green	0.13	0.23	0.00	0.07	0.17	0.17	0.15	0.39	0.39	0.06	0.30	0.30
Sat Flow, veh/h	3237	3328	1485	1781	3554	1548	3346	4944	1509	3346	3441	1507
Grp Volume(v), veh/h	357	228	0	96	601	16	438	1298	29	67	814	299
Grp Sat Flow(s),veh/h/ln	1618	1664	1485	1781	1777	1548	1673	1648	1509	1673	1721	1507
Q Serve(g_s), s	12.9	6.8	0.0	6.4	20.0	1.0	15.3	25.9	1.4	2.3	25.9	20.7
Cycle Q Clear(g_c), s	12.9	6.8	0.0	6.4	20.0	1.0	15.3	25.9	1.4	2.3	25.9	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	761		121	593	258	505	1945	594	199	1040	455
V/C Ratio(X)	0.85	0.30		0.79	1.01	0.06	0.87	0.67	0.05	0.34	0.78	0.66
Avail Cap(c_a), veh/h	540	761		297	593	258	698	1945	594	419	1149	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	38.2	0.0	55.0	49.9	42.0	49.7	29.9	22.5	54.0	38.2	36.4
Incr Delay (d2), s/veh	10.0	0.5	0.0	8.5	40.2	0.1	7.8	1.2	0.1	0.7	4.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	2.8	0.0	3.1	12.1	0.4	6.7	9.7	0.5	1.0	10.8	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	38.7	0.0	63.5	90.1	42.1	57.5	31.1	22.5	54.8	42.3	40.5
LnGrp LOS	E	D		E	F	D	E	C	C	D	D	D
Approach Vol, veh/h		585			713			1765			1180	
Approach Delay, s/veh		52.3			85.4			37.5			42.6	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	54.6	15.6	34.9	25.6	43.7	23.0	27.5				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	15.0	40.0	20.0	25.0	25.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	14.3	27.9	8.4	8.8	17.3	27.9	14.9	22.0				
Green Ext Time (p_c), s	0.1	9.0	0.1	2.1	0.7	7.6	0.6	0.0				

Intersection Summary

HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	291	33	19	650	11	59	8	26	8	5	16
Future Volume (veh/h)	6	291	33	19	650	11	59	8	26	8	5	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	331	19	22	739	5	67	9	5	9	6	3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	23	1080	467	69	1170	506	391	41	249	244	132	44
Arrive On Green	0.01	0.30	0.30	0.04	0.33	0.33	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1537	1781	3554	1538	1206	253	1551	534	824	272
Grp Volume(v), veh/h	7	331	19	22	739	5	76	0	5	18	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1538	1459	0	1551	1629	0	0
Q Serve(g_s), s	0.1	2.4	0.3	0.4	6.0	0.1	1.2	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	2.4	0.3	0.4	6.0	0.1	1.5	0.0	0.1	0.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.88		1.00	0.50		0.17
Lane Grp Cap(c), veh/h	23	1080	467	69	1170	506	432	0	249	419	0	0
V/C Ratio(X)	0.30	0.31	0.04	0.32	0.63	0.01	0.18	0.00	0.02	0.04	0.00	0.00
Avail Cap(c_a), veh/h	365	1663	719	365	1663	720	1462	0	1361	1530	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.7	9.1	8.4	16.0	9.7	7.7	12.7	0.0	12.1	12.2	0.0	0.0
Incr Delay (d2), s/veh	6.9	0.2	0.0	2.6	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.1	0.2	1.6	0.0	0.4	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	9.3	8.4	18.6	10.3	7.7	12.7	0.0	12.1	12.2	0.0	0.0
LnGrp LOS	C	A	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		357			766			81			18	
Approach Delay, s/veh		9.5			10.5			12.7			12.2	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.5	6.3	16.4		11.5	5.5	17.3				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s		3.5	2.4	4.4		2.3	2.1	8.0				
Green Ext Time (p_c), s		0.2	0.0	1.6		0.0	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
 32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	274	10	15	565	118	33	23	42	165	22	88
Future Volume (veh/h)	45	274	10	15	565	118	33	23	42	165	22	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	291	5	16	601	48	35	24	22	176	23	80
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	1171	507	50	1021	441	339	201	408	348	53	108
Arrive On Green	0.07	0.33	0.33	0.03	0.29	0.29	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1538	1781	3554	1536	802	768	1554	825	202	413
Grp Volume(v), veh/h	48	291	5	16	601	48	59	0	22	279	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1538	1781	1777	1536	1570	0	1554	1439	0	0
Q Serve(g_s), s	1.2	2.7	0.1	0.4	6.5	1.0	0.0	0.0	0.5	6.9	0.0	0.0
Cycle Q Clear(g_c), s	1.2	2.7	0.1	0.4	6.5	1.0	1.1	0.0	0.5	7.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.59		1.00	0.63		0.29
Lane Grp Cap(c), veh/h	125	1171	507	50	1021	441	540	0	408	509	0	0
V/C Ratio(X)	0.38	0.25	0.01	0.32	0.59	0.11	0.11	0.00	0.05	0.55	0.00	0.00
Avail Cap(c_a), veh/h	797	2782	1204	797	2782	1202	978	0	869	936	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.9	11.0	10.1	21.3	13.7	11.7	12.6	0.0	12.3	15.1	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.1	0.0	3.6	0.5	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	0.0	0.2	2.2	0.3	0.4	0.0	0.1	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	11.1	10.1	24.9	14.2	11.8	12.6	0.0	12.4	15.4	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		344			665			81			279	
Approach Delay, s/veh		12.5			14.3			12.5			15.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.7	6.3	20.7		17.7	8.1	18.8				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+1), s		3.1	2.4	4.7		9.9	3.2	8.5				
Green Ext Time (p_c), s		0.2	0.0	1.9		1.0	0.1	4.4				

Intersection Summary

HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	312	104	192	513	67	111	424	331	62	396	61
Future Volume (veh/h)	65	312	104	192	513	67	111	424	331	62	396	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	71	343	105	211	564	72	122	466	115	68	435	57
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	104	400	123	242	597	76	150	532	441	102	813	106
Arrive On Green	0.06	0.29	0.29	0.14	0.37	0.37	0.08	0.29	0.29	0.06	0.26	0.26
Sat Flow, veh/h	1781	1367	419	1767	1608	205	1767	1856	1537	1767	3128	407
Grp Volume(v), veh/h	71	0	448	211	0	636	122	466	115	68	244	248
Grp Sat Flow(s),veh/h/ln	1781	0	1786	1767	0	1813	1767	1856	1537	1767	1763	1773
Q Serve(g_s), s	4.1	0.0	24.7	12.2	0.0	35.4	7.1	24.9	6.0	3.9	12.4	12.6
Cycle Q Clear(g_c), s	4.1	0.0	24.7	12.2	0.0	35.4	7.1	24.9	6.0	3.9	12.4	12.6
Prop In Lane	1.00		0.23	1.00		0.11	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	104	0	523	242	0	674	150	532	441	102	458	461
V/C Ratio(X)	0.68	0.00	0.86	0.87	0.00	0.94	0.81	0.88	0.26	0.67	0.53	0.54
Avail Cap(c_a), veh/h	120	0	523	339	0	756	186	854	708	136	761	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	34.8	44.1	0.0	31.7	46.9	35.4	28.7	48.1	33.2	33.2
Incr Delay (d2), s/veh	8.8	0.0	12.6	12.5	0.0	18.4	16.1	6.2	0.3	2.9	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	12.2	5.9	0.0	17.6	3.7	11.5	2.1	1.8	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	0.0	47.4	56.6	0.0	50.1	63.0	41.6	29.0	51.0	34.1	34.2
LnGrp LOS	E	A	D	E	A	D	E	D	C	D	C	C
Approach Vol, veh/h		519		847		703		560				
Approach Delay, s/veh		48.7		51.7		43.2		36.2				
Approach LOS		D		D		D		D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	36.9	19.3	37.0	13.8	34.1	11.1	45.2				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	3.0	48.0	20.0	30.5	11.0	45.0	7.0	43.5				
Max Q Clear Time (g_c+1/3), s	1.0	26.9	14.2	26.7	9.1	14.6	6.1	37.4				
Green Ext Time (p_c), s	0.0	3.0	0.1	0.7	0.0	2.8	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				45.6								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	692	53	39	639	21	80	8	136	0	10	31
Future Volume (veh/h)	19	692	53	39	639	21	80	8	136	0	10	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	20	736	29	41	680	12	85	9	44	0	11	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	264	899	741	227	899	750	160	519	426	3	189	153
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.09	0.28	0.28	0.00	0.10	0.10
Sat Flow, veh/h	745	1856	1531	697	1856	1547	1767	1856	1523	1767	1856	1500
Grp Volume(v), veh/h	20	736	29	41	680	12	85	9	44	0	11	4
Grp Sat Flow(s),veh/h/ln	745	1856	1531	697	1856	1547	1767	1856	1523	1767	1856	1500
Q Serve(g_s), s	1.3	19.4	0.6	3.1	17.1	0.2	2.6	0.2	1.2	0.0	0.3	0.1
Cycle Q Clear(g_c), s	18.4	19.4	0.6	22.5	17.1	0.2	2.6	0.2	1.2	0.0	0.3	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	899	741	227	899	750	160	519	426	3	189	153
V/C Ratio(X)	0.08	0.82	0.04	0.18	0.76	0.02	0.53	0.02	0.10	0.00	0.06	0.03
Avail Cap(c_a), veh/h	359	1135	936	316	1135	946	618	648	532	618	648	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	12.6	7.8	22.2	12.0	7.7	24.9	14.9	15.3	0.0	23.2	23.2
Incr Delay (d2), s/veh	0.1	3.9	0.0	0.4	2.3	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.4	0.1	0.5	5.3	0.1	1.0	0.1	0.4	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	16.5	7.8	22.6	14.3	7.7	25.9	14.9	15.3	0.0	23.3	23.2
LnGrp LOS	B	B	A	C	B	A	C	B	B	A	C	C
Approach Vol, veh/h		785			733			138				15
Approach Delay, s/veh		16.2			14.6			21.8				23.2
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	12.3		34.7	0.0	22.5		34.7				
Change Period (Y+Rc), s	5.0	6.5		7.0	5.0	6.5		7.0				
Max Green Setting (Gmax), s	20.0	20.0		35.0	20.0	20.0		35.0				
Max Q Clear Time (g_c+1), s	14.6	2.3		24.5	0.0	3.2		21.4				
Green Ext Time (p_c), s	0.1	0.0		3.3	0.0	0.1		4.0				

Intersection Summary

HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	24	5	642	271	602	74	988	435	245	590	60
Future Volume (veh/h)	13	24	5	642	271	602	74	988	435	245	590	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1826	1826	1826	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	14	26	1	690	291	580	80	1062	364	263	634	31
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	10	10	5	5	5	6	6	6	6	6	6
Cap, veh/h	32	104	47	752	429	626	102	1280	911	293	1661	741
Arrive On Green	0.02	0.03	0.03	0.22	0.23	0.23	0.06	0.37	0.37	0.17	0.48	0.48
Sat Flow, veh/h	1668	3328	1485	3374	1826	1547	1725	3441	1529	1725	3441	1535
Grp Volume(v), veh/h	14	26	1	690	291	580	80	1062	364	263	634	31
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1687	1826	1547	1725	1721	1529	1725	1721	1535
Q Serve(g_s), s	0.9	0.8	0.1	20.6	14.9	24.2	4.7	28.8	13.0	15.4	12.0	1.1
Cycle Q Clear(g_c), s	0.9	0.8	0.1	20.6	14.9	24.2	4.7	28.8	13.0	15.4	12.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	104	47	752	429	626	102	1280	911	293	1661	741
V/C Ratio(X)	0.44	0.25	0.02	0.92	0.68	0.93	0.78	0.83	0.40	0.90	0.38	0.04
Avail Cap(c_a), veh/h	97	194	87	777	429	626	203	1532	1022	310	1746	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	48.6	48.3	39.1	35.8	29.2	47.8	29.3	11.1	41.9	16.9	14.1
Incr Delay (d2), s/veh	9.1	1.2	0.2	15.5	4.3	20.0	12.4	3.4	0.3	26.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	9.6	6.8	15.7	2.3	11.3	3.8	8.3	4.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	49.9	48.5	54.6	40.1	49.2	60.1	32.7	11.4	68.2	17.0	14.1
LnGrp LOS	E	D	D	D	D	D	E	C	B	E	B	B
Approach Vol, veh/h		41			1561			1506			928	
Approach Delay, s/veh		52.9			49.9			29.0			31.4	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	44.3	27.4	9.2	10.6	55.7	6.5	30.2				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	10.5	45.8	23.7	6.0	12.1	52.2	6.0	23.7				
Max Q Clear Time (g_c+1/7), s	11.4	30.8	22.6	2.8	6.7	14.0	2.9	26.2				
Green Ext Time (p_c), s	0.1	6.9	0.4	0.0	0.1	4.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	138	718	46	95	1238	89	102	594	166	129	580	127
Future Volume (veh/h)	138	718	46	95	1238	89	102	594	166	129	580	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	155	807	19	107	1391	48	115	667	105	145	652	62
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	226	1928	588	175	1852	573	145	855	374	178	921	403
Arrive On Green	0.07	0.39	0.39	0.05	0.37	0.37	0.08	0.24	0.24	0.10	0.26	0.26
Sat Flow, veh/h	3374	4985	1521	3374	4985	1541	1767	3526	1541	1767	3526	1542
Grp Volume(v), veh/h	155	807	19	107	1391	48	115	667	105	145	652	62
Grp Sat Flow(s),veh/h/ln	1687	1662	1521	1687	1662	1541	1767	1763	1541	1767	1763	1542
Q Serve(g_s), s	4.1	10.8	0.7	2.8	22.3	1.9	5.9	16.2	5.1	7.4	15.4	2.8
Cycle Q Clear(g_c), s	4.1	10.8	0.7	2.8	22.3	1.9	5.9	16.2	5.1	7.4	15.4	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	1928	588	175	1852	573	145	855	374	178	921	403
V/C Ratio(X)	0.69	0.42	0.03	0.61	0.75	0.08	0.80	0.78	0.28	0.82	0.71	0.15
Avail Cap(c_a), veh/h	921	2449	747	1289	2449	757	482	1155	505	482	1155	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	20.5	17.4	42.5	25.1	18.7	41.3	32.4	28.2	40.4	30.7	26.0
Incr Delay (d2), s/veh	1.4	0.1	0.0	2.6	0.9	0.1	3.7	2.1	0.3	3.4	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.9	0.2	1.2	8.2	0.6	2.6	6.7	1.8	3.2	6.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	20.7	17.5	45.1	26.0	18.7	45.0	34.5	28.5	43.8	31.9	26.2
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		981			1546			887			859	
Approach Delay, s/veh		24.2			27.1			35.2			33.5	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	40.9	12.0	29.4	10.6	39.5	13.7	27.7				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	35.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0				
Max Q Clear Time (g_c+1), s	14.8	12.8	7.9	17.4	6.1	24.3	9.4	18.2				
Green Ext Time (p_c), s	0.2	5.8	0.1	2.9	0.1	9.8	0.1	2.9				

Intersection Summary

HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1035	56	86	1350	52	94	199	133	68	189	27
Future Volume (veh/h)	33	1035	56	86	1350	52	94	199	133	68	189	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	38	1176	30	98	1534	31	107	226	32	77	215	31
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	61	1629	707	125	1756	781	137	303	250	99	501	218
Arrive On Green	0.04	0.47	0.47	0.07	0.51	0.51	0.08	0.16	0.16	0.06	0.14	0.14
Sat Flow, veh/h	1739	3469	1506	1739	3469	1543	1767	1856	1535	1767	3526	1533
Grp Volume(v), veh/h	38	1176	30	98	1534	31	107	226	32	77	215	31
Grp Sat Flow(s),veh/h/ln	1739	1735	1506	1739	1735	1543	1767	1856	1535	1767	1763	1533
Q Serve(g_s), s	1.8	22.7	0.9	4.6	32.7	0.8	5.0	9.7	1.5	3.6	4.7	1.5
Cycle Q Clear(g_c), s	1.8	22.7	0.9	4.6	32.7	0.8	5.0	9.7	1.5	3.6	4.7	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	1629	707	125	1756	781	137	303	250	99	501	218
V/C Ratio(X)	0.62	0.72	0.04	0.78	0.87	0.04	0.78	0.75	0.13	0.77	0.43	0.14
Avail Cap(c_a), veh/h	624	1869	811	624	1869	831	635	888	735	635	1688	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	17.8	12.0	38.1	18.3	10.4	37.9	33.3	29.9	38.9	32.7	31.4
Incr Delay (d2), s/veh	3.8	1.3	0.0	4.0	4.8	0.0	3.7	1.4	0.1	4.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.1	0.3	2.0	12.0	0.3	2.2	4.3	0.5	1.6	1.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.6	19.1	12.0	42.2	23.1	10.4	41.5	34.7	30.0	43.7	33.0	31.5
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1244			1663			365			323	
Approach Delay, s/veh		19.7			23.9			36.3			35.4	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	47.8	11.0	17.4	10.5	44.7	9.2	19.1				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.0	45.0	30.0	40.0	30.0	45.0	30.0	40.0				
Max Q Clear Time (g_c+1), s	13.8	34.7	7.0	6.7	6.6	24.7	5.6	11.7				
Green Ext Time (p_c), s	0.0	7.6	0.1	0.9	0.1	9.5	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	168	980	51	294	1300	200	116	516	404	190	358	87
Future Volume (veh/h)	168	980	51	294	1300	200	116	516	404	190	358	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	179	1043	24	313	1383	132	123	549	208	202	381	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	4	4	4	4	4	4
Cap, veh/h	237	2249	696	369	1701	756	179	888	273	260	1008	311
Arrive On Green	0.07	0.45	0.45	0.11	0.49	0.49	0.05	0.18	0.18	0.08	0.20	0.20
Sat Flow, veh/h	3374	4985	1542	3374	3469	1543	3401	5025	1547	3401	5025	1548
Grp Volume(v), veh/h	179	1043	24	313	1383	132	123	549	208	202	381	20
Grp Sat Flow(s),veh/h/ln	1687	1662	1542	1687	1735	1543	1700	1675	1547	1700	1675	1548
Q Serve(g_s), s	5.7	16.0	1.0	10.0	37.2	5.2	3.9	11.1	14.1	6.4	7.2	1.2
Cycle Q Clear(g_c), s	5.7	16.0	1.0	10.0	37.2	5.2	3.9	11.1	14.1	6.4	7.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	2249	696	369	1701	756	179	888	273	260	1008	311
V/C Ratio(X)	0.76	0.46	0.03	0.85	0.81	0.17	0.69	0.62	0.76	0.78	0.38	0.06
Avail Cap(c_a), veh/h	414	2249	696	414	1701	756	386	1343	413	386	1343	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	21.0	16.8	48.1	23.8	15.6	51.2	41.9	43.1	49.9	38.0	35.6
Incr Delay (d2), s/veh	1.9	0.7	0.1	12.7	4.4	0.5	1.8	0.3	1.8	2.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.9	0.3	4.7	14.9	1.8	1.7	4.5	5.3	2.7	2.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	21.6	16.9	60.8	28.1	16.1	53.0	42.1	44.8	52.7	38.1	35.6
LnGrp LOS	D	C	B	E	C	B	D	D	D	D	D	D
Approach Vol, veh/h		1246			1828			880			603	
Approach Delay, s/veh		25.9			32.9			44.3			42.9	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	55.5	10.3	27.7	12.2	59.8	12.9	25.0				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	13.5	34.1	12.5	29.4	13.5	34.1	12.5	29.4				
Max Q Clear Time (g_c+1/2G), s	12.0	18.0	5.9	9.2	7.7	39.2	8.4	16.1				
Green Ext Time (p_c), s	0.0	3.3	0.0	1.1	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1118	582	0	1174	686	0	0	0	194	0	790
Future Volume (veh/h)	0	1118	582	0	1174	686	0	0	0	194	0	790
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826				1826	1826	1826
Adj Flow Rate, veh/h	0	1165	286	0	1223	715				202	0	778
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	5	5				5	5	5
Cap, veh/h	0	2459	761	0	2459	1203				997	0	887
Arrive On Green	0.00	0.49	0.49	0.00	0.99	0.99				0.29	0.00	0.29
Sat Flow, veh/h	0	5149	1543	0	5149	1540				3478	0	3095
Grp Volume(v), veh/h	0	1165	286	0	1223	715				202	0	778
Grp Sat Flow(s),veh/h/ln	0	1662	1543	0	1662	1540				1739	0	1547
Q Serve(g_s), s	0.0	8.5	6.3	0.0	0.4	2.1				2.4	0.0	13.2
Cycle Q Clear(g_c), s	0.0	8.5	6.3	0.0	0.4	2.1				2.4	0.0	13.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2459	761	0	2459	1203				997	0	887
V/C Ratio(X)	0.00	0.47	0.38	0.00	0.50	0.59				0.20	0.00	0.88
Avail Cap(c_a), veh/h	0	2459	761	0	2459	1203				1069	0	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.81	0.81				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.2	8.7	0.0	0.2	0.0				14.9	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.7	1.4	0.0	0.6	1.8				0.0	0.0	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	1.8	0.0	0.2	0.7				0.9	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.9	10.1	0.0	0.8	1.8				14.9	0.0	27.0
LnGrp LOS	A	A	B	A	A	A				B	A	C
Approach Vol, veh/h		1451			1938						980	
Approach Delay, s/veh		9.9			1.2						24.5	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		33.4		21.6		33.4						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		26.0		16.9		26.0						
Max Q Clear Time (g_c+I1), s		10.5		15.2		4.1						
Green Ext Time (p_c), s		5.2		0.6		7.5						

Intersection Summary

HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	655	576	0	1163	293	699	2	544	0	0	0
Future Volume (veh/h)	0	655	576	0	1163	293	699	2	544	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	0	682	600	0	1211	153	729	0	350			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	5	5	0	5	5	5	5	5			
Cap, veh/h	0	2630	1203	0	2630	814	878	0	781			
Arrive On Green	0.00	1.00	1.00	0.00	0.53	0.53	0.25	0.00	0.25			
Sat Flow, veh/h	0	5149	1540	0	5149	1543	3478	0	3095			
Grp Volume(v), veh/h	0	682	600	0	1211	153	729	0	350			
Grp Sat Flow(s),veh/h/ln	0	1662	1540	0	1662	1543	1739	0	1547			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.3	2.9	10.9	0.0	5.2			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.3	2.9	10.9	0.0	5.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2630	1203	0	2630	814	878	0	781			
V/C Ratio(X)	0.00	0.26	0.50	0.00	0.46	0.19	0.83	0.00	0.45			
Avail Cap(c_a), veh/h	0	2630	1203	0	2630	814	1005	0	895			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.88	0.88	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	8.1	6.8	19.4	0.0	17.3			
Incr Delay (d2), s/veh	0.0	0.2	1.3	0.0	0.6	0.5	4.7	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.4	0.0	2.1	0.7	4.5	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	1.3	0.0	8.7	7.3	24.1	0.0	17.5			
LnGrp LOS	A	A	A	A	A	A	C	A	B			
Approach Vol, veh/h		1282			1364			1079				
Approach Delay, s/veh		0.7			8.5			22.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		35.3				35.3		19.7				
Change Period (Y+Rc), s		6.3				6.3		5.8				
Max Green Setting (Gmax), s		27.0				27.0		15.9				
Max Q Clear Time (g_c+1), s		2.0				10.3		12.9				
Green Ext Time (p_c), s		4.1				5.3		1.0				

Intersection Summary

HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	619	591	127	226	686	162	346	953	181	69	649	633
Future Volume (veh/h)	619	591	127	226	686	162	346	953	181	69	649	633
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	688	657	41	251	762	40	384	1059	90	77	721	476
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	10	10	10	3	3	3	6	6	6	6	6	6
Cap, veh/h	644	1514	468	314	1060	322	447	1783	551	174	1378	426
Arrive On Green	0.20	0.32	0.32	0.09	0.21	0.21	0.13	0.36	0.36	0.05	0.28	0.28
Sat Flow, veh/h	3237	4782	1478	3428	5066	1539	3346	4944	1528	3346	4944	1527
Grp Volume(v), veh/h	688	657	41	251	762	40	384	1059	90	77	721	476
Grp Sat Flow(s),veh/h/ln	1618	1594	1478	1714	1689	1539	1673	1648	1528	1673	1648	1527
Q Serve(g_s), s	25.0	13.7	2.4	9.0	17.6	2.6	14.1	21.9	5.0	2.8	15.5	35.0
Cycle Q Clear(g_c), s	25.0	13.7	2.4	9.0	17.6	2.6	14.1	21.9	5.0	2.8	15.5	35.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	644	1514	468	314	1060	322	447	1783	551	174	1378	426
V/C Ratio(X)	1.07	0.43	0.09	0.80	0.72	0.12	0.86	0.59	0.16	0.44	0.52	1.12
Avail Cap(c_a), veh/h	644	1714	530	683	1816	552	666	1783	551	666	1378	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	34.0	30.2	55.9	46.2	40.3	53.2	32.7	27.3	57.8	38.2	45.3
Incr Delay (d2), s/veh	54.9	0.2	0.1	3.5	0.9	0.2	6.4	0.5	0.1	1.3	0.4	80.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.6	5.1	0.9	4.0	7.3	1.0	6.1	8.4	1.8	1.2	6.1	22.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.1	34.2	30.2	59.4	47.1	40.5	59.6	33.2	27.4	59.1	38.6	125.3
LnGrp LOS	F	C	C	E	D	D	E	C	C	E	D	F
Approach Vol, veh/h		1386			1053			1533			1274	
Approach Delay, s/veh		69.3			49.8			39.5			72.2	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	46.8	11.5	50.8	30.0	33.3	21.8	40.5				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	25.0	45.0	25.0	35.0	25.0	45.0	25.0	35.0				
Max Q Clear Time (g_c+I1), s	11.0	15.7	4.8	23.9	27.0	19.6	16.1	37.0				
Green Ext Time (p_c), s	0.5	4.4	0.1	5.1	0.0	5.2	0.7	0.0				

Intersection Summary

HCM 6th Ctrl Delay	57.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	220	63	205	215	112	45	559	155	69	441	51
Future Volume (veh/h)	136	220	63	205	215	112	45	559	155	69	441	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	162	262	13	244	256	31	54	665	85	82	525	26
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	190	309	256	272	404	340	69	2133	651	104	2232	674
Arrive On Green	0.11	0.17	0.17	0.15	0.22	0.22	0.04	0.42	0.42	0.06	0.44	0.44
Sat Flow, veh/h	1781	1870	1548	1781	1870	1574	1753	5025	1534	1753	5025	1518
Grp Volume(v), veh/h	162	262	13	244	256	31	54	665	85	82	525	26
Grp Sat Flow(s),veh/h/ln	1781	1870	1548	1781	1870	1574	1753	1675	1534	1753	1675	1518
Q Serve(g_s), s	9.8	15.0	0.8	14.8	13.7	1.7	3.4	9.7	3.7	5.1	7.1	1.1
Cycle Q Clear(g_c), s	9.8	15.0	0.8	14.8	13.7	1.7	3.4	9.7	3.7	5.1	7.1	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	309	256	272	404	340	69	2133	651	104	2232	674
V/C Ratio(X)	0.85	0.85	0.05	0.90	0.63	0.09	0.78	0.31	0.13	0.79	0.24	0.04
Avail Cap(c_a), veh/h	227	420	348	413	629	529	120	2133	651	120	2232	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	44.6	38.6	45.7	39.2	34.5	52.4	21.0	19.3	51.1	19.0	17.3
Incr Delay (d2), s/veh	19.8	8.8	0.0	11.3	0.6	0.0	7.0	0.4	0.4	22.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.4	0.3	7.2	6.1	0.6	1.6	3.7	1.3	2.8	2.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	53.4	38.7	57.0	39.8	34.5	59.4	21.4	19.7	73.5	19.2	17.4
LnGrp LOS	E	D	D	E	D	C	E	C	B	E	B	B
Approach Vol, veh/h		437			531			804			633	
Approach Delay, s/veh		58.4			47.4			23.8			26.2	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	54.2	21.3	23.5	8.8	56.4	15.8	29.0				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	5	* 31	25.5	24.7	7.5	30.5	14.0	* 37				
Max Q Clear Time (g_c+1), s	11.7	16.8	17.0	5.4	9.1	11.8	15.7					
Green Ext Time (p_c), s	0.0	2.8	0.0	0.1	0.0	2.1	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	39	270	15	7	12	299	514	5	19	479	469
Future Volume (veh/h)	302	39	270	15	7	12	299	514	5	19	479	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	373	48	107	19	9	1	369	635	4	23	591	158
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	419	472	397	38	72	59	410	2417	727	44	952	417
Arrive On Green	0.24	0.25	0.25	0.02	0.04	0.04	0.23	0.48	0.48	0.02	0.27	0.27
Sat Flow, veh/h	1767	1856	1563	1767	1856	1534	1753	5025	1510	1753	3497	1530
Grp Volume(v), veh/h	373	48	107	19	9	1	369	635	4	23	591	158
Grp Sat Flow(s),veh/h/ln	1767	1856	1563	1767	1856	1534	1753	1675	1510	1753	1749	1530
Q Serve(g_s), s	16.8	1.6	4.5	0.9	0.4	0.1	16.8	6.2	0.1	1.1	12.2	6.9
Cycle Q Clear(g_c), s	16.8	1.6	4.5	0.9	0.4	0.1	16.8	6.2	0.1	1.1	12.2	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	472	397	38	72	59	410	2417	727	44	952	417
V/C Ratio(X)	0.89	0.10	0.27	0.50	0.13	0.02	0.90	0.26	0.01	0.53	0.62	0.38
Avail Cap(c_a), veh/h	569	1345	1133	124	879	726	479	3680	1106	132	1869	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	23.5	24.6	39.9	38.2	38.1	30.6	12.7	11.1	39.7	26.2	24.3
Incr Delay (d2), s/veh	12.8	0.1	0.4	9.9	0.8	0.1	18.2	0.1	0.0	9.6	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.7	1.7	0.5	0.2	0.0	8.5	2.0	0.0	0.5	4.7	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	23.6	24.9	49.8	39.0	38.2	48.8	12.7	11.1	49.2	26.9	24.9
LnGrp LOS	D	C	C	D	D	D	D	B	B	D	C	C
Approach Vol, veh/h		528			29			1008			772	
Approach Delay, s/veh		37.7			46.0			25.9			27.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.5	44.1	6.3	25.4	23.7	26.9	24.0	7.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.2	60.3	5.8	59.7	22.5	44.0	26.5	39.0				
Max Q Clear Time (g_c+1/3), s	13.1	8.2	2.9	6.5	18.8	14.2	18.8	2.4				
Green Ext Time (p_c), s	0.0	4.3	0.0	0.6	0.4	4.3	0.7	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											29.2	
HCM 6th LOS											C	



HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	141	77	296	175	59	77	606	249	46	591	102
Future Volume (veh/h)	126	141	77	296	175	59	77	606	249	46	591	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	148	166	12	348	206	17	91	713	181	54	695	113
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	186	374	162	391	760	334	116	1655	505	79	925	150
Arrive On Green	0.11	0.11	0.11	0.22	0.22	0.22	0.07	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1767	3526	1525	1767	3526	1550	1725	4944	1508	1725	2955	480
Grp Volume(v), veh/h	148	166	12	348	206	17	91	713	181	54	404	404
Grp Sat Flow(s),veh/h/ln	1767	1763	1525	1767	1763	1550	1725	1648	1508	1725	1721	1714
Q Serve(g_s), s	5.9	3.2	0.5	13.7	3.5	0.6	3.7	8.1	6.5	2.2	15.2	15.2
Cycle Q Clear(g_c), s	5.9	3.2	0.5	13.7	3.5	0.6	3.7	8.1	6.5	2.2	15.2	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	186	374	162	391	760	334	116	1655	505	79	539	537
V/C Ratio(X)	0.80	0.44	0.07	0.89	0.27	0.05	0.78	0.43	0.36	0.68	0.75	0.75
Avail Cap(c_a), veh/h	614	1960	848	614	1960	862	719	3436	1048	719	1196	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	30.2	29.0	27.2	23.5	22.4	33.0	18.6	18.1	33.8	22.2	22.2
Incr Delay (d2), s/veh	2.9	0.8	0.2	6.6	0.2	0.1	4.3	0.2	0.4	3.8	2.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.3	0.2	5.9	1.3	0.2	1.6	2.7	2.1	0.9	5.6	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	31.0	29.2	33.8	23.7	22.4	37.3	18.8	18.5	37.6	24.3	24.4
LnGrp LOS	C	C	C	C	C	C	D	B	B	D	C	C
Approach Vol, veh/h		326			571			985			862	
Approach Delay, s/veh		32.5			29.8			20.4			25.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	31.1	19.9	13.1	9.4	29.5	12.1	21.0				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	50.0	25.0	40.0	30.0	50.0	25.0	40.0				
Max Q Clear Time (g_c+1/2), s	14.2	10.1	15.7	5.2	5.7	17.2	7.9	5.5				
Green Ext Time (p_c), s	0.0	5.6	0.2	1.0	0.1	4.9	0.1	1.3				

Intersection Summary

HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	192	55	495	122	292	64	239	284	465	484	51
Future Volume (veh/h)	42	192	55	495	122	292	64	239	284	465	484	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	44	200	5	322	399	94	67	249	79	484	504	46
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	10	10	2	2	2	4	4	4	4	4	4
Cap, veh/h	143	286	125	539	566	470	100	669	292	379	795	72
Arrive On Green	0.09	0.09	0.09	0.30	0.30	0.30	0.06	0.19	0.19	0.11	0.25	0.25
Sat Flow, veh/h	1668	3328	1459	1781	1870	1556	1753	3497	1526	3401	3231	294
Grp Volume(v), veh/h	44	200	5	322	399	94	67	249	79	484	272	278
Grp Sat Flow(s),veh/h/ln	1668	1664	1459	1781	1870	1556	1753	1749	1526	1700	1749	1776
Q Serve(g_s), s	1.4	3.4	0.2	9.0	11.0	2.6	2.2	3.6	2.6	6.5	8.1	8.2
Cycle Q Clear(g_c), s	1.4	3.4	0.2	9.0	11.0	2.6	2.2	3.6	2.6	6.5	8.1	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	143	286	125	539	566	470	100	669	292	379	430	437
V/C Ratio(X)	0.31	0.70	0.04	0.60	0.71	0.20	0.67	0.37	0.27	1.28	0.63	0.64
Avail Cap(c_a), veh/h	143	286	125	1131	1188	988	226	2011	877	379	975	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	25.9	24.4	17.3	18.0	15.1	27.0	20.5	20.1	25.9	19.6	19.6
Incr Delay (d2), s/veh	1.2	7.4	0.1	1.1	1.6	0.2	7.6	0.3	0.5	143.2	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	0.1	3.4	4.4	0.8	1.0	1.3	0.8	9.8	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	33.3	24.6	18.4	19.7	15.3	34.6	20.9	20.6	169.1	21.1	21.2
LnGrp LOS	C	C	C	B	B	B	C	C	C	F	C	C
Approach Vol, veh/h		249		815		395		1034				
Approach Delay, s/veh		31.9		18.6		23.1		90.4				
Approach LOS		C		B		C		F				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	15.7		9.5	7.8	18.8		22.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	33.5	33.5		5.0	7.5	32.5		37.0				
Max Q Clear Time (g_c+1), s	19.5	5.6		5.4	4.2	10.2		13.0				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	2.8		3.8				

Intersection Summary

HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↖	↗		↖	↕↕		↖	↕↕	↗
Traffic Volume (veh/h)	242	99	190	42	138	27	190	701	31	41	820	406
Future Volume (veh/h)	242	99	190	42	138	27	190	701	31	41	820	406
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	260	106	144	45	148	20	204	754	31	44	882	196
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	356	408	569	75	252	34	246	1465	60	71	1152	656
Arrive On Green	0.10	0.22	0.22	0.04	0.16	0.16	0.14	0.44	0.44	0.04	0.33	0.33
Sat Flow, veh/h	3456	1870	1574	1781	1605	217	1725	3364	138	1725	3441	1490
Grp Volume(v), veh/h	260	106	144	45	0	168	204	386	399	44	882	196
Grp Sat Flow(s),veh/h/ln	1728	1870	1574	1781	0	1822	1725	1721	1782	1725	1721	1490
Q Serve(g_s), s	5.0	3.2	4.4	1.7	0.0	5.9	7.9	11.2	11.2	1.7	15.7	5.8
Cycle Q Clear(g_c), s	5.0	3.2	4.4	1.7	0.0	5.9	7.9	11.2	11.2	1.7	15.7	5.8
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	356	408	569	75	0	286	246	750	776	71	1152	656
V/C Ratio(X)	0.73	0.26	0.25	0.60	0.00	0.59	0.83	0.51	0.51	0.62	0.77	0.30
Avail Cap(c_a), veh/h	409	967	1040	174	0	905	285	834	864	169	1437	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	22.2	15.4	32.2	0.0	26.8	28.6	14.1	14.1	32.3	20.4	12.5
Incr Delay (d2), s/veh	5.6	0.3	0.2	7.5	0.0	1.9	16.4	0.5	0.5	8.3	2.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.4	1.5	0.9	0.0	2.5	4.1	3.7	3.8	0.8	5.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	22.5	15.6	39.8	0.0	28.7	45.0	14.6	14.6	40.6	22.4	12.7
LnGrp LOS	D	C	B	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		510			213			989			1122	
Approach Delay, s/veh		27.2			31.0			20.9			21.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	27.4	7.4	19.4	7.3	34.3	11.5	15.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	1.3	28.6	6.7	35.4	6.7	33.2	8.1	34.0				
Max Q Clear Time (g_c+19), s	19.9	17.7	3.7	6.4	3.7	13.2	7.0	7.9				
Green Ext Time (p_c), s	0.1	4.7	0.0	1.0	0.0	4.4	0.1	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											23.0	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	638	245	50	1240	0	0	0	0	548	0	238
Future Volume (veh/h)	0	638	245	50	1240	0	0	0	0	548	0	238
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No		No						No		
Adj Sat Flow, veh/h/ln	0	1707	1707	1707	1707	0				1707	1707	1707
Adj Flow Rate, veh/h	0	733	172	57	1425	0				630	0	223
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	13	13	13	13	0				13	13	13
Cap, veh/h	0	2847	872	112	3195	0				712	0	317
Arrive On Green	0.00	0.61	0.61	0.04	0.69	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	4815	1428	3155	4815	0				3252	0	1447
Grp Volume(v), veh/h	0	733	172	57	1425	0				630	0	223
Grp Sat Flow(s),veh/h/ln	0	1554	1428	1577	1554	0				1626	0	1447
Q Serve(g_s), s	0.0	8.7	6.4	2.1	16.6	0.0				22.5	0.0	17.1
Cycle Q Clear(g_c), s	0.0	8.7	6.4	2.1	16.6	0.0				22.5	0.0	17.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2847	872	112	3195	0				712	0	317
V/C Ratio(X)	0.00	0.26	0.20	0.51	0.45	0.00				0.89	0.00	0.70
Avail Cap(c_a), veh/h	0	2847	872	315	3195	0				1314	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.8	10.3	56.9	8.6	0.0				45.4	0.0	43.3
Incr Delay (d2), s/veh	0.0	0.2	0.5	1.3	0.5	0.0				1.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	2.0	0.9	4.9	0.0				9.2	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.0	10.8	58.2	9.0	0.0				46.9	0.0	44.4
LnGrp LOS		A	B	B	E	A				D	A	D
Approach Vol, veh/h		905			1482					853		
Approach Delay, s/veh		11.0			10.9					46.3		
Approach LOS		B			B					D		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.0	79.3		31.8		88.2						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	43.0			48.5		60.0						
Max Q Clear Time (g_c+1/4), s	10.7			24.5		18.6						
Green Ext Time (p_c), s	0.0	5.9		1.7		13.0						

Intersection Summary

HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑		↘	↙	↗	↘		↗
Traffic Volume (veh/h)	218	810	154	0	959	33	370	70	50	37	0	632
Future Volume (veh/h)	218	810	154	0	959	33	370	70	50	37	0	632
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	0	1707	1707	1707	1707	1707	1856	0	1856
Adj Flow Rate, veh/h	242	900	0	0	1066	35	467	0	14	41	0	269
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	13	13	13	0	13	13	13	13	13	3	0	3
Cap, veh/h	163	3349		0	3408	112	604	0	266	0	0	0
Arrive On Green	0.10	0.72	0.00	0.00	0.58	0.58	0.19	0.00	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1626	4661	2547	0	6121	193	3252	0	1435		0	
Grp Volume(v), veh/h	242	900	0	0	798	303	467	0	14		0.0	
Grp Sat Flow(s),veh/h/ln	1626	1554	1273	0	1468	1669	1626	0	1435			
Q Serve(g_s), s	12.0	8.1	0.0	0.0	11.2	11.2	16.4	0.0	1.0			
Cycle Q Clear(g_c), s	12.0	8.1	0.0	0.0	11.2	11.2	16.4	0.0	1.0			
Prop In Lane	1.00		1.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	163	3349		0	2552	967	604	0	266			
V/C Ratio(X)	1.49	0.27		0.00	0.31	0.31	0.77	0.00	0.05			
Avail Cap(c_a), veh/h	163	3349		0	2552	967	1165	0	514			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	54.0	5.9	0.0	0.0	13.0	13.0	46.5	0.0	40.2			
Incr Delay (d2), s/veh	249.4	0.2	0.0	0.0	0.3	0.8	2.2	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.0	2.2	0.0	0.0	3.6	4.3	6.8	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	303.4	6.1	0.0	0.0	13.3	13.8	48.6	0.0	40.3			
LnGrp LOS	F	A		A	B	B	D	A	D			
Approach Vol, veh/h		1142			1101			481				
Approach Delay, s/veh		69.1			13.4			48.4				
Approach LOS		E			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		92.2			16.7	75.5		27.8				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		51.0			* 12	34.0		43.0				
Max Q Clear Time (g_c+1), s		10.1			14.0	13.2		18.4				
Green Ext Time (p_c), s		4.2			0.0	5.0		2.2				

Intersection Summary

HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	608	50	54	717	51	49	322	73	27	357	79
Future Volume (veh/h)	68	608	50	54	717	51	49	322	73	27	357	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	73	654	24	58	771	51	53	346	23	29	384	23
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	137	1049	976	120	965	64	123	733	320	78	649	283
Arrive On Green	0.08	0.32	0.32	0.07	0.31	0.31	0.07	0.21	0.21	0.05	0.19	0.19
Sat Flow, veh/h	1626	3244	2471	1626	3084	204	1767	3441	1503	1725	3441	1501
Grp Volume(v), veh/h	73	654	24	58	405	417	53	346	23	29	384	23
Grp Sat Flow(s),veh/h/ln	1626	1622	1235	1626	1622	1666	1767	1721	1503	1725	1721	1501
Q Serve(g_s), s	2.5	9.8	0.3	2.0	13.1	13.1	1.6	5.0	0.7	0.9	5.8	0.7
Cycle Q Clear(g_c), s	2.5	9.8	0.3	2.0	13.1	13.1	1.6	5.0	0.7	0.9	5.8	0.7
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	1049	976	120	508	521	123	733	320	78	649	283
V/C Ratio(X)	0.53	0.62	0.02	0.48	0.80	0.80	0.43	0.47	0.07	0.37	0.59	0.08
Avail Cap(c_a), veh/h	427	1703	1474	427	851	875	464	1204	526	453	1204	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	16.4	10.6	25.4	18.0	18.0	25.5	19.7	18.0	26.5	21.2	19.1
Incr Delay (d2), s/veh	1.2	0.6	0.0	1.1	1.1	1.1	0.9	0.5	0.1	1.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.0	0.1	0.7	4.1	4.2	0.6	1.8	0.2	0.4	2.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	17.0	10.6	26.5	19.1	19.1	26.4	20.1	18.1	27.6	22.0	19.2
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	C	B
Approach Vol, veh/h		751			880			422			436	
Approach Delay, s/veh		17.7			19.6			20.8			22.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	18.2	8.2	24.2	8.0	16.8	8.8	23.6				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+1/3), s	12.5	7.0	4.0	11.8	3.6	7.8	4.5	15.1				
Green Ext Time (p_c), s	0.0	1.6	0.0	3.8	0.0	1.7	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	394	31	251	869	117	69	719	278	117	736	129
Future Volume (veh/h)	84	394	31	251	869	117	69	719	278	117	736	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	92	433	30	276	955	42	76	790	92	129	809	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	115	887	61	341	1058	464	118	984	431	159	1071	469
Arrive On Green	0.07	0.29	0.29	0.11	0.33	0.33	0.07	0.29	0.29	0.09	0.31	0.31
Sat Flow, veh/h	1626	3074	212	3155	3244	1421	1767	3441	1506	1725	3441	1507
Grp Volume(v), veh/h	92	228	235	276	955	42	76	790	92	129	809	49
Grp Sat Flow(s),veh/h/ln	1626	1622	1664	1577	1622	1421	1767	1721	1506	1725	1721	1507
Q Serve(g_s), s	5.0	10.3	10.4	7.6	25.0	1.8	3.7	18.9	4.1	6.5	18.8	2.1
Cycle Q Clear(g_c), s	5.0	10.3	10.4	7.6	25.0	1.8	3.7	18.9	4.1	6.5	18.8	2.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	468	480	341	1058	464	118	984	431	159	1071	469
V/C Ratio(X)	0.80	0.49	0.49	0.81	0.90	0.09	0.64	0.80	0.21	0.81	0.76	0.10
Avail Cap(c_a), veh/h	275	548	562	533	1095	480	298	1162	509	291	1162	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	26.1	26.2	38.7	28.6	20.8	40.4	29.4	24.1	39.6	27.5	21.8
Incr Delay (d2), s/veh	4.8	1.0	1.0	2.5	10.4	0.1	2.2	3.9	0.3	3.7	2.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.8	4.0	2.9	10.4	0.6	1.6	7.7	1.4	2.8	7.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	27.2	27.2	41.2	39.0	20.9	42.6	33.3	24.5	43.3	30.4	21.9
LnGrp LOS	D	C	C	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		555			1273			958			987	
Approach Delay, s/veh		30.2			38.9			33.2			31.7	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	31.4	13.6	31.6	9.9	33.7	10.3	35.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	15.0	30.0				
Max Q Clear Time (g_c+1), s	10.5	20.9	9.6	12.4	5.7	20.8	7.0	27.0				
Green Ext Time (p_c), s	0.0	4.4	0.0	2.9	0.0	4.2	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				34.3								
HCM 6th LOS				C								



HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	118	528	30	29	828	121	49	193	85	127	103	154
Future Volume (veh/h)	118	528	30	29	828	121	49	193	85	127	103	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	131	587	27	32	920	114	54	214	23	141	114	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	2	2	2
Cap, veh/h	163	1587	73	78	1239	153	120	350	290	182	416	345
Arrive On Green	0.10	0.35	0.35	0.05	0.30	0.30	0.07	0.19	0.19	0.10	0.22	0.22
Sat Flow, veh/h	1626	4561	209	1626	4193	518	1767	1856	1538	1781	1870	1552
Grp Volume(v), veh/h	131	399	215	32	681	353	54	214	23	141	114	47
Grp Sat Flow(s),veh/h/ln	1626	1554	1662	1626	1554	1603	1767	1856	1538	1781	1870	1552
Q Serve(g_s), s	4.9	6.0	6.1	1.2	12.4	12.5	1.8	6.6	0.8	4.8	3.2	1.5
Cycle Q Clear(g_c), s	4.9	6.0	6.1	1.2	12.4	12.5	1.8	6.6	0.8	4.8	3.2	1.5
Prop In Lane	1.00		0.13	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	1081	579	78	918	474	120	350	290	182	416	345
V/C Ratio(X)	0.80	0.37	0.37	0.41	0.74	0.75	0.45	0.61	0.08	0.78	0.27	0.14
Avail Cap(c_a), veh/h	207	1139	609	181	1089	562	197	837	693	199	843	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	15.3	15.3	29.0	19.9	20.0	28.1	23.4	21.0	27.5	20.2	19.6
Incr Delay (d2), s/veh	12.8	0.2	0.4	1.3	2.3	4.5	1.0	2.7	0.2	14.1	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.8	2.0	0.5	4.1	4.5	0.8	2.9	0.3	2.6	1.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	15.5	15.7	30.3	22.3	24.5	29.1	26.1	21.2	41.5	20.6	19.7
LnGrp LOS	D	B	B	C	C	C	C	C	C	D	C	B
Approach Vol, veh/h	745				1066		291		302			
Approach Delay, s/veh	20.0				23.3		26.3		30.2			
Approach LOS	B				C		C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	17.5	7.0	27.8	8.3	19.7	10.3	24.6				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	28.3	7.0	23.0	7.0	28.3	8.0	22.0					
Max Q Clear Time (g_c+1/3), s	8.6	3.2	8.1	3.8	5.2	6.9	14.5					
Green Ext Time (p_c), s	0.0	1.8	0.0	3.2	0.0	0.6	0.0	3.7				

Intersection Summary

HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	365	124	115	467	122	245	948	171	244	1489	168
Future Volume (veh/h)	62	365	124	115	467	122	245	948	171	244	1489	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	66	388	36	122	497	123	261	1009	133	260	1584	99
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	64	455	378	108	350	87	288	1331	577	287	1329	583
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.17	0.40	0.40	0.17	0.40	0.40
Sat Flow, veh/h	733	1707	1419	878	1316	326	1668	3328	1443	1668	3328	1460
Grp Volume(v), veh/h	66	388	36	122	0	620	261	1009	133	260	1584	99
Grp Sat Flow(s),veh/h/ln	733	1707	1419	878	0	1641	1668	1664	1443	1668	1664	1460
Q Serve(g_s), s	0.0	24.3	2.2	5.7	0.0	30.0	17.3	29.4	6.9	17.2	45.0	4.9
Cycle Q Clear(g_c), s	30.0	24.3	2.2	30.0	0.0	30.0	17.3	29.4	6.9	17.2	45.0	4.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	455	378	108	0	437	288	1331	577	287	1329	583
V/C Ratio(X)	1.03	0.85	0.10	1.13	0.00	1.42	0.91	0.76	0.23	0.91	1.19	0.17
Avail Cap(c_a), veh/h	64	455	378	108	0	437	370	1331	577	370	1329	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	39.2	31.1	55.2	0.0	41.3	45.7	29.1	22.3	45.7	33.8	21.8
Incr Delay (d2), s/veh	122.0	14.5	0.1	124.8	0.0	201.4	19.0	2.6	0.2	18.8	93.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	11.6	0.7	6.7	0.0	36.0	8.3	11.2	2.2	8.2	33.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	178.3	53.8	31.2	180.0	0.0	242.8	64.7	31.7	22.5	64.5	127.7	21.9
LnGrp LOS	F	D	C	F	A	F	E	C	C	E	F	C
Approach Vol, veh/h		490			742			1403			1943	
Approach Delay, s/veh		68.9			232.4			36.9			113.9	
Approach LOS		E			F			D			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.1	51.6		37.0	24.2	51.5		37.0				
Change Period (Y+Rc), s	4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	25	45.0		30.0	* 25	45.0		30.0				
Max Q Clear Time (g_c+119), s	19.2	31.4		32.0	19.3	47.0		32.0				
Green Ext Time (p_c), s	0.2	5.6		0.0	0.2	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	104.7
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	457.4											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	96	581	15	44	637	90	156	366	10	148	444	96
Future Vol, veh/h	96	581	15	44	637	90	156	366	10	148	444	96
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	13	13	13	13	13	13	3	3	3	3	3	3
Mvmt Flow	98	593	15	45	650	92	159	373	10	151	453	98
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	477.1	563.2	286	451.4
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	14%	6%	22%
Vol Thru, %	69%	84%	83%	65%
Vol Right, %	2%	2%	12%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	532	692	771	688
LT Vol	156	96	44	148
Through Vol	366	581	637	444
RT Vol	10	15	90	96
Lane Flow Rate	543	706	787	702
Geometry Grp	1	1	1	1
Degree of Util (X)	1.462	1.929	2.133	1.874
Departure Headway (Hd)	21.37	19.262	18.183	18.585
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	179	198	212	204
Service Time	19.37	17.262	16.183	16.585
HCM Lane V/C Ratio	3.034	3.566	3.712	3.441
HCM Control Delay	286	477.1	563.2	451.4
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	15.6	26.8	32.9	26.3

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↘	↙	↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	6	4	2	358	38	552	5	982	224	492	1313	39
Future Volume (veh/h)	6	4	2	358	38	552	5	982	224	492	1313	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	7	4	1	389	41	245	5	1067	154	535	1427	24
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
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	30	17	40	428	55	328	21	1058	463	385	1784	775
Arrive On Green	0.03	0.03	0.03	0.26	0.26	0.26	0.01	0.32	0.32	0.23	0.54	0.54
Sat Flow, veh/h	1144	654	1512	1668	214	1278	1668	3328	1458	1668	3328	1446
Grp Volume(v), veh/h	11	0	1	389	0	286	5	1067	154	535	1427	24
Grp Sat Flow(s),veh/h/ln1798	0	1512	1668	0	1492	1668	1664	1458	1668	1664	1446	
Q Serve(g_s), s	0.8	0.0	0.1	31.7	0.0	24.7	0.4	44.5	11.3	32.3	48.8	1.1
Cycle Q Clear(g_c), s	0.8	0.0	0.1	31.7	0.0	24.7	0.4	44.5	11.3	32.3	48.8	1.1
Prop In Lane	0.64		1.00	1.00		0.86	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	0	40	428	0	382	21	1058	463	385	1784	775
V/C Ratio(X)	0.23	0.00	0.02	0.91	0.00	0.75	0.24	1.01	0.33	1.39	0.80	0.03
Avail Cap(c_a), veh/h	128	0	108	486	0	435	123	1058	463	385	1784	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	0.0	66.4	50.5	0.0	47.9	68.5	47.8	36.4	53.9	26.4	15.3
Incr Delay (d2), s/veh	0.9	0.0	0.1	19.6	0.0	6.1	2.1	29.8	0.4	190.8	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.4	0.0	0.0	0.0	15.2	0.0	9.6	0.2	21.8	3.9	33.4	18.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.6	0.0	66.5	70.1	0.0	54.1	70.6	77.5	36.8	244.7	29.1	15.3
LnGrp LOS	E	A	E	E	A	D	E	F	D	F	C	B
Approach Vol, veh/h		12		675		1226		1986				
Approach Delay, s/veh		67.5		63.3		72.4		87.0				
Approach LOS		E		E		E		F				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	51.0		9.9	6.5	81.5		42.1				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	32	44.5		10.0	* 10	66.5		40.8				
Max Q Clear Time (g_c+Rc), s	34	46.5		2.8	2.4	50.8		33.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.4		1.8				

Intersection Summary

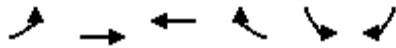
HCM 6th Ctrl Delay	78.3
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	68	522	1001	351	264	285	
Future Volume (veh/h)	68	522	1001	351	264	285	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1856	1856	
Adj Flow Rate, veh/h	72	549	1054	327	278	253	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	10	10	10	10	3	3	
Cap, veh/h	90	1852	1116	343	287	261	
Arrive On Green	0.05	0.56	0.45	0.45	0.33	0.33	
Sat Flow, veh/h	1668	3416	2594	771	872	794	
Grp Volume(v), veh/h	72	549	696	685	532	0	
Grp Sat Flow(s),veh/h/ln	1668	1664	1664	1613	1669	0	
Q Serve(g_s), s	3.4	6.9	31.4	32.2	24.7	0.0	
Cycle Q Clear(g_c), s	3.4	6.9	31.4	32.2	24.7	0.0	
Prop In Lane	1.00			0.48	0.52	0.48	
Lane Grp Cap(c), veh/h	90	1852	741	718	549	0	
V/C Ratio(X)	0.80	0.30	0.94	0.95	0.97	0.00	
Avail Cap(c_a), veh/h	112	1908	747	724	549	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	36.8	9.3	20.8	21.0	26.0	0.0	
Incr Delay (d2), s/veh	26.8	0.1	19.7	22.5	30.4	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.0	2.0	14.3	14.7	13.1	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	63.6	9.4	40.5	43.6	56.4	0.0	
LnGrp LOS	E	A	D	D	E	A	
Approach Vol, veh/h		621	1381		532		
Approach Delay, s/veh		15.7	42.0		56.4		
Approach LOS		B	D		E		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			48.3		30.4	8.7	39.5
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			45.1		25.9	5.3	35.3
Max Q Clear Time (g_c+1), s			8.9		26.7	5.4	34.2
Green Ext Time (p_c), s			3.7		0.0	0.0	0.9
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			38.6				
HCM 6th LOS			D				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	127	15	88	63	9	114	339	965	266	478	700	431
Future Volume (veh/h)	127	15	88	63	9	114	339	965	266	478	700	431
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1618	1618	1618	1618	1618	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	134	16	13	66	9	20	357	1016	134	503	737	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	19	19	19	19	19	19	10	10	10	10	10	10
Cap, veh/h	343	308	133	145	244	106	389	1198	664	586	1024	625
Arrive On Green	0.11	0.10	0.10	0.09	0.08	0.08	0.23	0.36	0.36	0.18	0.31	0.31
Sat Flow, veh/h	2990	3075	1333	1541	3075	1333	1668	3328	1459	3237	3328	1477
Grp Volume(v), veh/h	134	16	13	66	9	20	357	1016	134	503	737	199
Grp Sat Flow(s),veh/h/ln	1495	1537	1333	1541	1537	1333	1668	1664	1459	1618	1664	1477
Q Serve(g_s), s	3.5	0.4	0.7	3.4	0.2	1.2	17.4	23.4	4.6	12.6	16.4	7.5
Cycle Q Clear(g_c), s	3.5	0.4	0.7	3.4	0.2	1.2	17.4	23.4	4.6	12.6	16.4	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	308	133	145	244	106	389	1198	664	586	1024	625
V/C Ratio(X)	0.39	0.05	0.10	0.46	0.04	0.19	0.92	0.85	0.20	0.86	0.72	0.32
Avail Cap(c_a), veh/h	717	1291	560	370	1291	560	400	1398	752	777	1398	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	33.9	34.1	35.7	35.4	35.9	31.2	24.6	13.7	33.1	25.7	16.1
Incr Delay (d2), s/veh	0.3	0.1	0.3	2.2	0.0	0.3	24.7	4.5	0.1	6.0	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.1	0.2	1.3	0.1	0.4	8.9	8.7	1.3	4.9	5.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	34.0	34.4	38.0	35.4	36.2	55.9	29.1	13.8	39.1	26.8	16.4
LnGrp LOS	C	C	C	D	D	D	E	C	B	D	C	B
Approach Vol, veh/h		163			95			1507			1439	
Approach Delay, s/veh		34.4			37.4			34.1			29.7	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	36.5	12.5	14.5	24.1	32.1	14.3	12.8				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	20	35.0	* 20	35.0	* 20	35.0	* 20	35.0				
Max Q Clear Time (g_c+1/4), s	11.6	25.4	5.4	2.7	19.4	18.4	5.5	3.2				
Green Ext Time (p_c), s	0.5	4.5	0.1	0.1	0.0	4.7	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖↗	↖↗		↖	↖↗	↖	↖	↖↗	
Traffic Volume (veh/h)	65	368	22	924	761	196	32	942	676	122	597	33
Future Volume (veh/h)	65	368	22	924	761	196	32	942	676	122	597	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	67	379	0	953	785	184	33	971	664	126	615	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	123	458		975	973	228	92	937	857	138	992	52
Arrive On Green	0.07	0.14	0.00	0.30	0.37	0.37	0.06	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1668	3416	0	3237	2666	625	1668	3328	1457	1668	3215	167
Grp Volume(v), veh/h	67	379	0	953	490	479	33	971	664	126	318	329
Grp Sat Flow(s),veh/h/ln	1668	1664	0	1618	1664	1626	1668	1664	1457	1668	1664	1718
Q Serve(g_s), s	4.7	13.4	0.0	35.3	32.1	32.1	2.3	34.1	34.1	9.1	19.8	19.8
Cycle Q Clear(g_c), s	4.7	13.4	0.0	35.3	32.1	32.1	2.3	34.1	34.1	9.1	19.8	19.8
Prop In Lane	1.00		0.00	1.00		0.38	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	123	458		975	607	594	92	937	857	138	514	530
V/C Ratio(X)	0.54	0.83		0.98	0.81	0.81	0.36	1.04	0.77	0.92	0.62	0.62
Avail Cap(c_a), veh/h	138	563		975	645	631	138	937	857	138	514	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	50.8	0.0	41.9	34.6	34.6	55.2	43.5	19.4	55.2	35.8	35.8
Incr Delay (d2), s/veh	1.4	9.2	0.0	23.3	7.6	7.8	0.9	39.3	4.1	51.0	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.0	0.0	16.6	13.7	13.4	1.0	18.3	13.8	5.6	7.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	60.0	0.0	65.3	42.2	42.4	56.0	82.9	23.5	106.2	37.5	37.5
LnGrp LOS	E	E		E	D	D	E	F	C	F	D	D
Approach Vol, veh/h		446			1922			1668			773	
Approach Delay, s/veh		59.4			53.7			58.7			48.7	
Approach LOS		E			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	40.6	42.2	23.7	11.4	43.9	14.7	51.2				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	34.1	* 37	20.5	* 10	34.1	* 10	47.0					
Max Q Clear Time (g_c+I), s	36.1	37.3	15.4	4.3	21.8	6.7	34.1					
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	1.7	0.0	6.3				

Intersection Summary

HCM 6th Ctrl Delay	55.1
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↷	↷	↶↷		↶	↶↷
Traffic Volume (veh/h)	48	583	893	219	722	1035
Future Volume (veh/h)	48	583	893	219	722	1035
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	51	0	940	0	760	1089
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	140		1145		657	2660
Arrive On Green	0.04	0.00	0.34	0.00	0.39	0.80
Sat Flow, veh/h	3237	1485	3504	0	1668	3416
Grp Volume(v), veh/h	51	0	940	0	760	1089
Grp Sat Flow(s),veh/h/ln	1618	1485	1664	0	1668	1664
Q Serve(g_s), s	1.2	0.0	19.7	0.0	30.0	7.4
Cycle Q Clear(g_c), s	1.2	0.0	19.7	0.0	30.0	7.4
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	140		1145		657	2660
V/C Ratio(X)	0.36		0.82		1.16	0.41
Avail Cap(c_a), veh/h	1274		1747		657	2660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	0.0	22.9	0.0	23.1	2.3
Incr Delay (d2), s/veh	1.6	0.0	1.6	0.0	87.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	6.7	0.0	25.5	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.0	0.0	24.4	0.0	110.2	2.4
LnGrp LOS	D		C		F	A
Approach Vol, veh/h	51		940			1849
Approach Delay, s/veh	37.0		24.4			46.7
Approach LOS	D		C			D
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.7	32.7			67.4	8.8
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30	40.0			40.0	30.0
Max Q Clear Time (g_c+Rc), s	30	21.7			9.4	3.2
Green Ext Time (p_c), s	0.0	4.5			6.2	0.1

Intersection Summary





















HCM 6th Ctrl Delay	39.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	701	6	164	625	452	0	0	1283	297
Future Volume (veh/h)	0	0	0	701	6	164	625	452	0	0	1283	297
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				774	0	40	672	486	0	0	1380	147
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				850	0	378	774	3195	0	0	2229	533
Arrive On Green				0.24	0.00	0.24	0.07	0.21	0.00	0.00	0.35	0.35
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	6643	1527
Grp Volume(v), veh/h				774	0	40	672	486	0	0	1380	147
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1596	1527
Q Serve(g_s), s				19.2	0.0	1.8	17.5	7.1	0.0	0.0	16.2	6.2
Cycle Q Clear(g_c), s				19.2	0.0	1.8	17.5	7.1	0.0	0.0	16.2	6.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				850	0	378	774	3195	0	0	2229	533
V/C Ratio(X)				0.91	0.00	0.11	0.87	0.15	0.00	0.00	0.62	0.28
Avail Cap(c_a), veh/h				880	0	391	990	3195	0	0	2229	533
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.2	0.0	26.6	40.3	16.0	0.0	0.0	24.3	21.1
Incr Delay (d2), s/veh				13.2	0.0	0.1	5.2	0.1	0.0	0.0	1.3	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.2	0.0	1.8	8.5	2.5	0.0	0.0	5.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				46.5	0.0	26.8	45.5	16.0	0.0	0.0	25.6	22.4
LnGrp LOS				D	A	C	D	B	A	A	C	C
Approach Vol, veh/h					814			1158			1527	
Approach Delay, s/veh					45.5			33.2			25.3	
Approach LOS					D			C			C	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		62.6		27.4	25.3	37.2						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		56.0		22.4	26.0	25.0						
Max Q Clear Time (g_c+I1), s		9.1		21.2	19.5	18.2						
Green Ext Time (p_c), s		3.3		0.5	0.9	4.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				32.6								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

# HCM 6th Signalized Intersection Summary

## 2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↘ ↙	↘ ↙	↘ ↙	↘ ↙	↘ ↙			↘ ↙	↘ ↙
Traffic Volume (veh/h)	0	0	0	329	5	583	449	926	0	0	1772	588
Future Volume (veh/h)	0	0	0	329	5	583	449	926	0	0	1772	588
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				No
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				343	0	487	463	955	0	0	1827	260
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				844	0	376	572	3208	0	0	2138	653
Arrive On Green				0.24	0.00	0.24	0.06	0.21	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1547
Grp Volume(v), veh/h				343	0	487	463	955	0	0	1827	260
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1547
Q Serve(g_s), s				7.4	0.0	21.5	12.0	14.3	0.0	0.0	29.3	10.5
Cycle Q Clear(g_c), s				7.4	0.0	21.5	12.0	14.3	0.0	0.0	29.3	10.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				844	0	376	572	3208	0	0	2138	653
V/C Ratio(X)				0.41	0.00	1.30	0.81	0.30	0.00	0.00	0.85	0.40
Avail Cap(c_a), veh/h				844	0	376	800	3208	0	0	2138	653
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.9	0.0	34.3	41.1	18.7	0.0	0.0	23.5	18.1
Incr Delay (d2), s/veh				0.3	0.0	151.8	0.4	0.0	0.0	0.0	4.6	1.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	23.5	5.4	6.3	0.0	0.0	11.1	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.2	0.0	186.1	41.5	18.7	0.0	0.0	28.1	19.9
LnGrp LOS				C	A	F	D	B	A	A	C	B
Approach Vol, veh/h				830			1418			2087		
Approach Delay, s/veh				121.2			26.2			27.1		
Approach LOS				F			C			C		
Timer - Assigned Phs		2		5	6		8					
Phs Duration (G+Y+Rc), s		62.7		19.0	43.7		27.3					
Change Period (Y+Rc), s		5.7		4.0	5.7		5.8					
Max Green Setting (Gmax), s		57.0		21.0	32.0		21.5					
Max Q Clear Time (g_c+11), s		16.3		14.0	31.3		23.5					
Green Ext Time (p_c), s		4.4		1.0	0.5		0.0					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				44.8								
HCM 6th LOS				D								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

# HCM 6th Signalized Intersection Summary

## 3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1	541	0	0	0	0	1015	737	458	1527	0
Future Volume (veh/h)	68	1	541	0	0	0	0	1015	737	458	1527	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	48	0	514				0	1080	405	487	1624	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	349	0	621				0	2901	695	561	3412	0
Arrive On Green	0.20	0.00	0.20				0.00	0.45	0.45	0.33	1.00	0.00
Sat Flow, veh/h	1767	0	3145				0	6643	1530	3428	5233	0
Grp Volume(v), veh/h	48	0	514				0	1080	405	487	1624	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1596	1530	1714	1689	0
Q Serve(g_s), s	2.0	0.0	14.1				0.0	10.0	17.7	12.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	14.1				0.0	10.0	17.7	12.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	349	0	621				0	2901	695	561	3412	0
V/C Ratio(X)	0.14	0.00	0.83				0.00	0.37	0.58	0.87	0.48	0.00
Avail Cap(c_a), veh/h	518	0	923				0	2901	695	914	3412	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.61	0.61	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.6				0.0	16.1	18.2	29.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	4.0				0.0	0.4	3.5	1.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	5.4				0.0	3.4	6.2	4.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	0.0	38.7				0.0	16.5	21.8	31.1	0.3	0.0
LnGrp LOS	C	A	D				A	B	C	C	A	A
Approach Vol, veh/h		562						1485			2111	
Approach Delay, s/veh		37.9						17.9			7.4	
Approach LOS		D						B			A	
Timer - Assigned Phs	1	2					6	8				
Phs Duration (G+Y+Rc), s	19.7	46.7					66.4	23.6				
Change Period (Y+Rc), s	5.0	5.8					5.8	5.8				
Max Green Setting (Gmax), s	24.0	23.0					52.0	26.4				
Max Q Clear Time (g_c+1/4), s	14.0	19.7					2.0	16.1				
Green Ext Time (p_c), s	0.7	2.3					16.6	1.7				

### Intersection Summary

HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	299	0	656	0	0	0	0	1126	279	730	1323	0	
Future Volume (veh/h)	299	0	656	0	0	0	0	1126	279	730	1323	0	
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No						No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0	
Adj Flow Rate, veh/h	344	0	701				0	1294	275	839	1521	0	
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87	
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0	
Cap, veh/h	1186	0	528				0	952	202	931	2758	0	
Arrive On Green	0.33	0.00	0.33				0.00	0.23	0.23	0.18	0.36	0.00	
Sat Flow, veh/h	3619	0	1610				0	4334	885	3428	5233	0	
Grp Volume(v), veh/h	344	0	701				0	1049	520	839	1521	0	
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1675	1714	1689	0	
Q Serve(g_s), s	6.4	0.0	29.5				0.0	20.6	20.6	21.6	21.5	0.0	
Cycle Q Clear(g_c), s	6.4	0.0	29.5				0.0	20.6	20.6	21.6	21.5	0.0	
Prop In Lane	1.00		1.00				0.00		0.53	1.00		0.00	
Lane Grp Cap(c), veh/h	1186	0	528				0	771	382	931	2758	0	
V/C Ratio(X)	0.29	0.00	1.33				0.00	1.36	1.36	0.90	0.55	0.00	
Avail Cap(c_a), veh/h	1186	0	528				0	771	382	990	2758	0	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00	
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.37	0.37	0.00	
Uniform Delay (d), s/veh	22.5	0.0	30.3				0.0	34.7	34.7	35.6	19.8	0.0	
Incr Delay (d2), s/veh	0.1	0.0	160.4				0.0	170.3	178.4	4.5	0.3	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.5	0.0	33.9				0.0	26.1	26.7	9.6	8.5	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	22.6	0.0	190.7				0.0	205.0	213.1	40.1	20.1	0.0	
LnGrp LOS	C	A	F				A	F	F	D	C	A	
Approach Vol, veh/h		1045						1569			2360		
Approach Delay, s/veh		135.3						207.7			27.2		
Approach LOS		F						F			C		
Timer - Assigned Phs	1	2	4	6									
Phs Duration (G+Y+Rc), s	28.4	26.3	35.3	54.7									
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7									
Max Green Setting (Gmax), s	26.0	19.0	29.5	49.0									
Max Q Clear Time (g_c+Y), s	23.6	22.6	31.5	23.5									
Green Ext Time (p_c), s	0.9	0.0	0.0	7.4									

Intersection Summary

HCM 6th Ctrl Delay	106.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	756	336	164	593	178	350	1207	106	326	1202	364
Future Volume (veh/h)	290	756	336	164	593	178	350	1207	106	326	1202	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	302	788	260	171	618	119	365	1257	105	340	1252	346
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	338	1025	449	205	760	332	396	1264	106	374	994	275
Arrive On Green	0.19	0.29	0.29	0.12	0.22	0.22	0.22	0.27	0.27	0.21	0.25	0.25
Sat Flow, veh/h	1767	3526	1543	1767	3526	1540	1767	4755	397	1767	3928	1084
Grp Volume(v), veh/h	302	788	260	171	618	119	365	893	469	340	1076	522
Grp Sat Flow(s),veh/h/ln	1767	1763	1543	1767	1763	1540	1767	1689	1775	1767	1689	1635
Q Serve(g_s), s	23.0	28.2	19.9	13.1	23.0	9.1	27.9	36.5	36.5	26.0	35.0	35.0
Cycle Q Clear(g_c), s	23.0	28.2	19.9	13.1	23.0	9.1	27.9	36.5	36.5	26.0	35.0	35.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.66
Lane Grp Cap(c), veh/h	338	1025	449	205	760	332	396	898	472	374	855	414
V/C Ratio(X)	0.89	0.77	0.58	0.83	0.81	0.36	0.92	0.99	0.99	0.91	1.26	1.26
Avail Cap(c_a), veh/h	447	1025	449	447	892	390	447	898	472	447	855	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	44.8	41.8	59.8	51.6	46.1	52.4	50.6	50.6	53.2	51.6	51.6
Incr Delay (d2), s/veh	20.4	4.2	3.0	16.6	6.4	1.4	25.0	28.6	39.9	23.0	126.0	135.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	12.5	7.7	6.7	10.5	3.5	14.7	18.4	20.8	13.5	29.2	29.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.0	49.0	44.8	76.4	58.0	47.5	77.4	79.2	90.6	76.2	177.7	187.0
LnGrp LOS	E	D	D	E	E	D	E	E	F	E	F	F
Approach Vol, veh/h		1350			908			1727			1938	
Approach Delay, s/veh		54.0			60.1			81.9			162.4	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.2	40.8	20.1	44.2	35.0	39.0	30.4	33.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+20), s	20.0	38.5	15.1	30.2	29.9	37.0	25.0	25.0				
Green Ext Time (p_c), s	1.3	0.0	1.0	3.4	1.1	0.0	1.4	4.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											98.5	
HCM 6th LOS											F	

HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	473	203	263	459	95	165	745	182	173	1125	424
Future Volume (veh/h)	298	473	203	263	459	95	165	745	182	173	1125	424
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	301	478	195	266	464	85	167	753	171	175	1136	331
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	154	306	125	140	707	129	195	1045	237	204	693	577
Arrive On Green	0.09	0.25	0.25	0.08	0.24	0.24	0.11	0.37	0.37	0.12	0.37	0.37
Sat Flow, veh/h	1767	1244	508	1767	2968	540	1767	2836	644	1767	1856	1546
Grp Volume(v), veh/h	301	0	673	266	274	275	167	468	456	175	1136	331
Grp Sat Flow(s),veh/h/ln	1767	0	1752	1767	1763	1745	1767	1763	1717	1767	1856	1546
Q Serve(g_s), s	11.0	0.0	31.0	10.0	17.7	17.9	11.7	28.7	28.7	12.2	47.0	21.5
Cycle Q Clear(g_c), s	11.0	0.0	31.0	10.0	17.7	17.9	11.7	28.7	28.7	12.2	47.0	21.5
Prop In Lane	1.00		0.29	1.00		0.31	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	154	0	431	140	420	416	195	650	633	204	693	577
V/C Ratio(X)	1.95	0.00	1.56	1.90	0.65	0.66	0.85	0.72	0.72	0.86	1.64	0.57
Avail Cap(c_a), veh/h	154	0	431	140	420	416	463	658	641	463	693	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	0.0	47.5	58.0	43.3	43.4	55.0	34.2	34.2	54.7	39.5	31.5
Incr Delay (d2), s/veh	450.2	0.0	263.3	428.5	3.6	3.8	7.7	3.6	3.7	7.7	294.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.1	0.0	44.5	21.0	7.8	7.9	5.5	12.4	12.1	5.8	77.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	507.7	0.0	310.8	486.5	46.9	47.2	62.8	37.7	37.8	62.4	334.1	32.7
LnGrp LOS	F	A	F	F	D	D	E	D	D	E	F	C
Approach Vol, veh/h		974			815			1091			1642	
Approach Delay, s/veh		371.6			190.5			41.6			244.4	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	51.4	17.0	38.0	18.9	52.0	18.0	37.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	47.0	10.0	31.0	33.0	47.0	11.0	30.0				
Max Q Clear Time (g_c+1/4), s	14.2	30.7	12.0	33.0	13.7	49.0	13.0	19.9				
Green Ext Time (p_c), s	0.3	4.1	0.0	0.0	0.3	0.0	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	213.2
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	383	171	7	193	128	160	1243	16	164	1302	133
Future Volume (veh/h)	147	383	171	7	193	128	160	1243	16	164	1302	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	155	403	169	7	203	36	168	1308	17	173	1371	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	178	301	126	246	524	438	192	1600	21	197	1014	100
Arrive On Green	0.10	0.24	0.24	0.14	0.28	0.28	0.11	0.31	0.31	0.11	0.31	0.31
Sat Flow, veh/h	1767	1233	517	1767	1856	1551	1767	5152	67	1767	3233	319
Grp Volume(v), veh/h	155	0	572	7	203	36	168	857	468	173	744	763
Grp Sat Flow(s),veh/h/ln	1767	0	1750	1767	1856	1551	1767	1689	1842	1767	1763	1790
Q Serve(g_s), s	12.4	0.0	35.0	0.5	12.7	2.4	13.4	33.7	33.7	13.8	45.0	45.0
Cycle Q Clear(g_c), s	12.4	0.0	35.0	0.5	12.7	2.4	13.4	33.7	33.7	13.8	45.0	45.0
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	178	0	427	246	524	438	192	1049	572	197	553	561
V/C Ratio(X)	0.87	0.00	1.34	0.03	0.39	0.08	0.88	0.82	0.82	0.88	1.35	1.36
Avail Cap(c_a), veh/h	246	0	427	246	524	438	308	1059	577	308	553	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.6	0.0	54.3	53.4	41.5	37.9	63.1	45.7	45.7	62.9	49.3	49.3
Incr Delay (d2), s/veh	16.8	0.0	168.4	0.2	0.7	0.1	9.4	5.3	9.3	10.9	167.5	173.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	35.1	0.2	5.9	0.9	6.4	14.4	16.3	6.7	44.7	46.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.4	0.0	222.7	53.6	42.2	38.0	72.5	51.0	55.0	73.7	216.8	222.9
LnGrp LOS	F	A	F	D	D	D	E	D	E	E	F	F
Approach Vol, veh/h		727		246		1493		1680				
Approach Delay, s/veh		192.3		41.9		54.7		204.8				
Approach LOS		F		D		D		F				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	52.1	26.5	41.5	23.1	52.5	21.0	47.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0				
Max Q Clear Time (g_c+1/6), s	11.8	35.7	2.5	37.0	15.4	47.0	14.4	14.7				
Green Ext Time (p_c), s	0.1	6.3	0.0	0.0	0.1	0.0	0.1	1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			138.9									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	205	103	121	134	182	108	826	184	278	1025	62
Future Volume (veh/h)	46	205	103	121	134	182	108	826	184	278	1025	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	50	223	92	132	146	147	117	898	179	302	1114	63
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
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	70	247	102	160	210	212	147	946	188	333	1453	82
Arrive On Green	0.04	0.20	0.20	0.09	0.25	0.25	0.08	0.32	0.32	0.19	0.43	0.43
Sat Flow, veh/h	1767	1248	515	1767	848	854	1767	2930	584	1767	3392	192
Grp Volume(v), veh/h	50	0	315	132	0	293	117	540	537	302	579	598
Grp Sat Flow(s),veh/h/ln	1767	0	1763	1767	0	1702	1767	1763	1750	1767	1763	1821
Q Serve(g_s), s	2.5	0.0	15.7	6.6	0.0	14.0	5.8	26.8	26.9	15.0	25.0	25.1
Cycle Q Clear(g_c), s	2.5	0.0	15.7	6.6	0.0	14.0	5.8	26.8	26.9	15.0	25.0	25.1
Prop In Lane	1.00		0.29	1.00		0.50	1.00		0.33	1.00		0.11
Lane Grp Cap(c), veh/h	70	0	348	160	0	422	147	569	565	333	755	780
V/C Ratio(X)	0.71	0.00	0.90	0.83	0.00	0.69	0.80	0.95	0.95	0.91	0.77	0.77
Avail Cap(c_a), veh/h	101	0	354	160	0	422	183	570	566	333	755	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	35.1	40.1	0.0	30.6	40.4	29.6	29.6	35.6	21.8	21.8
Incr Delay (d2), s/veh	12.5	0.0	25.5	28.7	0.0	4.8	17.6	25.6	25.8	27.2	4.7	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	8.8	4.1	0.0	6.2	3.1	14.4	14.4	8.6	10.2	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	0.0	60.6	68.8	0.0	35.5	58.0	55.2	55.5	62.8	26.5	26.4
LnGrp LOS	E	A	E	E	A	D	E	E	E	E	C	C
Approach Vol, veh/h		365		425		1194		1479				
Approach Delay, s/veh		59.9		45.8		55.6		33.9				
Approach LOS		E		D		E		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.4	33.4	12.6	22.2	11.9	42.9	8.1	26.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.9	29.0	8.1	18.0	9.3	36.6	5.1	21.0				
Max Q Clear Time (g_c+1/3), s	11.0	28.9	8.6	17.7	7.8	27.1	4.5	16.0				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.1	0.0	4.8	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			45.6									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	0	0	0	15	0	24	0	1297	18	74	1496	0
Future Volume (veh/h)	0	0	0	15	0	24	0	1297	18	74	1496	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	16	0	3	0	1351	19	77	1558	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	0	2	3	3	3	3	3	3
Cap, veh/h	0	3	0	63	0	0	3	2254	32	201	2430	0
Arrive On Green	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.44	0.44	0.11	0.69	0.00
Sat Flow, veh/h	140277		0	1781	16		1767	5146	72	1767	3618	0
Grp Volume(v), veh/h	0	0	0	16	27.7		0	887	483	77	1558	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	C		1767	1689	1841	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	0.5			0.0	10.9	10.9	2.2	13.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.5			0.0	10.9	10.9	2.2	13.4	0.0
Prop In Lane	0.00		0.00	1.00			1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	63			3	1479	807	201	2430	0
V/C Ratio(X)	0.00	0.00	0.00	0.25			0.00	0.60	0.60	0.38	0.64	0.00
Avail Cap(c_a), veh/h	0	309	0	980			292	2205	1202	337	2430	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00			0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	25.6			0.0	11.7	11.7	22.4	4.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1			0.0	0.5	0.9	1.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2			0.0	2.9	3.3	0.8	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	27.7			0.0	12.1	12.5	23.6	5.3	0.0
LnGrp LOS	A	A	A	C			A	B	B	C	A	A
Approach Vol, veh/h	0							1370			1635	
Approach Delay, s/veh	0.0							12.3			6.2	
Approach LOS								B			A	
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	33.7	31.4	9.4	0.0	0.0	45.1						
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5						
Max Green Setting (Gmax), s	10.4	35.6	30.0	9.0	9.0	37.0						
Max Q Clear Time (g_c+I), s	14.2	12.9	2.5	0.0	0.0	15.4						
Green Ext Time (p_c), s	0.1	10.6	0.0	0.0	0.0	13.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.1								
HCM 6th LOS				A								

HCM 6th Signalized Intersection Summary  
10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖	↕			↕	↗
Traffic Volume (veh/h)	27	0	100	0	0	0	125	1231	0	0	1226	17
Future Volume (veh/h)	27	0	100	0	0	0	125	1231	0	0	1226	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	30	0	14	0	0	0	137	1353	0	0	1347	19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	262	0	128	0	157	0	205	2389	0	0	1573	22
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.12	0.68	0.00	0.00	0.44	0.44
Sat Flow, veh/h	1781	0	1542	0	1900	0	1767	3618	0	0	3651	50
Grp Volume(v), veh/h	30	0	14	0	0	0	137	1353	0	0	667	699
Grp Sat Flow(s),veh/h/ln	1781	0	1542	0	1900	0	1767	1763	0	0	1763	1846
Q Serve(g_s), s	1.0	0.0	0.5	0.0	0.0	0.0	4.7	12.6	0.0	0.0	21.3	21.3
Cycle Q Clear(g_c), s	1.0	0.0	0.5	0.0	0.0	0.0	4.7	12.6	0.0	0.0	21.3	21.3
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.03
Lane Grp Cap(c), veh/h	262	0	128	0	157	0	205	2389	0	0	779	816
V/C Ratio(X)	0.11	0.00	0.11	0.00	0.00	0.00	0.67	0.57	0.00	0.00	0.86	0.86
Avail Cap(c_a), veh/h	826	0	616	0	759	0	226	2534	0	0	831	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	26.6	0.0	0.0	0.0	26.5	5.3	0.0	0.0	15.7	15.7
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	6.5	0.3	0.0	0.0	8.6	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.2	0.0	0.0	0.0	2.1	2.3	0.0	0.0	8.5	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	0.0	26.9	0.0	0.0	0.0	33.0	5.6	0.0	0.0	24.3	24.0
LnGrp LOS	C	A	C	A	A	A	C	A	A	A	C	C
Approach Vol, veh/h		44			0			1490			1366	
Approach Delay, s/veh		26.9			0.0			8.1			24.1	
Approach LOS		C						A			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		49.9		12.7	14.8	35.2		12.7				
Change Period (Y+Rc), s		7.5		7.5	7.5	7.5		7.5				
Max Green Setting (Gmax), s		45.0		25.0	8.0	29.5		25.0				
Max Q Clear Time (g_c+1), s		14.6		3.0	6.7	23.3		0.0				
Green Ext Time (p_c), s		13.6		0.0	0.0	4.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	161	1074	278	701	645	244	135	984	736	234	1078	93
Future Volume (veh/h)	161	1074	278	701	645	244	135	984	736	234	1078	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1119	0	730	672	177	141	1025	0	244	1123	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	238	831		786	734	612	172	866		279	1079	466
Arrive On Green	0.07	0.25	0.00	0.24	0.41	0.41	0.10	0.25	0.00	0.16	0.31	0.31
Sat Flow, veh/h	3291	3385	1510	3291	1781	1485	1767	3526	1572	1767	3526	1525
Grp Volume(v), veh/h	168	1119	0	730	672	177	141	1025	0	244	1123	52
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1646	1781	1485	1767	1763	1572	1767	1763	1525
Q Serve(g_s), s	7.1	35.0	0.0	30.9	50.7	11.3	11.2	35.0	0.0	19.2	43.6	3.5
Cycle Q Clear(g_c), s	7.1	35.0	0.0	30.9	50.7	11.3	11.2	35.0	0.0	19.2	43.6	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	831		786	734	612	172	866		279	1079	466
V/C Ratio(X)	0.71	1.35		0.93	0.92	0.29	0.82	1.18		0.87	1.04	0.11
Avail Cap(c_a), veh/h	808	831		808	734	612	434	866		434	1079	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.6	53.8	0.0	53.1	39.5	28.0	63.1	53.8	0.0	58.6	49.5	35.5
Incr Delay (d2), s/veh	8.0	163.8	0.0	17.4	16.7	0.6	17.8	94.4	0.0	18.1	38.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	33.3	0.0	14.3	24.4	4.0	5.7	26.2	0.0	9.7	24.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	217.5	0.0	70.5	56.3	28.5	80.9	148.2	0.0	76.7	88.2	35.8
LnGrp LOS	E	F		E	E	C	F	F		E	F	D
Approach Vol, veh/h		1287			1579			1166			1419	
Approach Delay, s/veh		198.6			59.7			140.0			84.3	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.5	39.0	38.0	39.0	17.9	47.6	14.3	62.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+D), s	21.2	37.0	32.9	37.0	13.2	45.6	9.1	52.7				
Green Ext Time (p_c), s	1.3	0.0	1.1	0.0	0.8	0.0	1.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	116.1
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	291	1849	54	274	1491	662	33	444	82	587	580	192
Future Volume (veh/h)	291	1849	54	274	1491	662	33	444	82	587	580	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	297	1887	16	280	1521	426	34	453	24	599	592	178
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	234	1526	459	327	1688	408	64	501	417	243	990	297
Arrive On Green	0.14	0.31	0.31	0.10	0.28	0.28	0.04	0.27	0.27	0.14	0.37	0.37
Sat Flow, veh/h	1697	4863	1464	3291	6128	1481	1767	1856	1543	1767	2660	798
Grp Volume(v), veh/h	297	1887	16	280	1521	426	34	453	24	599	392	378
Grp Sat Flow(s),veh/h/ln	1697	1621	1464	1646	1532	1481	1767	1856	1543	1767	1763	1695
Q Serve(g_s), s	20.0	45.6	1.1	12.2	34.7	40.0	2.7	34.2	1.7	20.0	26.1	26.2
Cycle Q Clear(g_c), s	20.0	45.6	1.1	12.2	34.7	40.0	2.7	34.2	1.7	20.0	26.1	26.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	234	1526	459	327	1688	408	64	501	417	243	656	631
V/C Ratio(X)	1.27	1.24	0.03	0.86	0.90	1.04	0.53	0.90	0.06	2.46	0.60	0.60
Avail Cap(c_a), veh/h	234	1526	459	453	1688	408	243	600	499	243	656	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	49.8	34.6	64.4	50.7	52.6	68.8	51.2	39.3	62.6	36.8	36.9
Incr Delay (d2), s/veh	151.3	112.3	0.0	8.6	7.2	56.6	2.6	13.9	0.0	670.0	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.2	33.6	0.4	5.3	13.6	20.6	1.3	17.4	0.6	54.1	11.2	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.9	162.1	34.6	73.0	58.0	109.3	71.4	65.1	39.3	732.6	37.9	38.0
LnGrp LOS	F	F	C	E	E	F	E	E	D	F	D	D
Approach Vol, veh/h		2200			2227			511			1369	
Approach Delay, s/veh		168.2			69.7			64.3			341.9	
Approach LOS		F			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.5	45.8	20.9	52.1	11.7	60.5	26.5	46.5				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0				
Max Q Clear Time (g_c+Q), s	20.0	36.2	14.2	47.6	4.7	28.2	22.0	42.0				
Green Ext Time (p_c), s	0.0	1.2	0.3	0.0	0.0	2.7	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	162.7
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶↷	↑↑↑		↶↷	↑↑	↶	↶↷	↑↑↑	↶	↶↷	↑↑	↶
Traffic Volume (veh/h)	188	1817	285	682	1839	321	342	676	485	395	791	211
Future Volume (veh/h)	188	1817	285	682	1839	321	342	676	485	395	791	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	196	1893	279	710	1916	250	356	704	183	411	824	118
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	245	1243	183	747	1292	567	409	1102	335	462	822	359
Arrive On Green	0.07	0.23	0.23	0.23	0.38	0.38	0.12	0.21	0.21	0.13	0.23	0.23
Sat Flow, veh/h	3291	5417	798	3291	3385	1484	3483	5147	1564	3483	3582	1565
Grp Volume(v), veh/h	196	1606	566	710	1916	250	356	704	183	411	824	118
Grp Sat Flow(s),veh/h/ln	1646	1532	1618	1646	1692	1484	1742	1716	1564	1742	1791	1565
Q Serve(g_s), s	8.9	35.0	35.0	32.4	58.2	19.1	15.3	19.0	15.9	17.7	35.0	9.6
Cycle Q Clear(g_c), s	8.9	35.0	35.0	32.4	58.2	19.1	15.3	19.0	15.9	17.7	35.0	9.6
Prop In Lane	1.00		0.49	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	1055	371	747	1292	567	409	1102	335	462	822	359
V/C Ratio(X)	0.80	1.52	1.52	0.95	1.48	0.44	0.87	0.64	0.55	0.89	1.00	0.33
Avail Cap(c_a), veh/h	755	1055	371	755	1292	567	571	1102	335	571	822	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.4	58.7	58.7	58.1	47.1	35.0	66.2	54.5	53.3	65.0	58.7	48.9
Incr Delay (d2), s/veh	4.4	239.9	249.2	21.4	221.4	0.7	9.4	1.3	2.0	13.1	31.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	36.5	39.5	15.2	62.9	6.8	7.2	8.2	6.3	8.5	19.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	298.6	307.9	79.5	268.5	35.7	75.6	55.8	55.3	78.1	90.7	49.6
LnGrp LOS	E	F	F	E	F	D	E	E	E	E	F	D
Approach Vol, veh/h		2368			2876			1243			1353	
Approach Delay, s/veh		282.2			201.6			61.4			83.3	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	42.1	42.5	25.4	42.5	18.9	65.7	27.7	40.2				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0				
Max Q Clear Time (g_c+Rc), s	34.4	37.0	17.3	37.0	10.9	60.2	19.7	21.0				
Green Ext Time (p_c), s	0.2	0.0	0.6	0.0	0.4	0.0	0.5	1.9				

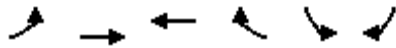
Intersection Summary

HCM 6th Ctrl Delay	183.3
HCM 6th LOS	F



HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



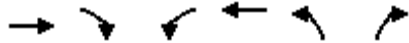
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	2329	1385	0	232	2096
Future Volume (veh/h)	0	2329	1385	0	232	2096
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	2478	1473	0	247	2221
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	2018	1404	0	704	1253
Arrive On Green	0.00	0.41	0.41	0.00	0.41	0.41
Sat Flow, veh/h	0	5184	3563	0	1697	3019
Grp Volume(v), veh/h	0	2478	1473	0	247	2221
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1697	1510
Q Serve(g_s), s	0.0	30.0	30.0	0.0	7.2	30.0
Cycle Q Clear(g_c), s	0.0	30.0	30.0	0.0	7.2	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2018	1404	0	704	1253
V/C Ratio(X)	0.00	1.23	1.05	0.00	0.35	1.77
Avail Cap(c_a), veh/h	0	2018	1404	0	704	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	21.2	21.2	0.0	14.5	21.1
Incr Delay (d2), s/veh	0.0	107.2	37.9	0.0	0.3	351.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	29.0	16.7	0.0	2.6	70.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	128.3	59.1	0.0	14.8	372.2
LnGrp LOS	A	F	F	A	B	F
Approach Vol, veh/h		2478	1473		2468	
Approach Delay, s/veh		128.3	59.1		336.4	
Approach LOS		F	E		F	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		36.8		35.5		36.8
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		32.0		32.0		32.0
Green Ext Time (p_c), s		0.0		0.0		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			192.4			
HCM 6th LOS			F			

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	778	1778	171	504	993	124
Future Volume (veh/h)	778	1778	171	504	993	124
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	819	1710	180	531	1045	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1722	1027	269	2464	1141	508
Arrive On Green	0.35	0.35	0.08	0.51	0.34	0.34
Sat Flow, veh/h	5024	1466	3291	5024	3393	1510
Grp Volume(v), veh/h	819	1710	180	531	1045	87
Grp Sat Flow(s),veh/h/ln	1621	1466	1646	1621	1697	1510
Q Serve(g_s), s	11.1	30.0	4.5	5.1	25.0	3.4
Cycle Q Clear(g_c), s	11.1	30.0	4.5	5.1	25.0	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1722	1027	269	2464	1141	508
V/C Ratio(X)	0.48	1.67	0.67	0.22	0.92	0.17
Avail Cap(c_a), veh/h	1722	1027	1165	2464	1201	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	8.7	37.8	11.6	27.0	19.8
Incr Delay (d2), s/veh	0.2	303.7	2.9	0.0	10.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	106.6	1.8	1.5	11.3	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.5	312.4	40.7	11.6	37.6	20.0
LnGrp LOS	C	F	D	B	D	B
Approach Vol, veh/h	2529			711	1132	
Approach Delay, s/veh	218.2			19.0	36.2	
Approach LOS	F			B	D	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	32.9	37.3		50.2	34.5	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	30.0	30.0		30.0	30.0	
Max Q Clear Time (g_c+1/5), s	10.5	32.0		7.1	27.0	
Green Ext Time (p_c), s	0.5	0.0		3.1	1.5	

Intersection Summary

HCM 6th Ctrl Delay	138.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.  
 User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	77	0	0	0	0	46	0	0	0
Future Volume (veh/h)	0	0	0	77	0	0	0	0	46	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	308	0	0	0	0	32	0	0	0
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	13	27	12	456	479	406	0	0	100	0	119	0
Arrive On Green	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	0	0	1579	0	1870	0
Grp Volume(v), veh/h	0	0	0	308	0	0	0	0	32	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	0	0	1579	0	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	13	27	12	456	479	406	0	0	100	0	119	0
V/C Ratio(X)	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00
Avail Cap(c_a), veh/h	673	5105	2277	2088	4172	3535	0	0	3820	0	4525	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			308			32			0		
Approach Delay, s/veh	0.0			6.2			7.7			0.0		
Approach LOS				A			A					
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	5.3		7.9		0.0		5.3		0.0		7.9	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	32.0		15.5		19.0		32.0		5.0		29.5	
Max Q Clear Time (g_c+I1), s	2.3		4.1		0.0		0.0		0.0		0.0	
Green Ext Time (p_c), s	0.1		0.7		0.0		0.0		0.0		0.0	
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			6.3									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔↔	↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	34	2	10	10	1	61	20	1629	19	118	1756	56
Future Volume (veh/h)	34	2	10	10	1	61	20	1629	19	118	1756	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	2	0	11	1	9	22	1752	10	127	1888	33
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	169	313	0	66	206	89	116	1759	772	282	2772	847
Arrive On Green	0.05	0.09	0.00	0.02	0.06	0.06	0.03	0.50	0.50	0.08	0.55	0.55
Sat Flow, veh/h	3456	3647	0	3456	3554	1532	3428	3526	1548	3428	5066	1548
Grp Volume(v), veh/h	37	2	0	11	1	9	22	1752	10	127	1888	33
Grp Sat Flow(s),veh/h/ln	1728	1777	0	1728	1777	1532	1714	1763	1548	1714	1689	1548
Q Serve(g_s), s	0.8	0.0	0.0	0.3	0.0	0.4	0.5	39.7	0.3	2.8	21.6	0.8
Cycle Q Clear(g_c), s	0.8	0.0	0.0	0.3	0.0	0.4	0.5	39.7	0.3	2.8	21.6	0.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	313	0	66	206	89	116	1759	772	282	2772	847
V/C Ratio(X)	0.22	0.01	0.00	0.17	0.00	0.10	0.19	1.00	0.01	0.45	0.68	0.04
Avail Cap(c_a), veh/h	862	887	0	862	887	382	855	1759	772	855	2772	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	33.4	0.0	38.7	35.6	35.8	37.7	20.0	10.1	35.1	13.1	8.4
Incr Delay (d2), s/veh	0.6	0.0	0.0	1.2	0.0	0.2	0.8	20.5	0.0	1.1	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.1	0.0	0.2	0.2	17.4	0.1	1.1	6.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	33.4	0.0	39.9	35.6	36.0	38.4	40.5	10.1	36.2	13.8	8.4
LnGrp LOS	D	C	A	D	D	D	D	D	B	D	B	A
Approach Vol, veh/h		39			21			1784			2048	
Approach Delay, s/veh		37.1			38.0			40.3			15.1	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	47.5	6.5	14.6	7.7	51.4	8.9	12.2				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	20.0	40.0	20.0	20.0	20.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1/8), s	14.8	41.7	2.3	2.0	2.5	23.6	2.8	2.4				
Green Ext Time (p_c), s	0.3	0.0	0.0	0.0	0.0	11.0	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	113	24	32	54	20	17
Future Vol, veh/h	113	24	32	54	20	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	128	27	36	61	23	19

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	155	0	231
Stage 1	-	-	-	-	128
Stage 2	-	-	-	-	103
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1423	-	737
Stage 1	-	-	-	-	884
Stage 2	-	-	-	-	910
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1423	-	719
Mov Cap-2 Maneuver	-	-	-	-	719
Stage 1	-	-	-	-	884
Stage 2	-	-	-	-	887

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	821	-	-	1423	-
HCM Lane V/C Ratio	0.051	-	-	0.026	-
HCM Control Delay (s)	9.6	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (veh/h)	96	34	80	64	21	48
Future Volume (veh/h)	96	34	80	64	21	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	15	86	69	23	7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	910	393	272	2107	65	20
Arrive On Green	0.26	0.26	0.15	0.59	0.05	0.05
Sat Flow, veh/h	3647	1534	1781	3647	1288	392
Grp Volume(v), veh/h	103	15	86	69	31	0
Grp Sat Flow(s),veh/h/ln	1777	1534	1781	1777	1735	0
Q Serve(g_s), s	0.9	0.3	1.7	0.3	0.7	0.0
Cycle Q Clear(g_c), s	0.9	0.3	1.7	0.3	0.7	0.0
Prop In Lane		1.00	1.00		0.74	0.23
Lane Grp Cap(c), veh/h	910	393	272	2107	88	0
V/C Ratio(X)	0.11	0.04	0.32	0.03	0.35	0.00
Avail Cap(c_a), veh/h	3055	1318	656	3055	1407	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.6	11.4	15.4	3.4	18.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.0	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.6	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	11.4	16.0	3.4	21.5	0.0
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	118			155	31	
Approach Delay, s/veh	11.6			10.4	21.5	
Approach LOS	B			B	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		9.1	13.7	17.9		31.6
Change Period (Y+Rc), s		7.0	7.5	7.5		7.5
Max Green Setting (Gmax), s		33.0	15.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		2.7	3.7	2.9		2.3
Green Ext Time (p_c), s		0.1	0.1	0.7		0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			
<b>Notes</b>						
User approved volume balancing among the lanes for turning movement.						

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	159	0	0	148	0	0
Future Vol, veh/h	159	0	0	148	0	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	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	173	0	0	161	0	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	173	0	334
Stage 1	-	-	-	-	173
Stage 2	-	-	-	-	161
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1416	-	665
Stage 1	-	-	-	-	862
Stage 2	-	-	-	-	873
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1416	-	665
Mov Cap-2 Maneuver	-	-	-	-	665
Stage 1	-	-	-	-	862
Stage 2	-	-	-	-	873

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1416	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Intersection	
Intersection Delay, s/veh	99.7
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	93	41	531	703	107
Future Vol, veh/h	66	93	41	531	703	107
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	70	99	44	565	748	114
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.2	42.4	157.4
HCM LOS	B	E	F

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	7%	100%	0%	0%
Vol Thru, %	93%	0%	0%	87%
Vol Right, %	0%	0%	100%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	572	66	93	810
LT Vol	41	66	0	0
Through Vol	531	0	0	703
RT Vol	0	0	93	107
Lane Flow Rate	609	70	99	862
Geometry Grp	2	7	7	2
Degree of Util (X)	0.916	0.155	0.185	1.285
Departure Headway (Hd)	5.824	8.567	7.326	5.37
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	627	421	493	681
Service Time	3.824	6.267	5.026	3.37
HCM Lane V/C Ratio	0.971	0.166	0.201	1.266
HCM Control Delay	42.4	12.8	11.7	157.4
HCM Lane LOS	E	B	B	F
HCM 95th-tile Q	11.7	0.5	0.7	33.5

HCM 6th Signalized Intersection Summary  
 23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	1	0	44	1	1
Future Volume (veh/h)	30	1	0	44	1	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1856	1856
Adj Flow Rate, veh/h	39	1	0	8	1	1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	3	3	3	3
Cap, veh/h	463	412	68	56	9	505
Arrive On Green	0.26	0.26	0.00	0.04	0.00	0.27
Sat Flow, veh/h	1781	1585	1856	1522	1767	1856
Grp Volume(v), veh/h	39	1	0	8	1	1
Grp Sat Flow(s),veh/h/ln	1781	1585	1856	1522	1767	1856
Q Serve(g_s), s	0.3	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	463	412	68	56	9	505
V/C Ratio(X)	0.08	0.00	0.00	0.14	0.11	0.00
Avail Cap(c_a), veh/h	1713	1525	3618	2967	505	4582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.4	5.3	0.0	9.0	9.6	5.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.2	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.5	5.3	0.0	10.1	14.7	5.1
LnGrp LOS	A	A	A	B	B	A
Approach Vol, veh/h	40		8			2
Approach Delay, s/veh	5.5		10.1			9.9
Approach LOS	A		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	4.5	5.2			9.7	9.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	37.5			47.5	18.5
Max Q Clear Time (g_c+1/2), s	12.0	2.1			2.0	2.3
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			6.4			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔		↔	↔		↔↑↑↑	↔↑↑↑		↔↑↑↑	↔↑↑↑	
Traffic Volume (veh/h)	37	0	14	6	0	53	10	1421	4	0	1593	64
Future Volume (veh/h)	37	0	14	6	0	53	10	1421	4	0	1593	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	39	0	3	6	0	6	10	1480	4	0	1659	67
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	199	0	89	3	0	3	32	3761	10	3	2893	117
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.02	0.71	0.71	0.00	0.57	0.57
Sat Flow, veh/h	3456	0	1543	1810	0	1610	1795	5299	14	1795	5068	205
Grp Volume(v), veh/h	39	0	3	6	0	6	10	958	526	0	1123	603
Grp Sat Flow(s),veh/h/ln	1728	0	1543	1810	0	1610	1795	1716	1883	1795	1716	1842
Q Serve(g_s), s	0.6	0.0	0.1	0.1	0.0	0.1	0.3	6.0	6.0	0.0	11.2	11.2
Cycle Q Clear(g_c), s	0.6	0.0	0.1	0.1	0.0	0.1	0.3	6.0	6.0	0.0	11.2	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	199	0	89	3	0	3	32	2435	1336	3	1958	1051
V/C Ratio(X)	0.20	0.00	0.03	1.78	0.00	2.00	0.31	0.39	0.39	0.00	0.57	0.57
Avail Cap(c_a), veh/h	2252	0	1005	1179	0	1049	1170	2555	1402	1170	2555	1372
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	23.9	26.9	0.0	26.9	26.0	3.1	3.1	0.0	7.4	7.4
Incr Delay (d2), s/veh	0.6	0.0	0.2	553.4	0.0	691.6	6.3	0.1	0.3	0.0	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.6	0.0	0.6	0.2	0.4	0.5	0.0	2.3	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	24.1	580.2	0.0	718.4	32.4	3.3	3.4	0.0	7.7	8.1
LnGrp LOS	C	A	C	F	A	F	C	A	A	A	A	A
Approach Vol, veh/h		42			12			1494			1726	
Approach Delay, s/veh		24.7			649.3			3.5			7.9	
Approach LOS		C			F			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	37.2	0.0	9.1	0.0	44.6	9.1	0.0				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	35.0	40.0	35.0	35.0	35.0	40.0	35.0	35.0				
Max Q Clear Time (g_c+1), s	12.3	13.2	0.0	0.0	0.0	8.0	2.6	0.0				
Green Ext Time (p_c), s	0.0	17.3	0.0	0.0	0.0	16.1	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	73	4	41	27	4	50	36	1575	40	60	1604	90
Future Volume (veh/h)	73	4	41	27	4	50	36	1575	40	60	1604	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	78	4	9	29	4	11	39	1694	16	65	1725	40
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	406	102	229	408	88	241	146	1439	433	206	1610	485
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.08	0.28	0.28	0.12	0.32	0.32
Sat Flow, veh/h	1388	504	1133	1391	433	1192	1767	5066	1523	1767	5066	1525
Grp Volume(v), veh/h	78	0	13	29	0	15	39	1694	16	65	1725	40
Grp Sat Flow(s),veh/h/ln	1388	0	1637	1391	0	1625	1767	1689	1523	1767	1689	1525
Q Serve(g_s), s	2.5	0.0	0.3	0.9	0.0	0.4	1.1	15.0	0.4	1.8	16.8	1.0
Cycle Q Clear(g_c), s	2.9	0.0	0.3	1.2	0.0	0.4	1.1	15.0	0.4	1.8	16.8	1.0
Prop In Lane	1.00		0.69	1.00		0.73	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	406	0	331	408	0	328	146	1439	433	206	1610	485
V/C Ratio(X)	0.19	0.00	0.04	0.07	0.00	0.05	0.27	1.18	0.04	0.32	1.07	0.08
Avail Cap(c_a), veh/h	1099	0	1147	1102	0	1138	335	1439	433	335	1610	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	17.0	17.5	0.0	17.0	22.7	18.9	13.7	21.4	18.0	12.6
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.1	1.2	87.4	0.0	1.1	44.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	0.3	0.0	0.1	0.4	16.0	0.1	0.7	11.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	17.0	17.5	0.0	17.0	23.9	106.3	13.7	22.5	62.2	12.7
LnGrp LOS	B	A	B	B	A	B	C	F	B	C	F	B
Approach Vol, veh/h		91			44			1749			1830	
Approach Delay, s/veh		18.2			17.4			103.6			59.7	
Approach LOS		B			B			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	22.5		16.7	11.9	24.3		16.7				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	15.0		37.0	10.0	15.0		37.0				
Max Q Clear Time (g_c+1/3), s	13.8	17.0		4.9	3.1	18.8		3.2				
Green Ext Time (p_c), s	0.1	0.0		0.4	0.0	0.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	78.9
HCM 6th LOS	E

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	11	24	542	764	40
Future Vol, veh/h	24	11	24	542	764	40
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	-	225	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	25	12	25	571	804	42

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1446	423	846	0	0
Stage 1	825	-	-	-	-
Stage 2	621	-	-	-	-
Critical Hdwy	6.63	6.93	4.145	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.2285	-	-
Pot Cap-1 Maneuver	133	580	783	-	-
Stage 1	392	-	-	-	-
Stage 2	535	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	129	580	783	-	-
Mov Cap-2 Maneuver	129	-	-	-	-
Stage 1	379	-	-	-	-
Stage 2	535	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.7	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	783	-	171	-	-
HCM Lane V/C Ratio	0.032	-	0.215	-	-
HCM Control Delay (s)	9.8	-	31.7	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↔	↕
Traffic Vol, veh/h	14	16	29	3	0	32
Future Vol, veh/h	14	16	29	3	0	32
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	-	-	-	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	18	20	36	4	0	40

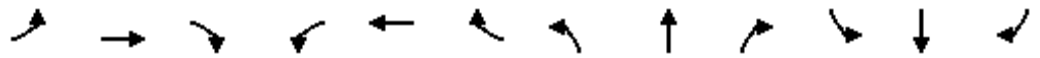
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	78	20	0	0	40	0
Stage 1	38	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.145	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.2285	-
Pot Cap-1 Maneuver	920	1053	-	-	1562	-
Stage 1	980	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	920	1053	-	-	1562	-
Mov Cap-2 Maneuver	920	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	982	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	986	1562
HCM Lane V/C Ratio	-	-	0.038	-
HCM Control Delay (s)	-	-	8.8	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖	↖↗	↕	↖	↖	↕↖↗	↖	↖	↕↖↗	↖
Traffic Volume (veh/h)	501	479	117	264	272	146	57	893	223	128	973	622
Future Volume (veh/h)	501	479	117	264	272	146	57	893	223	128	973	622
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	511	489	31	269	278	49	58	911	135	131	993	316
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	528	912	399	337	377	313	75	1452	442	161	1700	518
Arrive On Green	0.15	0.26	0.26	0.10	0.20	0.20	0.04	0.28	0.28	0.09	0.33	0.33
Sat Flow, veh/h	3428	3526	1542	3428	1856	1539	1795	5147	1568	1795	5147	1569
Grp Volume(v), veh/h	511	489	31	269	278	49	58	911	135	131	993	316
Grp Sat Flow(s),veh/h/ln	1714	1763	1542	1714	1856	1539	1795	1716	1568	1795	1716	1569
Q Serve(g_s), s	14.4	11.6	1.5	7.5	13.7	2.6	3.1	15.0	6.6	7.0	15.6	16.4
Cycle Q Clear(g_c), s	14.4	11.6	1.5	7.5	13.7	2.6	3.1	15.0	6.6	7.0	15.6	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	528	912	399	337	377	313	75	1452	442	161	1700	518
V/C Ratio(X)	0.97	0.54	0.08	0.80	0.74	0.16	0.78	0.63	0.31	0.81	0.58	0.61
Avail Cap(c_a), veh/h	528	1665	728	458	838	695	92	2040	621	203	2357	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	31.1	27.3	43.0	36.4	31.9	46.2	30.5	27.5	43.5	27.1	27.4
Incr Delay (d2), s/veh	30.8	0.7	0.1	4.8	4.0	0.3	21.9	0.6	0.5	14.5	0.5	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	4.7	0.5	3.2	6.2	0.9	1.8	5.9	2.4	3.6	5.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	31.8	27.4	47.8	40.4	32.3	68.1	31.1	28.0	58.0	27.5	29.0
LnGrp LOS	E	C	C	D	D	C	E	C	C	E	C	C
Approach Vol, veh/h		1031			596			1104			1440	
Approach Delay, s/veh		51.5			43.0			32.7			30.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	34.7	15.6	32.4	10.1	39.4	21.0	27.0				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	11.0	38.6	13.0	46.0	5.0	44.6	15.0	44.0				
Max Q Clear Time (g_c+I1), s	9.0	17.0	9.5	13.6	5.1	18.4	16.4	15.7				
Green Ext Time (p_c), s	0.0	8.9	0.1	4.6	0.0	11.7	0.0	2.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				38.1								
HCM 6th LOS				D								



HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1731	0	4	843	87	15	0	42	45	0	32
Future Volume (veh/h)	34	1731	0	4	843	87	15	0	42	45	0	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		1.00	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	39	1967	0	5	958	94	17	0	0	51	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	88	2313	1032	16	1991	195	240	0	0	233	0	0
Arrive On Green	0.05	0.67	0.00	0.01	0.63	0.63	0.10	0.00	0.00	0.10	0.00	0.00
Sat Flow, veh/h	1739	3469	1547	1739	3183	312	1501	0	0	1429	0	0
Grp Volume(v), veh/h	39	1967	0	5	522	530	17	0	0	51	0	0
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1760	1501	0	0	1429	0	0
Q Serve(g_s), s	1.8	35.2	0.0	0.2	13.0	13.0	0.0	0.0	0.0	1.8	0.0	0.0
Cycle Q Clear(g_c), s	1.8	35.2	0.0	0.2	13.0	13.0	0.7	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	88	2313	1032	16	1085	1101	240	0	0	233	0	0
V/C Ratio(X)	0.44	0.85	0.00	0.31	0.48	0.48	0.07	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	151	2367	1056	151	1183	1201	617	0	0	612	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.2	10.3	0.0	39.7	8.1	8.1	32.9	0.0	0.0	33.7	0.0	0.0
Incr Delay (d2), s/veh	3.5	3.4	0.0	10.7	0.7	0.7	0.1	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	11.0	0.0	0.1	4.1	4.2	0.3	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	13.8	0.0	50.4	8.8	8.8	33.0	0.0	0.0	34.2	0.0	0.0
LnGrp LOS	D	B	A	D	A	A	C	A	A	C	A	A
Approach Vol, veh/h		2006			1057			17			51	
Approach Delay, s/veh		14.3			9.0			33.0			34.2	
Approach LOS		B			A			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.1	5.7	60.8		14.1	9.1	57.4				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	55.0		30.0	7.0	55.0				
Max Q Clear Time (g_c+1), s		2.7	2.2	37.2		4.6	3.8	15.0				
Green Ext Time (p_c), s		0.0	0.0	16.6		0.2	0.0	17.1				

Intersection Summary

HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	671	668	477	69	359	50	165	975	112	76	1140	414
Future Volume (veh/h)	671	668	477	69	359	50	165	975	112	76	1140	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	714	711	0	73	382	10	176	1037	45	81	1213	258
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	3	3	3
Cap, veh/h	596	859		113	478	208	242	1817	554	223	1245	546
Arrive On Green	0.18	0.25	0.00	0.06	0.13	0.13	0.07	0.36	0.36	0.07	0.35	0.35
Sat Flow, veh/h	3374	3469	1547	1781	3554	1544	3428	5066	1545	3428	3526	1545
Grp Volume(v), veh/h	714	711	0	73	382	10	176	1037	45	81	1213	258
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1781	1777	1544	1714	1689	1545	1714	1763	1545
Q Serve(g_s), s	20.0	22.0	0.0	4.5	11.8	0.6	5.7	18.7	2.2	2.6	38.4	14.7
Cycle Q Clear(g_c), s	20.0	22.0	0.0	4.5	11.8	0.6	5.7	18.7	2.2	2.6	38.4	14.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	596	859		113	478	208	242	1817	554	223	1245	546
V/C Ratio(X)	1.20	0.83		0.65	0.80	0.05	0.73	0.57	0.08	0.36	0.97	0.47
Avail Cap(c_a), veh/h	596	859		315	628	273	757	1817	554	454	1245	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	40.3	0.0	51.8	47.5	42.7	51.5	29.3	24.0	50.7	36.1	28.4
Incr Delay (d2), s/veh	104.9	7.5	0.0	4.5	4.9	0.1	3.1	0.7	0.1	0.7	19.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	10.1	0.0	2.1	5.5	0.2	2.4	7.1	0.8	1.1	18.5	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.5	47.8	0.0	56.3	52.4	42.8	54.6	30.0	24.1	51.4	55.8	29.8
LnGrp LOS	F	D		E	D	D	D	C	C	D	E	C
Approach Vol, veh/h		1425			465			1258			1552	
Approach Delay, s/veh		99.7			52.8			33.2			51.2	
Approach LOS		F			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.9	48.1	14.7	35.5	15.5	47.5	27.5	22.7				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	15.0	40.0	20.0	25.0	25.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	14.6	20.7	6.5	24.0	7.7	40.4	22.0	13.8				
Green Ext Time (p_c), s	0.1	10.8	0.1	0.7	0.3	0.0	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay	61.3
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	803	38	9	417	18	31	5	17	17	7	13
Future Volume (veh/h)	34	803	38	9	417	18	31	5	17	17	7	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	836	21	9	434	11	32	5	2	18	7	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	1263	547	30	1117	483	350	41	205	281	87	15
Arrive On Green	0.06	0.36	0.36	0.02	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1539	1781	3554	1537	1170	310	1551	800	656	117
Grp Volume(v), veh/h	35	836	21	9	434	11	37	0	2	27	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1539	1781	1777	1537	1480	0	1551	1573	0	0
Q Serve(g_s), s	0.6	6.8	0.3	0.2	3.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	6.8	0.3	0.2	3.3	0.2	0.7	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.67		0.07
Lane Grp Cap(c), veh/h	103	1263	547	30	1117	483	391	0	205	383	0	0
V/C Ratio(X)	0.34	0.66	0.04	0.30	0.39	0.02	0.09	0.00	0.01	0.07	0.00	0.00
Avail Cap(c_a), veh/h	364	1658	718	364	1658	717	1461	0	1357	1500	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.5	9.3	7.2	16.7	9.2	8.1	13.2	0.0	12.9	13.1	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.6	0.0	5.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.8	0.1	0.1	0.9	0.0	0.2	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	9.9	7.3	22.2	9.4	8.1	13.2	0.0	12.9	13.1	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		892			454			39				27
Approach Delay, s/veh		10.2			9.6			13.2				13.1
Approach LOS		B			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.5	5.6	18.2		10.5	7.0	16.8				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s		2.7	2.2	8.8		2.4	2.6	5.3				
Green Ext Time (p_c), s		0.1	0.0	3.2		0.1	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					10.1							
HCM 6th LOS					B							

HCM 6th Signalized Intersection Summary  
32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	759	15	38	430	71	12	11	26	68	13	24
Future Volume (veh/h)	53	759	15	38	430	71	12	11	26	68	13	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	774	8	39	439	32	12	11	5	69	13	12
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	1297	562	109	1236	535	231	164	241	301	56	30
Arrive On Green	0.08	0.37	0.37	0.06	0.35	0.35	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1540	1781	3554	1539	617	1054	1548	949	358	191
Grp Volume(v), veh/h	54	774	8	39	439	32	23	0	5	94	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1781	1777	1539	1672	0	1548	1498	0	0
Q Serve(g_s), s	1.2	7.2	0.1	0.9	3.7	0.6	0.0	0.0	0.1	1.5	0.0	0.0
Cycle Q Clear(g_c), s	1.2	7.2	0.1	0.9	3.7	0.6	0.4	0.0	0.1	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.52		1.00	0.73		0.13
Lane Grp Cap(c), veh/h	140	1297	562	109	1236	535	395	0	241	387	0	0
V/C Ratio(X)	0.39	0.60	0.01	0.36	0.36	0.06	0.06	0.00	0.02	0.24	0.00	0.00
Avail Cap(c_a), veh/h	875	3056	1324	875	3056	1324	1117	0	951	1055	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	10.5	8.2	18.3	9.9	8.8	14.7	0.0	14.5	15.4	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.4	0.0	2.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.1	0.0	0.4	1.1	0.1	0.2	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	10.9	8.3	20.3	10.0	8.9	14.7	0.0	14.6	15.5	0.0	0.0
LnGrp LOS	B	B	A	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h		836			510			28			94	
Approach Delay, s/veh		11.5			10.8			14.7			15.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.3	7.5	20.9		12.3	8.2	20.2				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+1), s		2.4	2.9	9.2		4.2	3.2	5.7				
Green Ext Time (p_c), s		0.0	0.1	5.7		0.3	0.1	3.1				

Intersection Summary

HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	632	169	376	396	49	83	473	290	148	577	49
Future Volume (veh/h)	41	632	169	376	396	49	83	473	290	148	577	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	652	168	388	408	48	86	488	108	153	595	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	76	388	100	321	668	79	107	524	434	139	993	78
Arrive On Green	0.04	0.27	0.27	0.18	0.41	0.41	0.06	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	1781	1428	368	1767	1625	191	1767	1856	1537	1767	3305	261
Grp Volume(v), veh/h	42	0	820	388	0	456	86	488	108	153	317	325
Grp Sat Flow(s),veh/h/ln	1781	0	1796	1767	0	1816	1767	1856	1537	1767	1763	1803
Q Serve(g_s), s	2.9	0.0	34.5	23.0	0.0	25.0	6.1	32.5	6.9	10.0	19.4	19.5
Cycle Q Clear(g_c), s	2.9	0.0	34.5	23.0	0.0	25.0	6.1	32.5	6.9	10.0	19.4	19.5
Prop In Lane	1.00		0.20	1.00		0.11	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	76	0	489	321	0	746	107	524	434	139	530	542
V/C Ratio(X)	0.55	0.00	1.68	1.21	0.00	0.61	0.80	0.93	0.25	1.10	0.60	0.60
Avail Cap(c_a), veh/h	98	0	489	321	0	746	125	571	473	139	556	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	46.2	51.9	0.0	29.4	58.8	44.3	35.1	58.4	37.8	37.9
Incr Delay (d2), s/veh	2.3	0.0	314.1	120.2	0.0	1.1	22.7	21.3	0.3	104.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	57.8	20.5	0.0	10.6	3.3	17.5	2.5	8.4	8.4	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	0.0	360.3	172.1	0.0	30.5	81.4	65.6	35.4	163.3	39.5	39.5
LnGrp LOS	E	A	F	F	A	C	F	E	D	F	D	D
Approach Vol, veh/h		862			844			682			795	
Approach Delay, s/veh		345.7			95.6			62.8			63.3	
Approach LOS		F			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	42.8	28.0	41.0	12.7	45.1	10.4	58.6				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	10.0	39.0	23.0	34.5	9.0	40.0	7.0	50.5				
Max Q Clear Time (g_c+I), s	12.0	34.5	25.0	36.5	8.1	21.5	4.9	27.0				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	3.3	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	148.2
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	995	86	129	797	2	44	8	88	3	20	23
Future Volume (veh/h)	18	995	86	129	797	2	44	8	88	3	20	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	19	1059	53	137	848	2	47	9	14	3	21	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	233	1033	853	115	1033	862	110	266	216	10	160	129
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.06	0.14	0.14	0.01	0.09	0.09
Sat Flow, veh/h	643	1856	1532	503	1856	1548	1767	1856	1506	1767	1856	1496
Grp Volume(v), veh/h	19	1059	53	137	848	2	47	9	14	3	21	3
Grp Sat Flow(s),veh/h/ln	643	1856	1532	503	1856	1548	1767	1856	1506	1767	1856	1496
Q Serve(g_s), s	1.6	35.0	1.0	0.0	23.4	0.0	1.6	0.3	0.5	0.1	0.7	0.1
Cycle Q Clear(g_c), s	25.0	35.0	1.0	35.0	23.4	0.0	1.6	0.3	0.5	0.1	0.7	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	1033	853	115	1033	862	110	266	216	10	160	129
V/C Ratio(X)	0.08	1.02	0.06	1.20	0.82	0.00	0.43	0.03	0.06	0.30	0.13	0.02
Avail Cap(c_a), veh/h	233	1033	853	115	1033	862	562	590	479	562	590	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	13.9	6.4	31.4	11.4	6.2	28.4	23.2	23.3	31.1	26.5	26.3
Incr Delay (d2), s/veh	0.1	34.5	0.0	146.1	5.4	0.0	1.0	0.0	0.0	6.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	19.1	0.2	6.2	7.7	0.0	0.6	0.1	0.2	0.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	48.4	6.4	177.5	16.7	6.2	29.4	23.2	23.3	37.1	26.7	26.3
LnGrp LOS	C	F	A	F	B	A	C	C	C	D	C	C
Approach Vol, veh/h		1131			987			70			27	
Approach Delay, s/veh		46.0			39.0			27.4			27.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	11.9		42.0	5.4	15.5		42.0				
Change Period (Y+Rc), s	5.0	6.5		7.0	5.0	6.5		7.0				
Max Green Setting (Gmax), s	20.0	20.0		35.0	20.0	20.0		35.0				
Max Q Clear Time (g_c+1), s	13.6	2.7		37.0	2.1	2.5		37.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	42.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	155	27	701	39	327	11	738	654	688	1046	9
Future Volume (veh/h)	78	155	27	701	39	327	11	738	654	688	1046	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	160	1	723	40	277	11	761	627	709	1078	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	1	1	1	3	3	3	3	3	3
Cap, veh/h	99	138	61	613	298	765	26	1118	773	567	2197	980
Arrive On Green	0.06	0.04	0.04	0.18	0.16	0.16	0.01	0.32	0.32	0.32	0.62	0.62
Sat Flow, veh/h	1668	3328	1485	3483	1885	1598	1767	3526	1565	1767	3526	1572
Grp Volume(v), veh/h	80	160	1	723	40	277	11	761	627	709	1078	6
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1742	1885	1598	1767	1763	1565	1767	1763	1572
Q Serve(g_s), s	6.9	6.0	0.1	25.5	2.6	15.9	0.9	27.3	46.0	46.5	24.1	0.2
Cycle Q Clear(g_c), s	6.9	6.0	0.1	25.5	2.6	15.9	0.9	27.3	46.0	46.5	24.1	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	138	61	613	298	765	26	1118	773	567	2197	980
V/C Ratio(X)	0.81	1.16	0.02	1.18	0.13	0.36	0.42	0.68	0.81	1.25	0.49	0.01
Avail Cap(c_a), veh/h	162	138	61	613	298	765	73	1118	773	567	2197	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.4	69.5	66.7	59.8	52.5	23.8	70.8	43.1	31.1	49.3	14.8	10.3
Incr Delay (d2), s/veh	14.4	126.7	0.1	97.2	0.2	0.3	10.4	1.7	6.5	127.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	5.0	0.0	19.2	1.2	5.8	0.5	11.7	18.8	39.5	8.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	196.2	66.8	157.0	52.7	24.1	81.2	44.8	37.6	176.3	15.0	10.3
LnGrp LOS	F	F	E	F	D	C	F	D	D	F	B	B
Approach Vol, veh/h	241			1040			1399			1793		
Approach Delay, s/veh	157.7			117.6			41.9			78.8		
Approach LOS	F			F			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	51.0	52.0	30.0	12.0	6.6	96.4	13.1	28.9				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	46.5	46.0	25.5	6.0	6.0	86.5	14.1	17.4				
Max Q Clear Time (g_c+Rc), s	46.5	48.0	27.5	8.0	2.9	26.1	8.9	17.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	8.4	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	80.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	199	1405	88	248	989	115	66	583	168	242	699	178
Future Volume (veh/h)	199	1405	88	248	989	115	66	583	168	242	699	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	205	1448	31	256	1020	48	68	601	86	249	721	110
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	271	1803	550	333	1895	586	87	750	328	279	1132	496
Arrive On Green	0.08	0.35	0.35	0.10	0.37	0.37	0.05	0.21	0.21	0.16	0.32	0.32
Sat Flow, veh/h	3483	5147	1570	3483	5147	1591	1767	3526	1540	1767	3526	1544
Grp Volume(v), veh/h	205	1448	31	256	1020	48	68	601	86	249	721	110
Grp Sat Flow(s),veh/h/ln	1742	1716	1570	1742	1716	1591	1767	1763	1540	1767	1763	1544
Q Serve(g_s), s	6.3	27.7	1.4	7.8	17.0	2.1	4.1	17.6	5.1	15.0	19.0	5.7
Cycle Q Clear(g_c), s	6.3	27.7	1.4	7.8	17.0	2.1	4.1	17.6	5.1	15.0	19.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	1803	550	333	1895	586	87	750	328	279	1132	496
V/C Ratio(X)	0.76	0.80	0.06	0.77	0.54	0.08	0.78	0.80	0.26	0.89	0.64	0.22
Avail Cap(c_a), veh/h	799	2126	648	1119	2126	657	406	971	424	406	1132	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	32.0	23.5	48.1	27.1	22.4	51.2	40.7	35.7	45.0	31.6	27.0
Incr Delay (d2), s/veh	1.6	2.0	0.0	2.8	0.2	0.1	5.5	3.4	0.3	12.5	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	11.1	0.5	3.4	6.6	0.8	1.9	7.7	1.9	7.3	7.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	34.0	23.5	50.9	27.3	22.5	56.6	44.0	36.1	57.5	32.6	27.2
LnGrp LOS	D	C	C	D	C	C	E	D	D	E	C	C
Approach Vol, veh/h		1684			1324			755			1080	
Approach Delay, s/veh		35.8			31.7			44.3			37.8	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	43.7	9.9	40.5	13.0	45.6	21.7	28.7				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	35.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0				
Max Q Clear Time (g_c+1), s	19.8	29.7	6.1	21.0	8.3	19.0	17.0	19.6				
Green Ext Time (p_c), s	0.6	8.4	0.0	2.8	0.2	7.4	0.1	2.4				

Intersection Summary

HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	1752	59	155	1309	80	57	103	117	81	164	36
Future Volume (veh/h)	29	1752	59	155	1309	80	57	103	117	81	164	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	31	1844	28	163	1378	50	60	108	18	85	173	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	54	1814	788	198	2102	935	77	178	146	109	403	175
Arrive On Green	0.03	0.51	0.51	0.11	0.59	0.59	0.04	0.10	0.10	0.06	0.11	0.11
Sat Flow, veh/h	1795	3582	1556	1795	3582	1594	1767	1856	1522	1767	3526	1527
Grp Volume(v), veh/h	31	1844	28	163	1378	50	60	108	18	85	173	38
Grp Sat Flow(s),veh/h/ln	1795	1791	1556	1795	1791	1594	1767	1856	1522	1767	1763	1527
Q Serve(g_s), s	1.5	45.0	0.8	7.9	23.0	1.2	3.0	5.0	1.0	4.2	4.1	2.0
Cycle Q Clear(g_c), s	1.5	45.0	0.8	7.9	23.0	1.2	3.0	5.0	1.0	4.2	4.1	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	1814	788	198	2102	935	77	178	146	109	403	175
V/C Ratio(X)	0.57	1.02	0.04	0.82	0.66	0.05	0.78	0.61	0.12	0.78	0.43	0.22
Avail Cap(c_a), veh/h	606	1814	788	606	2102	935	597	835	685	597	1587	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	21.9	11.0	38.7	12.3	7.8	42.1	38.5	36.7	41.1	36.7	35.7
Incr Delay (d2), s/veh	3.5	25.4	0.0	3.2	0.8	0.0	6.1	1.2	0.1	4.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	22.2	0.3	3.5	7.7	0.4	1.4	2.3	0.4	1.9	1.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	47.3	11.0	41.9	13.1	7.9	48.2	39.8	36.9	45.5	36.9	36.0
LnGrp LOS	D	F	B	D	B	A	D	D	D	D	D	D
Approach Vol, veh/h		1903			1591			186			296	
Approach Delay, s/veh		46.7			15.9			42.2			39.3	
Approach LOS		D			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	57.6	8.4	15.7	14.3	50.5	10.0	14.0				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.0	45.0	30.0	40.0	30.0	45.0	30.0	40.0				
Max Q Clear Time (g_c+1), s	13.5	25.0	5.0	6.1	9.9	47.0	6.2	7.0				
Green Ext Time (p_c), s	0.0	11.3	0.0	0.8	0.1	0.0	0.1	0.4				

Intersection Summary

HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	320	1491	106	538	1051	296	228	663	258	341	699	241
Future Volume (veh/h)	320	1491	106	538	1051	296	228	663	258	341	699	241
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	327	1521	41	549	1072	144	233	677	50	348	713	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	385	1957	605	491	1470	653	292	906	279	406	1074	331
Arrive On Green	0.11	0.38	0.38	0.14	0.41	0.41	0.08	0.18	0.18	0.12	0.21	0.21
Sat Flow, veh/h	3483	5147	1591	3483	3582	1592	3483	5147	1584	3483	5147	1586
Grp Volume(v), veh/h	327	1521	41	549	1072	144	233	677	50	348	713	52
Grp Sat Flow(s),veh/h/ln	1742	1716	1591	1742	1791	1592	1742	1716	1584	1742	1716	1586
Q Serve(g_s), s	10.1	28.6	1.8	15.5	27.7	6.4	7.2	13.7	3.0	10.8	14.0	3.0
Cycle Q Clear(g_c), s	10.1	28.6	1.8	15.5	27.7	6.4	7.2	13.7	3.0	10.8	14.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1957	605	491	1470	653	292	906	279	406	1074	331
V/C Ratio(X)	0.85	0.78	0.07	1.12	0.73	0.22	0.80	0.75	0.18	0.86	0.66	0.16
Avail Cap(c_a), veh/h	491	1957	605	491	1470	653	491	1380	425	491	1380	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	30.0	21.7	47.2	27.3	21.0	49.5	43.0	38.6	47.7	40.0	35.6
Incr Delay (d2), s/veh	9.0	3.1	0.2	77.3	3.2	0.8	1.9	0.5	0.1	10.7	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	11.6	0.7	11.7	11.7	2.4	3.1	5.6	1.1	5.1	5.7	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	33.1	21.9	124.5	30.5	21.8	51.4	43.5	38.7	58.4	40.4	35.7
LnGrp LOS	E	C	C	F	C	C	D	D	D	E	D	D
Approach Vol, veh/h		1889			1765			960			1113	
Approach Delay, s/veh		37.0			59.0			45.1			45.8	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	47.7	13.7	28.5	16.7	51.1	17.3	25.0				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	15.5	29.0	15.5	29.5	15.5	29.0	15.5	29.5				
Max Q Clear Time (g_c+1/7), s	11.5	30.6	9.2	16.0	12.1	29.7	12.8	15.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1567	854	0	1430	545	0	0	0	293	1	837
Future Volume (veh/h)	0	1567	854	0	1430	545	0	0	0	293	1	837
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	1885	1885
Adj Flow Rate, veh/h	0	1599	400	0	1459	556				300	0	810
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	1	1				1	1	1
Cap, veh/h	0	2502	774	0	2502	1242				1055	0	939
Arrive On Green	0.00	0.49	0.49	0.00	0.97	0.97				0.29	0.00	0.29
Sat Flow, veh/h	0	5316	1593	0	5316	1589				3591	0	3195
Grp Volume(v), veh/h	0	1599	400	0	1459	556				300	0	810
Grp Sat Flow(s),veh/h/ln	0	1716	1593	0	1716	1589				1795	0	1598
Q Serve(g_s), s	0.0	12.7	9.5	0.0	1.0	0.8				3.5	0.0	13.2
Cycle Q Clear(g_c), s	0.0	12.7	9.5	0.0	1.0	0.8				3.5	0.0	13.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2502	774	0	2502	1242				1055	0	939
V/C Ratio(X)	0.00	0.64	0.52	0.00	0.58	0.45				0.28	0.00	0.86
Avail Cap(c_a), veh/h	0	2502	774	0	2502	1242				1169	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.77	0.77				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.5	9.7	0.0	0.4	0.1				15.0	0.0	18.4
Incr Delay (d2), s/veh	0.0	1.3	2.5	0.0	0.8	0.9				0.1	0.0	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	2.8	0.0	0.3	0.4				1.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.8	12.2	0.0	1.2	1.0				15.0	0.0	24.8
LnGrp LOS	A	B	B	A	A	A				B	A	C
Approach Vol, veh/h		1999			2015						1110	
Approach Delay, s/veh		11.9			1.1						22.2	
Approach LOS		B			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		33.0		22.0		33.0						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		25.0		17.9		25.0						
Max Q Clear Time (g_c+I1), s		14.7		15.2		3.0						
Green Ext Time (p_c), s		5.9		1.0		8.4						

Intersection Summary

HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	1307	492	0	1607	157	372	0	442	0	0	0
Future Volume (veh/h)	0	1307	492	0	1607	157	372	0	442	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No		No		No		No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	1885	1885			
Adj Flow Rate, veh/h	0	1347	507	0	1657	86	384	0	408			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	1	1			
Cap, veh/h	0	3093	1242	0	3093	958	643	0	572			
Arrive On Green	0.00	1.00	1.00	0.00	0.60	0.60	0.18	0.00	0.18			
Sat Flow, veh/h	0	5316	1591	0	5316	1594	3591	0	3195			
Grp Volume(v), veh/h	0	1347	507	0	1657	86	384	0	408			
Grp Sat Flow(s),veh/h/ln	0	1716	1591	0	1716	1594	1795	0	1598			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.4	1.3	5.4	0.0	6.6			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.4	1.3	5.4	0.0	6.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3093	1242	0	3093	958	643	0	572			
V/C Ratio(X)	0.00	0.44	0.41	0.00	0.54	0.09	0.60	0.00	0.71			
Avail Cap(c_a), veh/h	0	3093	1242	0	3093	958	1038	0	924			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.72	0.72	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	6.5	4.6	20.8	0.0	21.3			
Incr Delay (d2), s/veh	0.0	0.3	0.7	0.0	0.7	0.2	0.3	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.2	0.0	2.3	0.3	2.1	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.7	0.0	7.1	4.8	21.1	0.0	21.9			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1854			1743			792				
Approach Delay, s/veh		0.4			7.0			21.5				
Approach LOS		A			A			C				
Timer - Assigned Phs		2			6			8				
Phs Duration (G+Y+Rc), s		39.4			39.4			15.6				
Change Period (Y+Rc), s		6.3			6.3			5.8				
Max Green Setting (Gmax), s		27.0			27.0			15.9				
Max Q Clear Time (g_c+I1), s		2.0			12.4			8.6				
Green Ext Time (p_c), s		7.8			7.0			1.2				

Intersection Summary

HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗
Traffic Volume (veh/h)	519	1009	281	143	392	52	301	747	114	152	890	672
Future Volume (veh/h)	519	1009	281	143	392	52	301	747	114	152	890	672
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	541	1051	88	149	408	10	314	778	42	158	927	427
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	3	3	3
Cap, veh/h	620	1439	444	228	868	263	393	1831	566	229	1588	491
Arrive On Green	0.18	0.29	0.29	0.07	0.17	0.17	0.11	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	3374	4985	1539	3428	5066	1536	3428	5066	1566	3428	5066	1565
Grp Volume(v), veh/h	541	1051	88	149	408	10	314	778	42	158	927	427
Grp Sat Flow(s),veh/h/ln	1687	1662	1539	1714	1689	1536	1714	1689	1566	1714	1689	1565
Q Serve(g_s), s	16.2	19.7	4.5	4.4	7.5	0.6	9.3	12.0	1.8	4.7	16.0	26.8
Cycle Q Clear(g_c), s	16.2	19.7	4.5	4.4	7.5	0.6	9.3	12.0	1.8	4.7	16.0	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	620	1439	444	228	868	263	393	1831	566	229	1588	491
V/C Ratio(X)	0.87	0.73	0.20	0.65	0.47	0.04	0.80	0.42	0.07	0.69	0.58	0.87
Avail Cap(c_a), veh/h	812	2160	667	825	2195	665	825	1831	566	825	1707	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	33.3	27.9	47.3	38.8	35.9	44.8	25.0	21.8	47.4	30.0	33.7
Incr Delay (d2), s/veh	7.7	0.7	0.2	2.4	0.4	0.1	2.8	0.2	0.1	2.8	0.4	14.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	7.5	1.6	1.9	3.0	0.2	3.9	4.5	0.6	2.0	6.1	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	34.0	28.1	49.7	39.2	36.0	47.6	25.2	21.8	50.2	30.4	47.6
LnGrp LOS	D	C	C	D	D	D	D	C	C	D	C	D
Approach Vol, veh/h		1680			567			1134			1512	
Approach Delay, s/veh		38.5			41.9			31.3			37.3	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	37.0	11.9	43.1	24.1	24.8	16.9	38.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	25.0	45.0	25.0	35.0	25.0	45.0	25.0	35.0				
Max Q Clear Time (g_c+1), s	10.4	21.7	6.7	14.0	18.2	9.5	11.3	28.8				
Green Ext Time (p_c), s	0.3	7.3	0.3	4.9	0.9	2.7	0.6	3.6				

Intersection Summary

HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	208	36	169	226	116	79	609	179	132	589	91
Future Volume (veh/h)	72	208	36	169	226	116	79	609	179	132	589	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	75	217	7	176	235	28	82	634	95	138	614	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	95	288	238	203	408	344	104	2384	728	157	2537	767
Arrive On Green	0.05	0.15	0.15	0.11	0.22	0.22	0.06	0.46	0.46	0.09	0.49	0.49
Sat Flow, veh/h	1781	1870	1546	1781	1870	1574	1795	5147	1572	1795	5147	1555
Grp Volume(v), veh/h	75	217	7	176	235	28	82	634	95	138	614	45
Grp Sat Flow(s),veh/h/ln	1781	1870	1546	1781	1870	1574	1795	1716	1572	1795	1716	1555
Q Serve(g_s), s	5.0	13.3	0.5	11.7	13.5	1.7	5.4	9.0	4.1	9.1	8.2	1.8
Cycle Q Clear(g_c), s	5.0	13.3	0.5	11.7	13.5	1.7	5.4	9.0	4.1	9.1	8.2	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	288	238	203	408	344	104	2384	728	157	2537	767
V/C Ratio(X)	0.79	0.75	0.03	0.87	0.58	0.08	0.79	0.27	0.13	0.88	0.24	0.06
Avail Cap(c_a), veh/h	193	541	447	304	670	564	157	2384	728	157	2537	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	48.6	43.1	52.3	41.9	37.3	55.8	19.7	18.4	54.1	17.5	15.9
Incr Delay (d2), s/veh	5.3	1.5	0.0	11.1	0.5	0.0	7.3	0.3	0.4	37.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.2	0.2	5.7	6.1	0.6	2.6	3.5	1.5	5.7	3.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	50.1	43.2	63.4	42.4	37.4	63.1	20.0	18.8	92.1	17.7	16.0
LnGrp LOS	E	D	D	E	D	D	E	B	B	F	B	B
Approach Vol, veh/h		299			439			811			797	
Approach Delay, s/veh		52.8			50.5			24.2			30.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	63.1	18.1	23.8	11.4	66.7	10.4	31.5				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	10.5	* 33	20.5	34.7	10.5	32.5	13.0	* 43				
Max Q Clear Time (g_c+I1), s	11.0	11.0	13.7	15.3	7.4	10.2	7.0	15.5				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.1	0.0	2.6	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	6	238	11	4	9	331	759	5	21	469	216
Future Volume (veh/h)	201	6	238	11	4	9	331	759	5	21	469	216
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	203	6	57	11	4	2	334	767	4	21	474	55
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	261	313	263	25	64	54	406	2412	725	45	958	419
Arrive On Green	0.15	0.17	0.17	0.01	0.03	0.03	0.23	0.47	0.47	0.02	0.27	0.27
Sat Flow, veh/h	1767	1856	1558	1767	1856	1546	1795	5147	1546	1795	3582	1567
Grp Volume(v), veh/h	203	6	57	11	4	2	334	767	4	21	474	55
Grp Sat Flow(s),veh/h/ln	1767	1856	1558	1767	1856	1546	1795	1716	1546	1795	1791	1567
Q Serve(g_s), s	6.1	0.1	1.8	0.3	0.1	0.1	9.8	5.2	0.1	0.6	6.2	1.5
Cycle Q Clear(g_c), s	6.1	0.1	1.8	0.3	0.1	0.1	9.8	5.2	0.1	0.6	6.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	313	263	25	64	54	406	2412	725	45	958	419
V/C Ratio(X)	0.78	0.02	0.22	0.44	0.06	0.04	0.82	0.32	0.01	0.47	0.50	0.13
Avail Cap(c_a), veh/h	716	1887	1585	159	1302	1085	856	5974	1795	194	2836	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	19.3	19.9	27.2	25.9	25.9	20.4	9.2	7.9	26.7	17.2	15.5
Incr Delay (d2), s/veh	4.9	0.0	0.4	11.9	0.4	0.3	4.2	0.1	0.0	7.5	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.6	0.2	0.1	0.0	3.8	1.3	0.0	0.3	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	19.3	20.3	39.1	26.3	26.2	24.7	9.3	7.9	34.2	17.6	15.6
LnGrp LOS	C	B	C	D	C	C	C	A	A	C	B	B
Approach Vol, veh/h		266			17			1105			550	
Approach Delay, s/veh		26.0			34.6			13.9			18.0	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	30.5	5.3	13.9	17.1	19.4	12.7	6.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	64.5	64.5	5.0	56.5	26.5	44.0	22.5	39.0				
Max Q Clear Time (g_c+1), s	12.6	7.2	2.3	3.8	11.8	8.2	8.1	2.1				
Green Ext Time (p_c), s	0.0	5.4	0.0	0.2	0.8	3.1	0.4	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											16.9	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	130	65	200	79	32	79	545	225	57	628	98
Future Volume (veh/h)	95	130	65	200	79	32	79	545	225	57	628	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	102	140	13	215	85	6	85	586	128	61	675	99
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	131	411	178	264	646	284	113	1644	501	95	967	142
Arrive On Green	0.07	0.12	0.12	0.15	0.18	0.18	0.06	0.32	0.32	0.05	0.31	0.31
Sat Flow, veh/h	1767	3526	1528	1767	3526	1550	1767	5066	1544	1767	3077	451
Grp Volume(v), veh/h	102	140	13	215	85	6	85	586	128	61	386	388
Grp Sat Flow(s),veh/h/ln	1767	1763	1528	1767	1763	1550	1767	1689	1544	1767	1763	1765
Q Serve(g_s), s	3.3	2.2	0.4	7.0	1.2	0.2	2.8	5.2	3.6	2.0	11.4	11.4
Cycle Q Clear(g_c), s	3.3	2.2	0.4	7.0	1.2	0.2	2.8	5.2	3.6	2.0	11.4	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	131	411	178	264	646	284	113	1644	501	95	554	555
V/C Ratio(X)	0.78	0.34	0.07	0.81	0.13	0.02	0.76	0.36	0.26	0.64	0.70	0.70
Avail Cap(c_a), veh/h	748	2389	1035	748	2389	1050	898	4291	1308	898	1493	1495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	24.0	23.2	24.3	20.2	19.8	27.2	15.2	14.7	27.4	17.8	17.8
Incr Delay (d2), s/veh	3.7	0.5	0.2	2.3	0.1	0.0	3.8	0.1	0.3	2.7	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.8	0.2	2.7	0.4	0.1	1.2	1.6	1.1	0.8	3.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	24.5	23.4	26.6	20.3	19.8	31.0	15.4	14.9	30.1	19.4	19.4
LnGrp LOS	C	C	C	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h		255			306			799			835	
Approach Delay, s/veh		26.8			24.7			17.0			20.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	26.2	12.8	12.4	8.3	25.6	8.9	16.3				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	50.0	25.0	40.0	30.0	50.0	25.0	40.0				
Max Q Clear Time (g_c+14), s	14.0	7.2	9.0	4.2	4.8	13.4	5.3	3.2				
Green Ext Time (p_c), s	0.0	4.3	0.1	0.8	0.1	4.7	0.1	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	185	46	334	93	474	68	683	496	390	449	19
Future Volume (veh/h)	40	185	46	334	93	474	68	683	496	390	449	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	42	193	3	222	273	320	71	711	265	406	468	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	1	1	1
Cap, veh/h	126	251	110	495	520	432	97	1059	464	327	1180	45
Arrive On Green	0.07	0.07	0.07	0.28	0.28	0.28	0.05	0.30	0.30	0.09	0.34	0.34
Sat Flow, veh/h	1739	3469	1519	1781	1870	1555	1795	3582	1568	3483	3512	135
Grp Volume(v), veh/h	42	193	3	222	273	320	71	711	265	406	238	248
Grp Sat Flow(s),veh/h/ln	1739	1735	1519	1781	1870	1555	1795	1791	1568	1742	1791	1856
Q Serve(g_s), s	1.6	3.8	0.1	7.1	8.5	12.9	2.7	12.1	9.9	6.5	7.1	7.1
Cycle Q Clear(g_c), s	1.6	3.8	0.1	7.1	8.5	12.9	2.7	12.1	9.9	6.5	7.1	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	126	251	110	495	520	432	97	1059	464	327	602	623
V/C Ratio(X)	0.33	0.77	0.03	0.45	0.53	0.74	0.74	0.67	0.57	1.24	0.40	0.40
Avail Cap(c_a), veh/h	126	251	110	952	1000	831	174	1734	759	327	862	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	31.5	29.8	20.6	21.1	22.7	32.3	21.4	20.7	31.4	17.6	17.6
Incr Delay (d2), s/veh	1.5	13.6	0.1	0.6	0.8	2.5	10.3	0.7	1.1	131.8	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.0	0.0	2.8	3.6	4.6	1.3	4.4	3.2	8.4	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	45.1	29.9	21.2	21.9	25.2	42.5	22.2	21.8	163.2	18.0	18.0
LnGrp LOS	C	D	C	C	C	C	D	C	C	F	B	B
Approach Vol, veh/h		238		815		1047		892				
Approach Delay, s/veh		42.6		23.0		23.4		84.1				
Approach LOS		D		C		C		F				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.0	25.0		9.5	8.2	27.7		23.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	33.5	33.5		5.0	6.7	33.3		37.0				
Max Q Clear Time (g_c+1), s	14.1	14.1		5.8	4.7	9.1		14.9				
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	2.5		3.4				

Intersection Summary

HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↖	↗		↖	↕↕		↖	↕↕	↗
Traffic Volume (veh/h)	370	147	105	41	120	27	219	757	51	95	864	277
Future Volume (veh/h)	370	147	105	41	120	27	219	757	51	95	864	277
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	385	153	51	43	125	19	228	789	50	99	900	128
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	419	417	588	72	224	34	265	1371	87	127	1165	695
Arrive On Green	0.12	0.22	0.22	0.04	0.14	0.14	0.15	0.41	0.41	0.07	0.33	0.33
Sat Flow, veh/h	3456	1870	1574	1781	1577	240	1767	3360	213	1767	3526	1526
Grp Volume(v), veh/h	385	153	51	43	0	144	228	414	425	99	900	128
Grp Sat Flow(s),veh/h/ln	1728	1870	1574	1781	0	1817	1767	1763	1810	1767	1763	1526
Q Serve(g_s), s	7.7	4.9	1.5	1.7	0.0	5.2	8.8	12.7	12.7	3.9	16.1	3.5
Cycle Q Clear(g_c), s	7.7	4.9	1.5	1.7	0.0	5.2	8.8	12.7	12.7	3.9	16.1	3.5
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	419	417	588	72	0	258	265	720	739	127	1165	695
V/C Ratio(X)	0.92	0.37	0.09	0.60	0.00	0.56	0.86	0.58	0.58	0.78	0.77	0.18
Avail Cap(c_a), veh/h	419	957	1043	168	0	881	265	769	790	224	1458	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	23.1	14.3	33.1	0.0	28.0	29.1	16.1	16.1	32.0	21.1	11.5
Incr Delay (d2), s/veh	25.2	0.5	0.1	7.7	0.0	1.9	24.0	0.9	0.9	9.7	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	2.1	0.5	0.8	0.0	2.3	5.2	4.5	4.6	1.9	6.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	23.6	14.3	40.8	0.0	29.9	53.1	17.0	17.0	41.7	23.2	11.6
LnGrp LOS	E	C	B	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		589			187			1067			1127	
Approach Delay, s/veh		43.8			32.4			24.7			23.5	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	27.7	7.3	20.1	9.6	33.1	13.0	14.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	29.0	6.6	35.9	8.9	30.6	8.5	34.0				
Max Q Clear Time (g_c+I10), s	10.5	18.1	3.7	6.9	5.9	14.7	9.7	7.2				
Green Ext Time (p_c), s	0.0	4.6	0.0	1.0	0.1	4.3	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1310	485	269	1240	0	0	0	0	619	3	427
Future Volume (veh/h)	0	1310	485	269	1240	0	0	0	0	619	3	427
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1781	1781	1781
Adj Flow Rate, veh/h	0	1323	362	272	1253	0				627	0	384
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	8	8	8	8	0				8	8	8
Cap, veh/h	0	2373	727	323	3040	0				947	0	421
Arrive On Green	0.00	0.49	0.49	0.10	0.63	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	5024	1490	3291	5024	0				3393	0	1510
Grp Volume(v), veh/h	0	1323	362	272	1253	0				627	0	384
Grp Sat Flow(s),veh/h/ln	0	1621	1490	1646	1621	0				1697	0	1510
Q Serve(g_s), s	0.0	23.0	19.7	9.8	15.6	0.0				19.6	0.0	29.5
Cycle Q Clear(g_c), s	0.0	23.0	19.7	9.8	15.6	0.0				19.6	0.0	29.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2373	727	323	3040	0				947	0	421
V/C Ratio(X)	0.00	0.56	0.50	0.84	0.41	0.00				0.66	0.00	0.91
Avail Cap(c_a), veh/h	0	2373	727	329	3040	0				1371	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.6	20.8	53.2	11.4	0.0				38.2	0.0	41.8
Incr Delay (d2), s/veh	0.0	1.0	2.4	16.5	0.4	0.0				0.3	0.0	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.4	6.9	4.7	5.1	0.0				8.2	0.0	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.6	23.2	69.7	11.8	0.0				38.5	0.0	52.8
LnGrp LOS	A	C	C	E	B	A				D	A	D
Approach Vol, veh/h		1685			1525						1011	
Approach Delay, s/veh		22.7			22.1						43.9	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	66.5	64.5		39.0		81.0						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	43.0	43.0		48.5		60.0						
Max Q Clear Time (g_c+M), s	25.0	25.0		31.5		17.6						
Green Ext Time (p_c), s	0.0	9.7		2.0		10.7						

Intersection Summary

HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
 49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗		↑↑↑		↖	↖	↗	↖		↗
Traffic Volume (veh/h)	345	1356	247	0	1461	93	294	123	203	142	0	661
Future Volume (veh/h)	345	1356	247	0	1461	93	294	123	203	142	0	661
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	0	1781	1781	1781	1781	1781	1856	0	1856
Adj Flow Rate, veh/h	348	1370	0	0	1476	89	210	245	109	143	0	148
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	0	8	8	8	8	8	3	0	3
Cap, veh/h	141	3504		0	3557	214	312	327	275	0	0	0
Arrive On Green	0.08	0.72	0.00	0.00	0.60	0.60	0.18	0.18	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1697	4863	2657	0	6198	358	1697	1781	1497		0	
Grp Volume(v), veh/h	348	1370	0	0	1140	425	210	245	109		0.0	
Grp Sat Flow(s),veh/h/ln	1697	1621	1329	0	1532	1710	1697	1781	1497			
Q Serve(g_s), s	10.0	13.2	0.0	0.0	15.9	15.9	13.8	15.6	7.7			
Cycle Q Clear(g_c), s	10.0	13.2	0.0	0.0	15.9	15.9	13.8	15.6	7.7			
Prop In Lane	1.00		1.00	0.00		0.21	1.00		1.00			
Lane Grp Cap(c), veh/h	141	3504		0	2749	1023	312	327	275			
V/C Ratio(X)	2.46	0.39		0.00	0.41	0.42	0.67	0.75	0.40			
Avail Cap(c_a), veh/h	141	3504		0	2749	1023	636	668	562			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	55.0	6.5	0.0	0.0	12.9	12.9	45.6	46.4	43.1			
Incr Delay (d2), s/veh	678.4	0.3	0.0	0.0	0.5	1.2	2.5	3.4	0.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh	30.8	3.8	0.0	0.0	5.3	6.2	6.0	7.2	2.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	733.4	6.9	0.0	0.0	13.4	14.1	48.2	49.8	44.1			
LnGrp LOS	F	A		A	B	B	D	D	D			
Approach Vol, veh/h		1718			1565			564				
Approach Delay, s/veh		154.0			13.6			48.1				
Approach LOS		F			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		92.5			14.7	77.8		27.5				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		49.0			* 10	34.0		45.0				
Max Q Clear Time (g_c+1), s		15.2			12.0	17.9		17.6				
Green Ext Time (p_c), s		7.2			0.0	6.9		2.7				

Intersection Summary

HCM 6th Ctrl Delay	81.4
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	895	101	101	719	43	89	356	51	66	326	96
Future Volume (veh/h)	116	895	101	101	719	43	89	356	51	66	326	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	129	994	53	112	799	45	99	396	15	73	362	23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	161	1245	1182	154	1184	67	156	606	264	137	570	248
Arrive On Green	0.10	0.37	0.37	0.09	0.36	0.36	0.09	0.17	0.17	0.08	0.16	0.16
Sat Flow, veh/h	1697	3385	2581	1697	3254	183	1781	3526	1536	1767	3526	1535
Grp Volume(v), veh/h	129	994	53	112	416	428	99	396	15	73	362	23
Grp Sat Flow(s),veh/h/ln	1697	1692	1290	1697	1692	1745	1781	1763	1536	1767	1763	1535
Q Serve(g_s), s	5.0	17.7	0.8	4.3	14.0	14.0	3.6	7.1	0.6	2.7	6.5	0.9
Cycle Q Clear(g_c), s	5.0	17.7	0.8	4.3	14.0	14.0	3.6	7.1	0.6	2.7	6.5	0.9
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	1245	1182	154	616	635	156	606	264	137	570	248
V/C Ratio(X)	0.80	0.80	0.04	0.73	0.67	0.67	0.64	0.65	0.06	0.53	0.64	0.09
Avail Cap(c_a), veh/h	377	1504	1380	377	752	775	396	1045	455	393	1045	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	19.1	10.2	29.9	18.1	18.1	29.8	26.1	23.4	30.0	26.4	24.1
Incr Delay (d2), s/veh	3.4	2.6	0.0	2.4	1.1	1.0	1.6	1.1	0.1	1.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.3	0.2	1.7	4.8	4.9	1.5	2.8	0.2	1.1	2.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	21.7	10.2	32.3	19.2	19.1	31.3	27.2	23.5	31.2	27.5	24.2
LnGrp LOS	C	C	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1176			956			510			458	
Approach Delay, s/veh		22.4			20.7			27.9			27.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	17.6	10.1	30.5	9.9	16.9	10.4	30.3				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+I), s	14.5	9.1	6.3	19.7	5.6	8.5	7.0	16.0				
Green Ext Time (p_c), s	0.0	1.7	0.0	4.6	0.0	1.5	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	850	82	279	521	151	87	898	509	169	698	109
Future Volume (veh/h)	169	850	82	279	521	151	87	898	509	169	698	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	895	81	294	548	44	92	945	304	178	735	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	207	914	83	353	938	411	116	1019	446	208	1203	527
Arrive On Green	0.12	0.29	0.29	0.11	0.28	0.28	0.07	0.29	0.29	0.12	0.34	0.34
Sat Flow, veh/h	1697	3133	284	3291	3385	1481	1781	3526	1543	1767	3526	1545
Grp Volume(v), veh/h	178	483	493	294	548	44	92	945	304	178	735	39
Grp Sat Flow(s),veh/h/ln	1697	1692	1724	1646	1692	1481	1781	1763	1543	1767	1763	1545
Q Serve(g_s), s	10.6	29.1	29.1	9.0	14.4	2.3	5.2	26.8	17.9	10.2	17.8	1.8
Cycle Q Clear(g_c), s	10.6	29.1	29.1	9.0	14.4	2.3	5.2	26.8	17.9	10.2	17.8	1.8
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	494	503	353	938	411	116	1019	446	208	1203	527
V/C Ratio(X)	0.86	0.98	0.98	0.83	0.58	0.11	0.79	0.93	0.68	0.86	0.61	0.07
Avail Cap(c_a), veh/h	247	494	503	480	987	432	260	1028	450	258	1203	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	36.1	36.1	45.0	32.1	27.7	47.4	35.5	32.4	44.5	28.2	22.9
Incr Delay (d2), s/veh	19.9	35.1	34.8	6.7	1.0	0.2	4.4	14.0	4.6	17.5	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	16.1	16.3	3.9	5.7	0.8	2.4	12.8	6.9	5.3	7.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	71.2	70.9	51.7	33.1	27.8	51.8	49.6	36.9	62.0	29.2	23.0
LnGrp LOS	E	E	E	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		1154			886			1341			952	
Approach Delay, s/veh		70.0			39.0			46.8			35.1	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.1	35.7	15.0	36.0	10.7	41.1	16.5	34.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	15.0	30.0				
Max Q Clear Time (g_c+1/2), s	11.2	28.8	11.0	31.1	7.2	19.8	12.6	16.4				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	4.1	0.0	3.8				

Intersection Summary

HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	274	1040	58	80	584	157	21	87	46	127	145	165
Future Volume (veh/h)	274	1040	58	80	584	157	21	87	46	127	145	165
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	291	1106	57	85	621	113	22	93	9	135	154	49
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	243	1498	77	146	1073	192	63	340	282	180	463	384
Arrive On Green	0.14	0.32	0.32	0.09	0.26	0.26	0.04	0.18	0.18	0.10	0.25	0.25
Sat Flow, veh/h	1697	4728	243	1697	4133	740	1781	1870	1549	1781	1870	1554
Grp Volume(v), veh/h	291	758	405	85	485	249	22	93	9	135	154	49
Grp Sat Flow(s),veh/h/ln	1697	1621	1729	1697	1621	1631	1781	1870	1549	1781	1870	1554
Q Serve(g_s), s	9.0	13.1	13.1	3.0	8.2	8.4	0.8	2.7	0.3	4.6	4.2	1.5
Cycle Q Clear(g_c), s	9.0	13.1	13.1	3.0	8.2	8.4	0.8	2.7	0.3	4.6	4.2	1.5
Prop In Lane	1.00		0.14	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1027	548	146	841	423	63	340	282	180	463	384
V/C Ratio(X)	1.20	0.74	0.74	0.58	0.58	0.59	0.35	0.27	0.03	0.75	0.33	0.13
Avail Cap(c_a), veh/h	243	1240	661	189	1137	572	199	814	674	199	814	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	19.1	19.1	27.6	20.2	20.3	29.5	22.1	21.1	27.4	19.4	18.3
Incr Delay (d2), s/veh	120.9	1.9	3.6	1.4	0.7	1.4	1.2	0.7	0.1	11.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.4	5.0	1.2	2.7	2.9	0.3	1.2	0.1	2.3	1.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.7	21.0	22.7	28.9	20.9	21.7	30.7	22.8	21.2	38.6	19.8	18.5
LnGrp LOS	F	C	C	C	C	C	C	C	C	D	B	B
Approach Vol, veh/h	1454				819		124				338	
Approach Delay, s/veh	46.9				21.9		24.1				27.1	
Approach LOS	D				C		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	17.1	9.4	25.9	6.2	21.2	13.0	22.3				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	27.3	7.0	24.0	7.0	27.3	9.0	22.0					
Max Q Clear Time (g_c+1/3), s	4.7	5.0	15.1	2.8	6.2	11.0	10.4					
Green Ext Time (p_c), s	0.0	0.7	0.0	4.7	0.0	0.8	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	463	318	195	417	247	178	1720	163	128	1183	119
Future Volume (veh/h)	154	463	318	195	417	247	178	1720	163	128	1183	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	160	482	111	203	434	240	185	1792	124	133	1232	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	70	519	431	92	312	172	216	1478	641	162	1371	601
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.13	0.44	0.44	0.10	0.40	0.40
Sat Flow, veh/h	728	1781	1482	784	1070	592	1697	3385	1468	1697	3385	1484
Grp Volume(v), veh/h	160	482	111	203	0	674	185	1792	124	133	1232	54
Grp Sat Flow(s),veh/h/ln	728	1781	1482	784	0	1662	1697	1692	1468	1697	1692	1484
Q Serve(g_s), s	0.0	27.1	5.9	2.9	0.0	30.0	11.0	45.0	5.4	7.9	35.1	2.3
Cycle Q Clear(g_c), s	30.0	27.1	5.9	30.0	0.0	30.0	11.0	45.0	5.4	7.9	35.1	2.3
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	519	431	92	0	484	216	1478	641	162	1371	601
V/C Ratio(X)	2.29	0.93	0.26	2.21	0.00	1.39	0.86	1.21	0.19	0.82	0.90	0.09
Avail Cap(c_a), veh/h	70	519	431	92	0	484	412	1478	641	412	1478	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	35.5	28.0	51.2	0.0	36.5	44.0	29.0	17.8	45.7	28.7	18.9
Incr Delay (d2), s/veh	622.9	23.4	0.3	576.2	0.0	189.2	3.8	102.0	0.1	3.9	7.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	14.4	2.0	17.0	0.0	36.8	4.6	36.8	1.7	3.3	14.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	674.4	58.8	28.3	627.3	0.0	225.7	47.8	131.0	18.0	49.7	36.1	19.0
LnGrp LOS	F	E	C	F	A	F	D	F	B	D	D	B
Approach Vol, veh/h		753			877			2101			1419	
Approach Delay, s/veh		185.1			318.6			117.0			36.7	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	51.5		37.0	17.8	48.2		37.0				
Change Period (Y+Rc), s	4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	25	45.0		30.0	* 25	45.0		30.0				
Max Q Clear Time (g_c+1/9), s	19.9	47.0		32.0	13.0	37.1		32.0				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.2	4.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	139.2
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	574.6											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	108	697	51	18	655	145	52	598	29	154	340	54
Future Vol, veh/h	108	697	51	18	655	145	52	598	29	154	340	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	3	3	3	3	3	3
Mvmt Flow	115	741	54	19	697	154	55	636	31	164	362	57
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	714.2	657.9	488.1	339.4
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	13%	2%	28%
Vol Thru, %	88%	81%	80%	62%
Vol Right, %	4%	6%	18%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	679	856	818	548
LT Vol	52	108	18	154
Through Vol	598	697	655	340
RT Vol	29	51	145	54
Lane Flow Rate	722	911	870	583
Geometry Grp	1	1	1	1
Degree of Util (X)	1.934	2.459	2.328	1.562
Departure Headway (Hd)	22.473	21.007	21.596	25.6
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	173	182	183	152
Service Time	20.473	19.007	19.596	23.6
HCM Lane V/C Ratio	4.173	5.005	4.754	3.836
HCM Control Delay	488.1	714.2	657.9	339.4
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	23.6	35.7	32.2	15.3

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↘		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	6	42	8	343	1	595	3	1515	394	589	1409	26
Future Volume (veh/h)	6	42	8	343	1	595	3	1515	394	589	1409	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	6	44	1	361	1	282	3	1595	335	620	1483	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	13	96	89	283	1	245	13	1354	594	370	2066	898
Arrive On Green	0.06	0.06	0.06	0.16	0.16	0.16	0.01	0.40	0.40	0.22	0.61	0.61
Sat Flow, veh/h	221	1623	1509	1739	5	1506	1697	3385	1484	1697	3385	1472
Grp Volume(v), veh/h	50	0	1	361	0	283	3	1595	335	620	1483	16
Grp Sat Flow(s),veh/h/ln	1844	0	1509	1739	0	1512	1697	1692	1484	1697	1692	1472
Q Serve(g_s), s	3.9	0.0	0.1	24.1	0.0	24.1	0.3	59.2	25.9	32.3	44.9	0.6
Cycle Q Clear(g_c), s	3.9	0.0	0.1	24.1	0.0	24.1	0.3	59.2	25.9	32.3	44.9	0.6
Prop In Lane	0.12		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	0	89	283	0	246	13	1354	594	370	2066	898
V/C Ratio(X)	0.46	0.00	0.01	1.27	0.00	1.15	0.23	1.18	0.56	1.67	0.72	0.02
Avail Cap(c_a), veh/h	135	0	110	283	0	246	130	1354	594	370	2066	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	0.0	65.5	61.9	0.0	61.9	73.0	44.4	34.4	57.8	20.0	11.3
Incr Delay (d2), s/veh	1.1	0.0	0.0	148.2	0.0	103.7	3.1	88.0	1.2	315.0	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	22.1	0.0	16.2	0.1	39.9	9.1	45.7	16.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.4	0.0	65.5	210.1	0.0	165.7	76.1	132.4	35.6	372.8	21.2	11.4
LnGrp LOS	E	A	E	F	A	F	E	F	D	F	C	B
Approach Vol, veh/h		51			644			1933			2119	
Approach Delay, s/veh		68.4			190.6			115.6			124.0	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	65.7		15.0	5.9	96.8		30.3				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	32	59.2		10.8	* 11	80.2		24.1				
Max Q Clear Time (g_c+Rc), s	34	61.2		5.9	2.3	46.9		26.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	12.7		0.0				

Intersection Summary

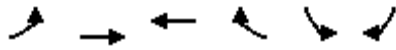
HCM 6th Ctrl Delay	129.0
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	295	1130	763	352	284	112	
Future Volume (veh/h)	295	1130	763	352	284	112	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1856	1856	
Adj Flow Rate, veh/h	311	1189	803	295	299	98	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	5	5	5	5	3	3	
Cap, veh/h	353	2124	853	313	330	108	
Arrive On Green	0.20	0.61	0.34	0.34	0.26	0.26	
Sat Flow, veh/h	1739	3561	2576	912	1288	422	
Grp Volume(v), veh/h	311	1189	560	538	398	0	
Grp Sat Flow(s),veh/h/ln	1739	1735	1735	1662	1715	0	
Q Serve(g_s), s	11.9	13.8	21.5	21.5	15.4	0.0	
Cycle Q Clear(g_c), s	11.9	13.8	21.5	21.5	15.4	0.0	
Prop In Lane	1.00			0.55	0.75	0.25	
Lane Grp Cap(c), veh/h	353	2124	596	571	440	0	
V/C Ratio(X)	0.88	0.56	0.94	0.94	0.91	0.00	
Avail Cap(c_a), veh/h	368	2154	596	571	464	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	26.5	7.8	21.8	21.8	24.7	0.0	
Incr Delay (d2), s/veh	20.5	0.3	23.3	24.3	20.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	6.4	3.5	11.2	10.9	7.9	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	47.0	8.1	45.1	46.1	45.2	0.0	
LnGrp LOS	D	A	D	D	D	A	
Approach Vol, veh/h		1500	1098		398		
Approach Delay, s/veh		16.2	45.6		45.2		
Approach LOS		B	D		D		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			46.4		22.0	18.4	28.0
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			42.5		18.5	14.5	23.5
Max Q Clear Time (g_c+1), s			15.8		17.4	13.9	23.5
Green Ext Time (p_c), s			9.1		0.2	0.1	0.0
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			30.8				
HCM 6th LOS			C				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	388	75	404	239	19	558	203	809	77	162	1194	250
Future Volume (veh/h)	388	75	404	239	19	558	203	809	77	162	1194	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	392	76	160	241	19	336	205	817	39	164	1206	109
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	452	768	335	268	838	366	232	1186	753	280	1012	652
Arrive On Green	0.13	0.22	0.22	0.15	0.24	0.24	0.14	0.35	0.35	0.09	0.30	0.30
Sat Flow, veh/h	3374	3469	1515	1739	3469	1517	1697	3385	1483	3291	3385	1502
Grp Volume(v), veh/h	392	76	160	241	19	336	205	817	39	164	1206	109
Grp Sat Flow(s),veh/h/ln	1687	1735	1515	1739	1735	1517	1697	1692	1483	1646	1692	1502
Q Serve(g_s), s	13.3	2.0	10.8	15.9	0.5	25.3	13.9	24.2	1.6	5.6	35.0	5.2
Cycle Q Clear(g_c), s	13.3	2.0	10.8	15.9	0.5	25.3	13.9	24.2	1.6	5.6	35.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	452	768	335	268	838	366	232	1186	753	280	1012	652
V/C Ratio(X)	0.87	0.10	0.48	0.90	0.02	0.92	0.89	0.69	0.05	0.59	1.19	0.17
Avail Cap(c_a), veh/h	577	1038	453	297	1038	454	290	1186	753	563	1012	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	36.3	39.7	48.6	33.8	43.2	49.6	32.5	14.7	51.6	41.0	20.3
Incr Delay (d2), s/veh	9.3	0.1	1.1	26.4	0.0	18.9	20.0	1.7	0.0	0.7	96.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.8	3.9	8.6	0.2	10.9	6.9	9.5	0.5	2.2	27.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	36.3	40.7	75.0	33.8	62.1	69.6	34.2	14.8	52.3	137.0	20.4
LnGrp LOS	E	D	D	E	C	E	E	C	B	D	F	C
Approach Vol, veh/h		628			596			1061			1479	
Approach Delay, s/veh		51.5			66.4			40.3			119.0	
Approach LOS		D			E			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	47.5	22.8	32.1	20.7	41.5	20.4	34.5				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	20	35.0	* 20	35.0	* 20	35.0	* 20	35.0				
Max Q Clear Time (g_c+1), s	17.6	26.2	17.9	12.8	15.9	37.0	15.3	27.3				
Green Ext Time (p_c), s	0.2	3.3	0.1	0.9	0.1	0.0	0.4	0.4				

Intersection Summary

HCM 6th Ctrl Delay	77.3
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖↗	↖↗		↖	↖↗	↖	↖	↖↗	
Traffic Volume (veh/h)	117	634	42	644	525	169	30	595	936	423	985	100
Future Volume (veh/h)	117	634	42	644	525	169	30	595	936	423	985	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	126	682	0	692	565	162	32	640	949	455	1059	104
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	136	694		705	877	251	85	782	657	331	1169	115
Arrive On Green	0.08	0.20	0.00	0.21	0.33	0.33	0.05	0.23	0.23	0.20	0.38	0.38
Sat Flow, veh/h	1739	3561	0	3374	2651	757	1697	3385	1479	1697	3108	305
Grp Volume(v), veh/h	126	682	0	692	369	358	32	640	949	455	576	587
Grp Sat Flow(s),veh/h/ln	1739	1735	0	1687	1735	1673	1697	1692	1479	1697	1692	1720
Q Serve(g_s), s	10.4	28.4	0.0	29.6	26.2	26.4	2.6	26.0	33.5	28.3	46.7	46.8
Cycle Q Clear(g_c), s	10.4	28.4	0.0	29.6	26.2	26.4	2.6	26.0	33.5	28.3	46.7	46.8
Prop In Lane	1.00		0.00	1.00		0.45	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	136	694		705	574	554	85	782	657	331	637	647
V/C Ratio(X)	0.93	0.98		0.98	0.64	0.65	0.38	0.82	1.44	1.37	0.91	0.91
Avail Cap(c_a), veh/h	136	694		705	574	554	132	782	657	331	637	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	57.8	0.0	57.1	41.2	41.3	66.7	52.9	40.8	58.3	42.8	42.8
Incr Delay (d2), s/veh	55.5	29.9	0.0	29.1	2.8	3.0	1.0	6.4	208.3	186.4	16.2	16.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	15.0	0.0	15.2	11.4	11.1	1.1	11.3	60.4	28.8	21.3	21.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.0	87.6	0.0	86.2	44.0	44.2	67.7	59.3	249.1	244.7	58.9	58.9
LnGrp LOS	F	F		F	D	D	E	E	F	F	E	E
Approach Vol, veh/h		808		1419			1621		1618			
Approach Delay, s/veh		93.0		64.6			170.6		111.2			
Approach LOS		F		E			F		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	40.0	36.0	36.0	11.9	61.1	17.0	55.0				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	28	33.5	* 30	29.0	* 11	50.5	* 11	48.0				
Max Q Clear Time (g_c+Rc), s	30	35.5	31.6	30.4	4.6	48.8	12.4	28.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.8	0.0	5.8				

Intersection Summary

HCM 6th Ctrl Delay	114.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕		↔	↕↕
Traffic Volume (veh/h)	89	899	1012	118	534	1361
Future Volume (veh/h)	89	899	1012	118	534	1361
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	95	0	1077	0	568	1448
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	183		1280		601	2681
Arrive On Green	0.06	0.00	0.38	0.00	0.35	0.79
Sat Flow, veh/h	3291	1510	3563	0	1697	3474
Grp Volume(v), veh/h	95	0	1077	0	568	1448
Grp Sat Flow(s),veh/h/ln	1646	1510	1692	0	1697	1692
Q Serve(g_s), s	2.2	0.0	22.9	0.0	25.6	12.2
Cycle Q Clear(g_c), s	2.2	0.0	22.9	0.0	25.6	12.2
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	183		1280		601	2681
V/C Ratio(X)	0.52		0.84		0.95	0.54
Avail Cap(c_a), veh/h	1254		1719		646	2681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	22.3	0.0	24.7	3.0
Incr Delay (d2), s/veh	2.3	0.0	2.7	0.0	21.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	8.0	0.0	12.2	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.4	0.0	25.0	0.0	46.2	3.2
LnGrp LOS	D		C		D	A
Approach Vol, veh/h	95		1077		2016	
Approach Delay, s/veh	38.4		25.0		15.3	
Approach LOS	D		C		B	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	32.6	36.3			68.9	9.9
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30.0	40.0			40.0	30.0
Max Q Clear Time (g_c+Y), s	27.6	24.9			14.2	4.2
Green Ext Time (p_c), s	0.3	4.9			8.9	0.3

Intersection Summary





















HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	504	9	295	906	932	0	0	409	157
Future Volume (veh/h)	0	0	0	504	9	295	906	932	0	0	409	157
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1811	1811	1811	1811	1811	0	0	1811	1811
Adj Flow Rate, veh/h				621	0	151	985	1013	0	0	445	45
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				6	6	6	6	6	0	0	6	6
Cap, veh/h				735	0	327	1071	3253	0	0	1758	420
Arrive On Green				0.21	0.00	0.21	0.11	0.22	0.00	0.00	0.28	0.28
Sat Flow, veh/h				3450	0	1535	3346	5107	0	0	6484	1487
Grp Volume(v), veh/h				621	0	151	985	1013	0	0	445	45
Grp Sat Flow(s),veh/h/ln				1725	0	1535	1673	1648	0	0	1558	1487
Q Serve(g_s), s				15.5	0.0	7.7	26.2	15.5	0.0	0.0	5.0	2.0
Cycle Q Clear(g_c), s				15.5	0.0	7.7	26.2	15.5	0.0	0.0	5.0	2.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				735	0	327	1071	3253	0	0	1758	420
V/C Ratio(X)				0.84	0.00	0.46	0.92	0.31	0.00	0.00	0.25	0.11
Avail Cap(c_a), veh/h				897	0	399	1115	3253	0	0	1758	420
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.0	0.0	30.9	39.1	18.1	0.0	0.0	25.0	23.9
Incr Delay (d2), s/veh				6.3	0.0	1.0	9.6	0.2	0.0	0.0	0.3	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.0	0.0	6.8	13.1	6.8	0.0	0.0	1.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.3	0.0	31.9	48.7	18.3	0.0	0.0	25.3	24.4
LnGrp LOS				D	A	C	D	B	A	A	C	C
Approach Vol, veh/h					772			1998			490	
Approach Delay, s/veh					38.7			33.3			25.2	
Approach LOS					D			C			C	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		65.0		25.0	33.8	31.2						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		55.0		23.4	30.0	20.0						
Max Q Clear Time (g_c+I1), s		17.5		17.5	28.2	7.0						
Green Ext Time (p_c), s		9.0		1.6	0.6	2.6						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				33.4								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	184	12	563	938	1555	0	0	785	383
Future Volume (veh/h)	0	0	0	184	12	563	938	1555	0	0	785	383
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				195	0	496	947	1571	0	0	793	129
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				872	0	388	731	3039	0	0	1689	515
Arrive On Green				0.25	0.00	0.25	0.14	0.40	0.00	0.00	0.33	0.33
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1545
Grp Volume(v), veh/h				195	0	496	947	1571	0	0	793	129
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1545
Q Serve(g_s), s				3.3	0.0	18.5	16.0	17.6	0.0	0.0	9.3	4.6
Cycle Q Clear(g_c), s				3.3	0.0	18.5	16.0	17.6	0.0	0.0	9.3	4.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				872	0	388	731	3039	0	0	1689	515
V/C Ratio(X)				0.22	0.00	1.28	1.29	0.52	0.00	0.00	0.47	0.25
Avail Cap(c_a), veh/h				872	0	388	731	3039	0	0	1689	515
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.5	0.0	28.3	32.1	14.2	0.0	0.0	19.8	18.2
Incr Delay (d2), s/veh				0.1	0.0	144.0	133.6	0.1	0.0	0.0	0.9	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.3	0.0	22.1	20.4	7.0	0.0	0.0	3.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				22.7	0.0	172.2	165.8	14.3	0.0	0.0	20.7	19.4
LnGrp LOS				C	A	F	F	B	A	A	C	B
Approach Vol, veh/h					691			2518			922	
Approach Delay, s/veh					130.0			71.3			20.5	
Approach LOS					F			E			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.7			20.0	30.7		24.3				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		45.0			16.0	25.0		18.5				
Max Q Clear Time (g_c+I1), s		19.6			18.0	11.3		20.5				
Green Ext Time (p_c), s		9.5			0.0	3.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	69.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	3	618	0	0	0	0	1577	836	84	824	0
Future Volume (veh/h)	267	3	618	0	0	0	0	1577	836	84	824	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811				0	1811	1811	1811	1811	0
Adj Flow Rate, veh/h	192	0	590				0	1696	447	90	886	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	6	6	6	6	0
Cap, veh/h	403	0	717				0	3317	796	166	3153	0
Arrive On Green	0.23	0.00	0.23				0.00	0.53	0.53	0.10	1.00	0.00
Sat Flow, veh/h	1725	0	3070				0	6484	1495	3346	5107	0
Grp Volume(v), veh/h	192	0	590				0	1696	447	90	886	0
Grp Sat Flow(s),veh/h/ln	1725	0	1535				0	1558	1495	1673	1648	0
Q Serve(g_s), s	8.6	0.0	16.4				0.0	15.7	18.0	2.3	0.0	0.0
Cycle Q Clear(g_c), s	8.6	0.0	16.4				0.0	15.7	18.0	2.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	403	0	717				0	3317	796	166	3153	0
V/C Ratio(X)	0.48	0.00	0.82				0.00	0.51	0.56	0.54	0.28	0.00
Avail Cap(c_a), veh/h	583	0	1037				0	3317	796	521	3153	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	29.8	0.0	32.7				0.0	13.5	14.0	39.6	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	3.6				0.0	0.6	2.9	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.0	6.3				0.0	5.3	6.2	0.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	0.0	36.4				0.0	14.1	16.9	40.4	0.2	0.0
LnGrp LOS	C	A	D				A	B	B	D	A	A
Approach Vol, veh/h		782						2143			976	
Approach Delay, s/veh		35.0						14.7			3.9	
Approach LOS		C						B			A	
Timer - Assigned Phs	1	2					6	8				
Phs Duration (G+Y+Rc), s	9.5	53.7					63.2	26.8				
Change Period (Y+Rc), s	5.0	5.8					5.8	5.8				
Max Green Setting (Gmax), s	14.0	29.0					48.0	30.4				
Max Q Clear Time (g_c+14), s	14.3	20.0					2.0	18.4				
Green Ext Time (p_c), s	0.1	7.5					7.8	2.6				

Intersection Summary

HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	626	5	404	0	0	0	0	1871	386	253	715	0	
Future Volume (veh/h)	626	5	404	0	0	0	0	1871	386	253	715	0	
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No						No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0	
Adj Flow Rate, veh/h	656	0	272				0	1949	367	264	745	0	
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96	
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0	
Cap, veh/h	810	0	361				0	1967	362	379	3154	0	
Arrive On Green	0.22	0.00	0.22				0.00	0.46	0.46	0.04	0.21	0.00	
Sat Flow, veh/h	3619	0	1610				0	4454	789	3428	5233	0	
Grp Volume(v), veh/h	656	0	272				0	1526	790	264	745	0	
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1698	1714	1689	0	
Q Serve(g_s), s	12.9	0.0	11.8				0.0	33.4	34.4	5.7	9.2	0.0	
Cycle Q Clear(g_c), s	12.9	0.0	11.8				0.0	33.4	34.4	5.7	9.2	0.0	
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00	
Lane Grp Cap(c), veh/h	810	0	361				0	1550	779	379	3154	0	
V/C Ratio(X)	0.81	0.00	0.75				0.00	0.98	1.01	0.70	0.24	0.00	
Avail Cap(c_a), veh/h	989	0	440				0	1550	779	777	3154	0	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00	
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00	
Uniform Delay (d), s/veh	27.6	0.0	27.2				0.0	20.0	20.3	34.9	14.9	0.0	
Incr Delay (d2), s/veh	4.2	0.0	5.8				0.0	19.5	35.8	2.1	0.2	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.8	0.0	4.9				0.0	15.8	19.8	2.6	3.8	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	31.8	0.0	33.0				0.0	39.5	56.1	37.0	15.1	0.0	
LnGrp LOS	C	A	C				A	D	F	D	B	A	
Approach Vol, veh/h		928						2316			1009		
Approach Delay, s/veh		32.2						45.1			20.8		
Approach LOS		C						D			C		
Timer - Assigned Phs	1	2	4	6									
Phs Duration (G+Y+Rc), s	32.3	40.1	22.6	52.4									
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7									
Max Green Setting (Gmax), s	30.0	22.0	20.5	43.0									
Max Q Clear Time (g_c+1), s	36.4	36.4	14.9	11.2									
Green Ext Time (p_c), s	0.6	0.0	1.9	3.9									

Intersection Summary

HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	478	217	132	726	269	343	1647	111	185	917	235
Future Volume (veh/h)	279	478	217	132	726	269	343	1647	111	185	917	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	300	514	145	142	781	208	369	1771	116	199	986	225
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	333	1154	505	173	834	365	392	1570	103	232	956	218
Arrive On Green	0.19	0.33	0.33	0.10	0.24	0.24	0.23	0.33	0.33	0.13	0.24	0.24
Sat Flow, veh/h	1767	3526	1544	1767	3526	1541	1725	4735	310	1725	4009	912
Grp Volume(v), veh/h	300	514	145	142	781	208	369	1232	655	199	810	401
Grp Sat Flow(s),veh/h/ln	1767	1763	1544	1767	1763	1541	1725	1648	1749	1725	1648	1625
Q Serve(g_s), s	24.4	16.9	10.2	11.6	31.9	17.5	30.9	48.7	48.7	16.6	35.0	35.0
Cycle Q Clear(g_c), s	24.4	16.9	10.2	11.6	31.9	17.5	30.9	48.7	48.7	16.6	35.0	35.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.56
Lane Grp Cap(c), veh/h	333	1154	505	173	834	365	392	1093	580	232	786	387
V/C Ratio(X)	0.90	0.45	0.29	0.82	0.94	0.57	0.94	1.13	1.13	0.86	1.03	1.03
Avail Cap(c_a), veh/h	421	1154	505	421	840	367	411	1093	580	411	786	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	38.9	36.7	65.0	55.0	49.5	55.7	49.1	49.1	62.2	55.9	55.9
Incr Delay (d2), s/veh	22.5	0.6	0.7	18.0	18.0	3.4	30.2	69.1	78.6	17.2	40.4	54.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	7.5	4.0	6.1	16.2	7.1	16.7	30.4	33.8	8.4	18.9	20.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	39.5	37.3	83.0	72.9	52.9	85.9	118.2	127.7	79.4	96.3	110.8
LnGrp LOS	F	D	D	F	E	D	F	F	F	F	E	F
Approach Vol, veh/h		959			1131			2256			1410	
Approach Delay, s/veh		52.1			70.5			115.7			98.1	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.7	52.7	18.4	52.0	37.4	39.0	31.7	38.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+1.0), s	110.6	50.7	13.6	18.9	32.9	37.0	26.4	33.9				
Green Ext Time (p_c), s	1.1	0.0	0.8	6.2	0.5	0.0	1.3	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											91.9	
HCM 6th LOS											F	



HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	519	122	179	544	211	164	1197	310	286	509	307
Future Volume (veh/h)	348	519	122	179	544	211	164	1197	310	286	509	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	387	577	130	199	604	206	182	1330	330	318	566	194
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	378	85	127	554	189	208	845	204	343	702	585
Arrive On Green	0.12	0.26	0.26	0.07	0.22	0.22	0.12	0.30	0.30	0.19	0.38	0.38
Sat Flow, veh/h	1767	1460	329	1767	2566	873	1767	2795	676	1767	1856	1546
Grp Volume(v), veh/h	387	0	707	199	415	395	182	826	834	318	566	194
Grp Sat Flow(s),veh/h/ln	1767	0	1789	1767	1763	1676	1767	1763	1709	1767	1856	1546
Q Serve(g_s), s	16.0	0.0	36.0	10.0	30.0	30.0	14.1	42.0	42.0	24.6	37.9	12.4
Cycle Q Clear(g_c), s	16.0	0.0	36.0	10.0	30.0	30.0	14.1	42.0	42.0	24.6	37.9	12.4
Prop In Lane	1.00		0.18	1.00		0.52	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	203	0	463	127	380	362	208	533	516	343	702	585
V/C Ratio(X)	1.90	0.00	1.53	1.57	1.09	1.09	0.87	1.55	1.61	0.93	0.81	0.33
Avail Cap(c_a), veh/h	203	0	463	127	380	362	420	533	516	420	702	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	0.0	51.5	64.5	54.5	54.5	60.3	48.5	48.5	55.0	38.6	30.7
Incr Delay (d2), s/veh	423.9	0.0	247.5	288.8	72.4	74.5	8.4	257.1	285.5	23.1	6.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	0.0	47.9	14.7	20.9	20.1	6.8	56.4	58.8	13.1	18.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	485.4	0.0	299.0	353.3	126.9	129.0	68.6	305.6	334.0	78.2	45.3	30.9
LnGrp LOS	F	A	F	F	F	F	E	F	F	E	D	C
Approach Vol, veh/h		1094			1009			1842			1078	
Approach Delay, s/veh		364.9			172.4			295.1			52.4	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	47.0	17.0	43.0	21.4	57.6	23.0	37.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	42.0	10.0	36.0	33.0	42.0	16.0	30.0				
Max Q Clear Time (g_c+20.6), s	20.6	44.0	12.0	38.0	16.1	39.9	18.0	32.0				
Green Ext Time (p_c), s	0.4	0.0	0.0	0.0	0.3	0.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	233.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	190	119	86	264	249	279	1616	101	86	1016	75
Future Volume (veh/h)	128	190	119	86	264	249	279	1616	101	86	1016	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	149	221	124	100	307	62	324	1879	114	100	1181	85
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	173	245	137	123	357	298	312	2077	126	122	1059	76
Arrive On Green	0.10	0.22	0.22	0.07	0.19	0.19	0.18	0.44	0.44	0.07	0.33	0.33
Sat Flow, veh/h	1767	1107	621	1767	1856	1550	1725	4762	288	1725	3250	234
Grp Volume(v), veh/h	149	0	345	100	307	62	324	1299	694	100	625	641
Grp Sat Flow(s),veh/h/ln	1767	0	1728	1767	1856	1550	1725	1648	1754	1725	1721	1763
Q Serve(g_s), s	11.5	0.0	26.8	7.7	22.1	4.6	25.0	50.6	51.0	7.9	45.0	45.0
Cycle Q Clear(g_c), s	11.5	0.0	26.8	7.7	22.1	4.6	25.0	50.6	51.0	7.9	45.0	45.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.16	1.00		0.13
Lane Grp Cap(c), veh/h	173	0	382	123	357	298	312	1438	765	122	561	575
V/C Ratio(X)	0.86	0.00	0.90	0.82	0.86	0.21	1.04	0.90	0.91	0.82	1.11	1.12
Avail Cap(c_a), veh/h	256	0	438	256	470	393	312	1438	765	312	561	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	0.0	52.4	63.4	54.0	46.9	56.5	36.2	36.3	63.3	46.5	46.5
Incr Delay (d2), s/veh	12.4	0.0	21.0	4.9	13.3	0.5	61.0	8.5	14.8	5.0	73.2	73.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	13.9	3.6	11.7	1.9	16.2	21.8	24.7	3.6	30.5	31.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.8	0.0	73.4	68.3	67.3	47.4	117.5	44.7	51.1	68.3	119.7	120.3
LnGrp LOS	E	A	E	E	E	D	F	D	D	E	F	F
Approach Vol, veh/h		494		469		2317		1366				
Approach Delay, s/veh		73.5		64.9		56.8		116.2				
Approach LOS		E		E		E		F				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	67.7	16.1	37.0	32.5	52.5	20.0	33.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0				
Max Q Clear Time (g_c+1.9s), s	19.9	53.0	9.7	28.8	27.0	47.0	13.5	24.1				
Green Ext Time (p_c), s	0.1	0.0	0.1	1.4	0.0	0.0	0.1	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			76.9									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	68	119	149	165	225	184	1214	61	92	668	53
Future Volume (veh/h)	92	68	119	149	165	225	184	1214	61	92	668	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	95	74	42	162	179	175	190	1252	62	100	689	48
Peak Hour Factor	0.97	0.92	0.97	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	2	3	2	2	2	3	3	2	2	3	3
Cap, veh/h	121	220	125	201	209	204	230	1231	61	128	1008	70
Arrive On Green	0.07	0.20	0.20	0.11	0.24	0.24	0.13	0.36	0.36	0.07	0.30	0.30
Sat Flow, veh/h	1767	1120	636	1781	868	849	1767	3419	169	1781	3344	233
Grp Volume(v), veh/h	95	0	116	162	0	354	190	645	669	100	363	374
Grp Sat Flow(s),veh/h/ln	1767	0	1756	1781	0	1718	1767	1763	1825	1781	1763	1814
Q Serve(g_s), s	3.7	0.0	3.9	6.2	0.0	13.7	7.3	25.0	25.0	3.8	12.6	12.6
Cycle Q Clear(g_c), s	3.7	0.0	3.9	6.2	0.0	13.7	7.3	25.0	25.0	3.8	12.6	12.6
Prop In Lane	1.00		0.36	1.00		0.49	1.00		0.09	1.00		0.13
Lane Grp Cap(c), veh/h	121	0	345	201	0	413	230	635	657	128	532	547
V/C Ratio(X)	0.78	0.00	0.34	0.81	0.00	0.86	0.82	1.02	1.02	0.78	0.68	0.68
Avail Cap(c_a), veh/h	140	0	455	218	0	519	242	635	657	141	533	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	24.0	30.1	0.0	25.2	29.4	22.2	22.2	31.7	21.3	21.3
Incr Delay (d2), s/veh	21.7	0.0	0.6	18.5	0.0	11.2	19.6	39.8	39.7	22.3	3.6	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.6	3.6	0.0	6.5	4.2	16.4	17.0	2.4	5.4	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	0.0	24.6	48.6	0.0	36.5	49.0	62.0	62.0	54.0	24.9	24.8
LnGrp LOS	D	A	C	D	A	D	D	F	F	D	C	C
Approach Vol, veh/h		211			516			1504			837	
Approach Delay, s/veh		37.6			40.3			60.4			28.3	
Approach LOS		D			D			E			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	29.5	12.3	18.1	13.5	25.4	9.3	21.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	25.0	8.5	18.0	9.5	21.0	5.5	21.0				
Max Q Clear Time (g_c+I), s	11.8	27.0	8.2	5.9	9.3	14.6	5.7	15.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	2.4	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay	46.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕		↕	↕	↕↕↕		↕	↕		
Traffic Volume (veh/h)	0	0	0	45	0	84	0	1736	32	21	1237	0	
Future Volume (veh/h)	0	0	0	45	0	84	0	1736	32	21	1237	0	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1811	1811	1811	1811	1811	1811	
Adj Flow Rate, veh/h	0	0	0	52	0	13	0	1995	37	24	1422	0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Percent Heavy Veh, %	2	2	2	2	0	2	6	6	6	6	6	6	
Cap, veh/h	0	3	0	150	0	0	3	2624	49	84	2367	0	
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.53	0.53	0.05	0.69	0.00	
Sat Flow, veh/h		1402	277	0	1781	52		1725	4996	93	1725	3532	0
Grp Volume(v), veh/h	0	0	0	52	29.8		0	1315	717	24	1422	0	
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	C		1725	1648	1793	1725	1721	0	
Q Serve(g_s), s	0.0	0.0	0.0	1.8			0.0	20.7	20.8	0.9	14.5	0.0	
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.8			0.0	20.7	20.8	0.9	14.5	0.0	
Prop In Lane	0.00		0.00	1.00			1.00		0.05	1.00		0.00	
Lane Grp Cap(c), veh/h	0	3	0	150			3	1731	942	84	2367	0	
V/C Ratio(X)	0.00	0.00	0.00	0.35			0.00	0.76	0.76	0.29	0.60	0.00	
Avail Cap(c_a), veh/h	0	256	0	816			236	1845	1004	239	2367	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	0.00	0.00	1.00			0.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	0.0	0.0	0.0	28.4			0.0	12.3	12.3	30.2	5.5	0.0	
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4			0.0	1.9	3.4	1.9	0.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.8			0.0	6.8	7.8	0.4	3.6	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	0.0	0.0	0.0	29.8			0.0	14.2	15.7	32.0	5.9	0.0	
LnGrp LOS	A	A	A	C			A	B	B	C	A	A	
Approach Vol, veh/h		0						2032			1446		
Approach Delay, s/veh		0.0						14.7			6.4		
Approach LOS								B			A		
Timer - Assigned Phs	1	2	3	4	5	6							
Phs Duration (G+Y+Rc), s	40.7	42.0	13.0	0.0	0.0	52.7							
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5							
Max Green Setting (Gmax), s	36.8	30.1	9.0	9.0	36.9								
Max Q Clear Time (g_c+I), s	22.8	3.8	0.0	0.0	16.5								
Green Ext Time (p_c), s	0.0	11.7	0.1	0.0	0.0	12.6							
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay				11.5									
HCM 6th LOS				B									

HCM 6th Signalized Intersection Summary  
 10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	0	93	0	0	0	122	1345	0	0	1085	30
Future Volume (veh/h)	49	0	93	0	0	0	122	1345	0	0	1085	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	52	0	14	0	0	0	128	1416	0	0	1142	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	299	0	160	0	193	0	205	2301	0	0	1450	39
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.12	0.65	0.00	0.00	0.41	0.41
Sat Flow, veh/h	1781	0	1567	0	1900	0	1767	3618	0	0	3597	95
Grp Volume(v), veh/h	52	0	14	0	0	0	128	1416	0	0	574	599
Grp Sat Flow(s),veh/h/ln	1781	0	1567	0	1900	0	1767	1763	0	0	1763	1837
Q Serve(g_s), s	1.6	0.0	0.5	0.0	0.0	0.0	4.2	14.2	0.0	0.0	17.3	17.3
Cycle Q Clear(g_c), s	1.6	0.0	0.5	0.0	0.0	0.0	4.2	14.2	0.0	0.0	17.3	17.3
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h	299	0	160	0	193	0	205	2301	0	0	729	760
V/C Ratio(X)	0.17	0.00	0.09	0.00	0.00	0.00	0.62	0.62	0.00	0.00	0.79	0.79
Avail Cap(c_a), veh/h	847	0	641	0	778	0	240	2597	0	0	843	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	24.9	0.0	0.0	0.0	25.7	6.2	0.0	0.0	15.6	15.6
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.0	0.0	0.0	3.8	0.4	0.0	0.0	4.6	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.2	0.0	0.0	0.0	1.9	3.7	0.0	0.0	7.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	25.0	0.0	0.0	0.0	29.6	6.6	0.0	0.0	20.2	20.0
LnGrp LOS	C	A	C	A	A	A	C	A	A	A	C	C
Approach Vol, veh/h	66			0			1544			1173		
Approach Delay, s/veh	25.5			0.0			8.5			20.1		
Approach LOS	C						A			C		
Timer - Assigned Phs	2		4		5		6		8			
Phs Duration (G+Y+Rc), s	47.4		13.7		14.6		32.8		13.7			
Change Period (Y+Rc), s	7.5		7.5		7.5		7.5		7.5			
Max Green Setting (Gmax), s	45.0		25.0		8.3		29.2		25.0			
Max Q Clear Time (g_c+I1), s	16.2		3.6		6.2		19.3		0.0			
Green Ext Time (p_c), s	15.5		0.1		0.1		6.0		0.0			

Intersection Summary

HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	60	498	159	531	828	267	224	1455	650	267	788	129
Future Volume (veh/h)	60	498	159	531	828	267	224	1455	650	267	788	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	65	541	0	577	900	226	243	1582	0	290	857	94
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
Percent Heavy Veh, %	13	13	13	13	13	13	6	6	6	6	6	6
Cap, veh/h	110	677		678	663	553	281	912		328	1006	435
Arrive On Green	0.04	0.21	0.00	0.22	0.39	0.39	0.16	0.27	0.00	0.19	0.29	0.29
Sat Flow, veh/h	3155	3244	1447	3155	1707	1422	1725	3441	1535	1725	3441	1487
Grp Volume(v), veh/h	65	541	0	577	900	226	243	1582	0	290	857	94
Grp Sat Flow(s),veh/h/ln	1577	1622	1447	1577	1707	1422	1725	1721	1535	1725	1721	1487
Q Serve(g_s), s	2.7	20.9	0.0	23.2	51.3	15.3	18.1	35.0	0.0	21.6	31.0	6.3
Cycle Q Clear(g_c), s	2.7	20.9	0.0	23.2	51.3	15.3	18.1	35.0	0.0	21.6	31.0	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	110	677		678	663	553	281	912		328	1006	435
V/C Ratio(X)	0.59	0.80		0.85	1.36	0.41	0.86	1.73		0.88	0.85	0.22
Avail Cap(c_a), veh/h	836	860		836	663	553	457	912		457	1006	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	49.6	0.0	49.8	40.4	29.3	53.8	48.5	0.0	52.0	44.0	35.3
Incr Delay (d2), s/veh	10.2	6.0	0.0	8.9	170.2	1.0	16.1	335.1	0.0	18.7	7.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.1	0.0	10.0	52.6	5.4	9.1	57.4	0.0	11.1	14.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.0	55.6	0.0	58.7	210.6	30.4	69.9	383.6	0.0	70.7	51.8	35.8
LnGrp LOS	E	E		E	F	C	E	F		E	D	D
Approach Vol, veh/h		606			1703			1825			1241	
Approach Delay, s/veh		57.5			135.2			341.9			55.0	
Approach LOS		E			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.1	39.0	32.4	31.5	25.5	42.6	8.6	55.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+Y), s	20.6	37.0	25.2	22.9	20.1	33.0	4.7	53.3				
Green Ext Time (p_c), s	1.5	0.0	3.2	4.6	1.4	1.5	0.4	0.0				

Intersection Summary

HCM 6th Ctrl Delay	178.1
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖↗	↑↑↑	↗	↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	219	1296	58	110	1364	409	56	776	228	517	515	185
Future Volume (veh/h)	219	1296	58	110	1364	409	56	776	228	517	515	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	226	1336	20	113	1406	206	58	800	155	533	531	170
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	213	1595	486	154	1527	369	74	571	475	231	1039	331
Arrive On Green	0.13	0.34	0.34	0.05	0.26	0.26	0.04	0.31	0.31	0.13	0.40	0.40
Sat Flow, veh/h	1626	4661	1421	3155	5873	1419	1767	1856	1544	1767	2617	834
Grp Volume(v), veh/h	226	1336	20	113	1406	206	58	800	155	533	357	344
Grp Sat Flow(s),veh/h/ln	1626	1554	1421	1577	1468	1419	1767	1856	1544	1767	1763	1689
Q Serve(g_s), s	20.0	40.4	1.4	5.4	35.6	19.2	5.0	47.0	11.8	20.0	23.4	23.6
Cycle Q Clear(g_c), s	20.0	40.4	1.4	5.4	35.6	19.2	5.0	47.0	11.8	20.0	23.4	23.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	213	1595	486	154	1527	369	74	571	475	231	699	670
V/C Ratio(X)	1.06	0.84	0.04	0.73	0.92	0.56	0.78	1.40	0.33	2.30	0.51	0.51
Avail Cap(c_a), veh/h	213	1595	486	413	1538	372	231	571	475	231	699	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	46.3	33.5	71.6	55.0	48.9	72.5	52.9	40.7	66.4	34.8	34.9
Incr Delay (d2), s/veh	78.8	4.3	0.0	2.5	9.5	2.3	6.6	190.8	0.1	599.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.0	16.3	0.5	2.2	14.2	7.1	2.4	52.1	4.6	47.6	10.2	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	145.2	50.6	33.6	74.1	64.5	51.2	79.0	243.7	40.8	666.1	35.1	35.2
LnGrp LOS	F	D	C	E	E	D	E	F	D	F	D	D
Approach Vol, veh/h		1582			1725			1013			1234	
Approach Delay, s/veh		63.9			63.5			203.2			307.7	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.5	53.5	14.0	58.7	12.9	67.1	26.5	46.2				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0				
Max Q Clear Time (g_c+20), s	20.0	49.0	7.4	42.4	7.0	25.6	22.0	37.6				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	2.9	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	143.4
HCM 6th LOS	F



HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

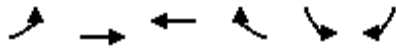
Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑↑		↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑	↔
Traffic Volume (veh/h)	298	1675	175	395	1398	293	191	841	520	264	408	135
Future Volume (veh/h)	298	1675	175	395	1398	293	191	841	520	264	408	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	314	1763	175	416	1472	215	201	885	176	278	429	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	381	1594	158	486	1056	462	266	1015	308	346	789	345
Arrive On Green	0.12	0.29	0.29	0.15	0.33	0.33	0.08	0.20	0.20	0.10	0.23	0.23
Sat Flow, veh/h	3155	5461	542	3155	3244	1421	3401	5025	1526	3401	3497	1528
Grp Volume(v), veh/h	314	1422	516	416	1472	215	201	885	176	278	429	33
Grp Sat Flow(s),veh/h/ln	1577	1468	1598	1577	1622	1421	1700	1675	1526	1700	1749	1528
Q Serve(g_s), s	11.7	35.0	35.0	15.4	39.0	14.4	6.9	20.5	12.5	9.6	13.0	2.0
Cycle Q Clear(g_c), s	11.7	35.0	35.0	15.4	39.0	14.4	6.9	20.5	12.5	9.6	13.0	2.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1286	466	486	1056	462	266	1015	308	346	789	345
V/C Ratio(X)	0.82	1.11	1.11	0.86	1.39	0.46	0.76	0.87	0.57	0.80	0.54	0.10
Avail Cap(c_a), veh/h	921	1286	466	921	1056	462	709	1048	318	709	1021	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	42.4	42.4	49.4	40.4	32.1	54.1	46.3	43.1	52.7	41.0	36.7
Incr Delay (d2), s/veh	3.4	59.4	73.7	3.3	183.3	0.9	3.3	8.1	2.4	3.3	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	19.6	23.2	6.3	42.2	5.1	3.1	9.2	4.9	4.3	5.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	101.8	116.2	52.7	223.8	33.0	57.4	54.4	45.6	56.0	41.7	36.9
LnGrp LOS	D	F	F	D	F	C	E	D	D	E	D	D
Approach Vol, veh/h		2252			2103			1262			740	
Approach Delay, s/veh		98.6			170.4			53.7			46.8	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	42.5	16.9	34.5	22.0	46.5	19.7	31.7				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0				
Max Q Clear Time (g_c+11), s	11.7	37.0	8.9	15.0	13.7	41.0	11.6	22.5				
Green Ext Time (p_c), s	1.1	0.0	0.4	3.4	0.8	0.0	0.6	1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											107.4	
HCM 6th LOS											F	

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1797	1144	0	213	1498
Future Volume (veh/h)	0	1797	1144	0	213	1498
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	1912	1217	0	227	1571
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	1934	1346	0	675	1201
Arrive On Green	0.00	0.41	0.41	0.00	0.41	0.41
Sat Flow, veh/h	0	4968	3415	0	1626	2894
Grp Volume(v), veh/h	0	1912	1217	0	227	1571
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1626	1447
Q Serve(g_s), s	0.0	29.4	25.4	0.0	6.9	30.0
Cycle Q Clear(g_c), s	0.0	29.4	25.4	0.0	6.9	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1934	1346	0	675	1201
V/C Ratio(X)	0.00	0.99	0.90	0.00	0.34	1.31
Avail Cap(c_a), veh/h	0	1934	1346	0	675	1201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	21.0	19.8	0.0	14.4	21.1
Incr Delay (d2), s/veh	0.0	17.8	8.9	0.0	0.3	144.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.8	10.3	0.0	2.4	33.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	38.7	28.7	0.0	14.7	166.0
LnGrp LOS	A	D	C	A	B	F
Approach Vol, veh/h		1912	1217		1798	
Approach Delay, s/veh		38.7	28.7		146.9	
Approach LOS		D	C		F	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		36.8		35.5		36.8
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		31.4		32.0		27.4
Green Ext Time (p_c), s		0.0		0.0		1.9

Intersection Summary

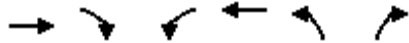
HCM 6th Ctrl Delay	75.7
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	537	1526	154	420	776	432
Future Volume (veh/h)	537	1526	154	420	776	432
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	577	1459	166	452	834	214
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1749	965	255	2475	984	438
Arrive On Green	0.38	0.38	0.08	0.53	0.30	0.30
Sat Flow, veh/h	4815	1406	3155	4815	3252	1447
Grp Volume(v), veh/h	577	1459	166	452	834	214
Grp Sat Flow(s),veh/h/ln	1554	1406	1577	1554	1626	1447
Q Serve(g_s), s	7.1	30.0	4.1	4.0	19.2	9.7
Cycle Q Clear(g_c), s	7.1	30.0	4.1	4.0	19.2	9.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1749	965	255	2475	984	438
V/C Ratio(X)	0.33	1.51	0.65	0.18	0.85	0.49
Avail Cap(c_a), veh/h	1749	965	1184	2475	1220	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	9.0	35.7	9.7	26.1	22.8
Incr Delay (d2), s/veh	0.1	235.5	2.8	0.0	4.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	81.8	1.6	1.3	7.7	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.9	244.5	38.5	9.8	30.9	23.7
LnGrp LOS	B	F	D	A	C	C
Approach Vol, veh/h	2036			618	1048	
Approach Delay, s/veh	180.3			17.5	29.4	
Approach LOS	F			B	C	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	12.5	37.3		49.8	30.2	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	30.0	30.0		30.0	30.0	
Max Q Clear Time (g_c+1/3), s	10.1	32.0		6.0	21.2	
Green Ext Time (p_c), s	0.5	0.0		3.2	3.0	

Intersection Summary

HCM 6th Ctrl Delay	110.4
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.  
 User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	24	0	0	0	0	68	0	0	0
Future Volume (veh/h)	0	0	0	24	0	0	0	0	68	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	36	0	0	0	0	17	0	0	0
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	36	16	85	89	75	0	0	71	0	84	0
Arrive On Green	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	0	0	1580	0	1870	0
Grp Volume(v), veh/h	0	0	0	36	0	0	0	0	17	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	0	0	1580	0	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	18	36	16	85	89	75	0	0	71	0	84	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00
Avail Cap(c_a), veh/h	898	6809	3037	1006	3697	3133	0	0	5084	0	6017	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			36			17			0		
Approach Delay, s/veh	0.0			7.9			6.3			0.0		
Approach LOS				A			A					
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	4.9		5.0		0.0		4.9		0.0		5.0	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	31.9		5.6		19.0		31.9		5.0		19.6	
Max Q Clear Time (g_c+I1), s	2.1		2.2		0.0		0.0		0.0		0.0	
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0		0.0		0.0	
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				7.4								
HCM 6th LOS				A								

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔↔	↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	81	13	31	33	9	172	51	1862	16	62	1375	17
Future Volume (veh/h)	81	13	31	33	9	172	51	1862	16	62	1375	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	86	14	5	35	10	26	54	1981	8	66	1463	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	249	304	101	161	325	140	199	1633	717	219	2375	725
Arrive On Green	0.07	0.12	0.12	0.05	0.09	0.09	0.06	0.47	0.47	0.07	0.48	0.48
Sat Flow, veh/h	3456	2595	866	3456	3554	1533	3346	3441	1510	3346	4944	1510
Grp Volume(v), veh/h	86	9	10	35	10	26	54	1981	8	66	1463	8
Grp Sat Flow(s),veh/h/ln	1728	1777	1685	1728	1777	1533	1673	1721	1510	1673	1648	1510
Q Serve(g_s), s	2.0	0.4	0.4	0.8	0.2	1.3	1.3	40.0	0.2	1.6	18.4	0.2
Cycle Q Clear(g_c), s	2.0	0.4	0.4	0.8	0.2	1.3	1.3	40.0	0.2	1.6	18.4	0.2
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	208	197	161	325	140	199	1633	717	219	2375	725
V/C Ratio(X)	0.35	0.04	0.05	0.22	0.03	0.19	0.27	1.21	0.01	0.30	0.62	0.01
Avail Cap(c_a), veh/h	820	422	400	820	843	364	794	1633	717	794	2375	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	33.0	33.0	38.7	34.9	35.4	37.9	22.1	11.7	37.6	16.2	11.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.7	0.0	0.2	0.7	101.8	0.0	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	0.2	0.4	0.1	0.5	0.5	37.7	0.1	0.7	6.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	33.1	33.1	39.4	34.9	35.6	38.6	123.9	11.7	38.3	16.6	11.4
LnGrp LOS	D	C	C	D	C	D	D	F	B	D	B	B
Approach Vol, veh/h		105			71			2043			1537	
Approach Delay, s/veh		37.1			37.4			121.2			17.5	
Approach LOS		D			D			F			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.5	47.5	8.9	17.4	10.0	48.0	11.1	15.2				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	20.0	40.0	20.0	20.0	20.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	13.6	42.0	2.8	2.4	3.3	20.4	4.0	3.3				
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.1	10.8	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	74.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC  
18: Park Place & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	81	11	33	172	47	44
Future Vol, veh/h	81	11	33	172	47	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	96	13	39	205	56	52

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	109	0	277
Stage 1	-	-	-	-	96
Stage 2	-	-	-	-	181
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1479	-	690
Stage 1	-	-	-	-	917
Stage 2	-	-	-	-	832
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1479	-	672
Mov Cap-2 Maneuver	-	-	-	-	672
Stage 1	-	-	-	-	917
Stage 2	-	-	-	-	810

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	802	-	-	1479	-
HCM Lane V/C Ratio	0.135	-	-	0.027	-
HCM Control Delay (s)	10.2	-	-	7.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Traffic Volume (veh/h)	94	31	59	142	62	121
Future Volume (veh/h)	94	31	59	142	62	121
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	10	65	156	68	57
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	839	362	221	1881	130	109
Arrive On Green	0.24	0.24	0.12	0.53	0.14	0.14
Sat Flow, veh/h	3647	1532	1781	3647	906	760
Grp Volume(v), veh/h	103	10	65	156	126	0
Grp Sat Flow(s),veh/h/ln	1777	1532	1781	1777	1680	0
Q Serve(g_s), s	1.0	0.2	1.5	1.0	3.1	0.0
Cycle Q Clear(g_c), s	1.0	0.2	1.5	1.0	3.1	0.0
Prop In Lane		1.00	1.00		0.54	0.45
Lane Grp Cap(c), veh/h	839	362	221	1881	241	0
V/C Ratio(X)	0.12	0.03	0.29	0.08	0.52	0.00
Avail Cap(c_a), veh/h	2805	1209	603	2805	1250	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.3	13.0	17.6	5.1	17.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.6	0.2	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	13.1	18.4	5.2	19.7	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	113			221	126	
Approach Delay, s/veh	13.4			9.0	19.7	
Approach LOS	B			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.4	13.0	18.0		31.0
Change Period (Y+Rc), s		7.0	7.5	7.5		7.5
Max Green Setting (Gmax), s		33.0	15.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		5.1	3.5	3.0		3.0
Green Ext Time (p_c), s		0.5	0.1	0.8		1.2

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



HCM 6th TWSC  
20: Proposed St A & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	187	2	10	189	5	52
Future Vol, veh/h	187	2	10	189	5	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	210	2	11	212	6	58

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	212	0	339
Stage 1	-	-	-	-	211
Stage 2	-	-	-	-	128
Critical Hdwy	-	-	4.16	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.23	-	3.52
Pot Cap-1 Maneuver	-	-	1348	-	631
Stage 1	-	-	-	-	804
Stage 2	-	-	-	-	884
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1348	-	626
Mov Cap-2 Maneuver	-	-	-	-	626
Stage 1	-	-	-	-	804
Stage 2	-	-	-	-	877

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	890	-	-	1348	-
HCM Lane V/C Ratio	0.072	-	-	0.008	-
HCM Control Delay (s)	9.4	-	-	7.7	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 6th Signalized Intersection Summary  
21: Sumner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	27	58	7	18	63	114	849	14	16	520	67
Future Volume (veh/h)	154	27	58	7	18	63	114	849	14	16	520	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	173	30	13	8	20	8	128	954	16	18	584	72
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	213	407	165	18	141	53	163	998	17	38	772	95
Arrive On Green	0.12	0.16	0.16	0.01	0.06	0.06	0.09	0.55	0.55	0.02	0.48	0.48
Sat Flow, veh/h	1781	2466	1001	1781	2527	949	1767	1820	31	1781	1617	199
Grp Volume(v), veh/h	173	21	22	8	14	14	128	0	970	18	0	656
Grp Sat Flow(s),veh/h/ln	1781	1777	1690	1781	1777	1699	1767	0	1850	1781	0	1817
Q Serve(g_s), s	6.7	0.7	0.8	0.3	0.5	0.6	5.0	0.0	35.1	0.7	0.0	20.8
Cycle Q Clear(g_c), s	6.7	0.7	0.8	0.3	0.5	0.6	5.0	0.0	35.1	0.7	0.0	20.8
Prop In Lane	1.00		0.59	1.00		0.56	1.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	213	293	279	18	99	95	163	0	1015	38	0	867
V/C Ratio(X)	0.81	0.07	0.08	0.44	0.14	0.15	0.79	0.00	0.96	0.48	0.00	0.76
Avail Cap(c_a), veh/h	240	567	539	126	454	434	248	0	1036	126	0	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.3	24.9	24.9	34.7	31.7	31.7	31.3	0.0	15.1	34.1	0.0	15.1
Incr Delay (d2), s/veh	17.2	0.1	0.1	15.5	0.6	0.7	8.9	0.0	18.1	9.2	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.3	0.3	0.2	0.2	0.2	2.5	0.0	17.3	0.4	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	25.0	25.0	50.2	32.3	32.4	40.3	0.0	33.2	43.3	0.0	18.7
LnGrp LOS	D	C	C	D	C	C	D	A	C	D	A	B
Approach Vol, veh/h		216			36			1098				674
Approach Delay, s/veh		43.0			36.3			34.1				19.4
Approach LOS		D			D			C				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	43.2	5.2	16.1	11.0	38.2	12.9	8.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	39.5	5.0	22.5	9.9	34.6	9.5	18.0				
Max Q Clear Time (g_c+I1), s	2.7	37.1	2.3	2.8	7.0	22.8	8.7	2.6				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.1	0.1	3.6	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				30.2								
HCM 6th LOS				C								

HCM 6th TWSC  
22: Proposed Driveway B & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour

Intersection						
Int Delay, s/veh	7.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Vol, veh/h	23	34	25	1	86	125
Future Vol, veh/h	23	34	25	1	86	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	27	40	30	1	102	149

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	67	0	108 34
Stage 1	-	-	-	-	47 -
Stage 2	-	-	-	-	61 -
Critical Hdwy	-	-	4.16	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.23	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1525	-	878 1032
Stage 1	-	-	-	-	970 -
Stage 2	-	-	-	-	954 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1525	-	860 1032
Mov Cap-2 Maneuver	-	-	-	-	860 -
Stage 1	-	-	-	-	970 -
Stage 2	-	-	-	-	935 -

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	954	-	-	1525	-
HCM Lane V/C Ratio	0.263	-	-	0.02	-
HCM Control Delay (s)	10.1	-	-	7.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.1	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	145	2	76	25	1	1	1	92	1	1	0
Future Volume (veh/h)	0	145	2	76	25	1	1	1	92	1	1	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	0	173	2	90	30	1	1	1	16	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	3	3	2
Cap, veh/h	7	672	8	162	1566	52	7	4	70	7	89	0
Arrive On Green	0.00	0.19	0.19	0.09	0.45	0.45	0.00	0.05	0.05	0.00	0.05	0.00
Sat Flow, veh/h	1781	3598	42	1781	3509	116	1781	91	1462	1767	1856	0
Grp Volume(v), veh/h	0	85	90	90	15	16	1	0	17	1	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1862	1781	1777	1849	1781	0	1553	1767	1856	0
Q Serve(g_s), s	0.0	1.1	1.1	1.3	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.1	1.1	1.3	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.06	1.00		0.94	1.00		0.00
Lane Grp Cap(c), veh/h	7	332	348	162	793	825	7	0	74	7	89	0
V/C Ratio(X)	0.00	0.26	0.26	0.55	0.02	0.02	0.15	0.00	0.23	0.15	0.01	0.00
Avail Cap(c_a), veh/h	333	1196	1253	433	1295	1348	333	0	2177	330	2601	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	9.3	11.6	4.1	4.1	13.3	0.0	12.3	13.3	12.1	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	2.9	0.0	0.0	10.1	0.0	1.6	10.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.7	9.7	14.6	4.1	4.1	23.4	0.0	13.8	23.5	12.2	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	B	C	B	A
Approach Vol, veh/h		175			121			18				2
Approach Delay, s/veh		9.7			11.9			14.3				17.9
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	5.8	6.9	9.5	4.5	5.8	0.0	16.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	37.5	6.5	18.0	5.0	37.5	5.0	19.5				
Max Q Clear Time (g_c+I1), s	2.0	2.3	3.3	3.1	2.0	2.0	0.0	2.1				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.9								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔		↔	↔		↔↑↑↑	↔↑↑↑		↔↑↑↑	↔↑↑↑	
Traffic Volume (veh/h)	228	0	54	2	0	19	22	1307	5	0	717	97
Future Volume (veh/h)	228	0	54	2	0	19	22	1307	5	0	717	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	253	0	12	2	0	1	24	1452	6	0	797	101
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	0	0	4	4	4	4	4	4
Cap, veh/h	505	0	226	4	0	3	70	3008	12	4	1806	227
Arrive On Green	0.15	0.00	0.15	0.00	0.00	0.00	0.04	0.58	0.58	0.00	0.40	0.40
Sat Flow, veh/h	3456	0	1546	1810	0	1610	1753	5166	21	1753	4503	567
Grp Volume(v), veh/h	253	0	12	2	0	1	24	942	516	0	591	307
Grp Sat Flow(s),veh/h/ln	1728	0	1546	1810	0	1610	1753	1675	1837	1753	1675	1720
Q Serve(g_s), s	3.1	0.0	0.3	0.1	0.0	0.0	0.6	7.5	7.5	0.0	5.9	6.0
Cycle Q Clear(g_c), s	3.1	0.0	0.3	0.1	0.0	0.0	0.6	7.5	7.5	0.0	5.9	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	505	0	226	4	0	3	70	1951	1070	4	1343	690
V/C Ratio(X)	0.50	0.00	0.05	0.51	0.00	0.29	0.34	0.48	0.48	0.00	0.44	0.44
Avail Cap(c_a), veh/h	2627	0	1176	1376	0	1224	1333	2911	1596	1333	2911	1494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	16.9	23.0	0.0	23.0	21.5	5.6	5.6	0.0	10.0	10.1
Incr Delay (d2), s/veh	0.9	0.0	0.1	88.4	0.0	54.3	3.4	0.3	0.5	0.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.1	0.1	0.0	0.1	0.3	1.7	1.9	0.0	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	17.1	111.4	0.0	77.3	24.9	5.8	6.1	0.0	10.4	10.7
LnGrp LOS	B	A	B	F	A	E	C	A	A	A	B	B
Approach Vol, veh/h		265			3			1482			898	
Approach Delay, s/veh		19.0			100.0			6.2			10.5	
Approach LOS		B			F			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	25.0	0.0	12.7	0.0	33.3	12.7	0.0				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	35.0	40.0	35.0	35.0	35.0	40.0	35.0	35.0				
Max Q Clear Time (g_c+1), s	12.6	8.0	0.0	0.0	0.0	9.5	5.1	0.0				
Green Ext Time (p_c), s	0.1	9.9	0.0	0.0	0.0	17.3	1.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	118	5	48	39	14	124	34	1689	17	60	1268	85
Future Volume (veh/h)	118	5	48	39	14	124	34	1689	17	60	1268	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	124	5	11	41	15	28	36	1778	7	63	1335	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	399	111	244	424	125	233	133	1380	415	196	1558	469
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.28	0.28	0.11	0.32	0.32
Sat Flow, veh/h	1355	512	1127	1388	576	1074	1725	4944	1487	1725	4944	1489
Grp Volume(v), veh/h	124	0	16	41	0	43	36	1778	7	63	1335	35
Grp Sat Flow(s),veh/h/ln	1355	0	1639	1388	0	1650	1725	1648	1487	1725	1648	1489
Q Serve(g_s), s	4.4	0.0	0.4	1.3	0.0	1.1	1.1	15.0	0.2	1.8	13.6	0.9
Cycle Q Clear(g_c), s	5.5	0.0	0.4	1.7	0.0	1.1	1.1	15.0	0.2	1.8	13.6	0.9
Prop In Lane	1.00		0.69	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	0	355	424	0	358	133	1380	415	196	1558	469
V/C Ratio(X)	0.31	0.00	0.05	0.10	0.00	0.12	0.27	1.29	0.02	0.32	0.86	0.07
Avail Cap(c_a), veh/h	1038	0	1128	1079	0	1136	321	1380	415	321	1558	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	0.0	16.6	17.3	0.0	16.9	23.4	19.4	14.0	21.9	17.3	12.9
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.2	1.3	135.4	0.0	1.1	5.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	0.4	0.0	0.4	0.4	22.3	0.1	0.7	5.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	16.7	17.4	0.0	17.1	24.7	154.8	14.1	23.1	22.4	13.0
LnGrp LOS	B	A	B	B	A	B	C	F	B	C	C	B
Approach Vol, veh/h		140			84			1821			1433	
Approach Delay, s/veh		19.3			17.3			151.7			22.2	
Approach LOS		B			B			F			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	22.5		17.7	11.7	24.4		17.7				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	15.0		37.0	10.0	15.0		37.0				
Max Q Clear Time (g_c+1), s	13.8	17.0		7.5	3.1	15.6		3.7				
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	0.0		0.4				

Intersection Summary

HCM 6th Ctrl Delay	89.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
 26: Sumner Ave & E Parkview St

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	109	24	36	34	7	71	42	696	43	15	566	13
Future Volume (veh/h)	109	24	36	34	7	71	42	696	43	15	566	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	125	28	20	39	8	18	48	800	43	17	651	14
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	378	45	29	309	75	77	96	1295	70	39	1228	26
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.05	0.38	0.38	0.02	0.35	0.35
Sat Flow, veh/h	1084	272	177	756	456	464	1767	3403	183	1767	3529	76
Grp Volume(v), veh/h	173	0	0	65	0	0	48	414	429	17	325	340
Grp Sat Flow(s),veh/h/ln	1533	0	0	1676	0	0	1767	1763	1823	1767	1763	1842
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.0	0.0	0.8	6.0	6.0	0.3	4.6	4.6
Cycle Q Clear(g_c), s	3.2	0.0	0.0	1.0	0.0	0.0	0.8	6.0	6.0	0.3	4.6	4.6
Prop In Lane	0.72		0.12	0.60		0.28	1.00		0.10	1.00		0.04
Lane Grp Cap(c), veh/h	452	0	0	462	0	0	96	671	694	39	613	641
V/C Ratio(X)	0.38	0.00	0.00	0.14	0.00	0.00	0.50	0.62	0.62	0.44	0.53	0.53
Avail Cap(c_a), veh/h	1054	0	0	1063	0	0	311	1043	1079	283	1015	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	11.3	0.0	0.0	14.4	7.8	7.8	15.1	8.1	8.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	3.9	0.9	0.9	7.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.3	0.0	0.0	0.4	1.5	1.6	0.2	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	0.0	0.0	11.4	0.0	0.0	18.3	8.8	8.7	22.7	8.9	8.8
LnGrp LOS	B	A	A	B	A	A	B	A	A	C	A	A
Approach Vol, veh/h		173			65			891			682	
Approach Delay, s/veh		12.7			11.4			9.3			9.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	16.4		9.7	6.2	15.4		9.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.5	18.0		18.0				
Max Q Clear Time (g_c+1), s	12.3	8.0		5.2	2.8	6.6		3.0				
Green Ext Time (p_c), s	0.0	3.9		0.7	0.0	3.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.6								
HCM 6th LOS				A								



HCM 6th TWSC  
27: Mill Creek Ave & E Amanecer Privado

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	67	0	24	5	0	8	21	18	23	36	31	11
Future Vol, veh/h	67	0	24	5	0	8	21	18	23	36	31	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	3	3	2
Mvmt Flow	88	0	32	7	0	11	28	24	30	47	41	14
































Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	210	252	28	210	244	27	55	0	0	54	0	0
Stage 1	142	142	-	95	95	-	-	-	-	-	-	-
Stage 2	68	110	-	115	149	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	729	650	1041	729	657	1042	1548	-	-	1542	-	-
Stage 1	846	778	-	901	815	-	-	-	-	-	-	-
Stage 2	934	803	-	877	773	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	695	619	1041	681	626	1042	1548	-	-	1542	-	-
Mov Cap-2 Maneuver	695	619	-	681	626	-	-	-	-	-	-	-
Stage 1	831	755	-	885	800	-	-	-	-	-	-	-
Stage 2	908	789	-	824	750	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.6		9.2		2.5		3.4	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1548	-	-	762	866	1542	-	-
HCM Lane V/C Ratio	0.018	-	-	0.157	0.02	0.031	-	-
HCM Control Delay (s)	7.4	-	-	10.6	9.2	7.4	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.1	0.1	-	-

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 				  			  	
Traffic Volume (veh/h)	566	374	60	148	354	133	69	691	186	68	399	320
Future Volume (veh/h)	566	374	60	148	354	133	69	691	186	68	399	320
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	590	390	20	154	369	43	72	720	91	71	416	90
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	543	1237	542	222	477	397	92	1276	388	91	1272	387
Arrive On Green	0.16	0.35	0.35	0.06	0.26	0.26	0.05	0.25	0.25	0.05	0.25	0.25
Sat Flow, veh/h	3428	3526	1545	3428	1856	1542	1753	5025	1529	1753	5025	1529
Grp Volume(v), veh/h	590	390	20	154	369	43	72	720	91	71	416	90
Grp Sat Flow(s),veh/h/ln	1714	1763	1545	1714	1856	1542	1753	1675	1529	1753	1675	1529
Q Serve(g_s), s	15.0	7.6	0.8	4.2	17.5	2.0	3.8	11.8	4.5	3.8	6.4	4.4
Cycle Q Clear(g_c), s	15.0	7.6	0.8	4.2	17.5	2.0	3.8	11.8	4.5	3.8	6.4	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	543	1237	542	222	477	397	92	1276	388	91	1272	387
V/C Ratio(X)	1.09	0.32	0.04	0.70	0.77	0.11	0.78	0.56	0.23	0.78	0.33	0.23
Avail Cap(c_a), veh/h	543	1824	800	362	862	716	93	2208	672	148	2367	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	22.4	20.2	43.4	32.6	26.9	44.3	30.8	28.0	44.4	28.8	28.1
Incr Delay (d2), s/veh	64.1	0.2	0.0	1.5	3.8	0.2	31.6	0.6	0.4	5.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	3.1	0.3	1.8	8.2	0.8	2.5	4.8	1.7	1.8	2.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.0	22.6	20.2	44.8	36.4	27.0	76.0	31.3	28.5	49.8	29.0	28.5
LnGrp LOS	F	C	C	D	D	C	E	C	C	D	C	C
Approach Vol, veh/h		1000			566			883			577	
Approach Delay, s/veh		70.6			38.0			34.7			31.5	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	31.2	12.1	40.4	11.0	31.2	21.0	31.6				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	8.0	41.6	10.0	49.0	5.0	44.6	15.0	44.0				
Max Q Clear Time (g_c+I1), s	5.8	13.8	6.2	9.6	5.8	8.4	17.0	19.5				
Green Ext Time (p_c), s	0.0	8.2	0.1	4.2	0.0	4.9	0.0	3.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			46.6									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	632	13	16	1414	46	0	0	3	59	0	52
Future Volume (veh/h)	11	632	13	16	1414	46	0	0	3	59	0	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	12	695	10	18	1554	51	0	0	1	65	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	10	10	10	10	10	3	3	3	2	2	2
Cap, veh/h	35	2007	873	49	2010	66	0	0	162	252	0	0
Arrive On Green	0.02	0.60	0.60	0.03	0.61	0.61	0.00	0.00	0.11	0.11	0.00	0.00
Sat Flow, veh/h	1668	3328	1447	1668	3286	108	0	0	1525	1389	0	0
Grp Volume(v), veh/h	12	695	10	18	785	820	0	0	1	65	0	0
Grp Sat Flow(s),veh/h/ln	1668	1664	1447	1668	1664	1729	0	0	1526	1389	0	0
Q Serve(g_s), s	0.5	7.2	0.2	0.7	23.9	24.2	0.0	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	7.2	0.2	0.7	23.9	24.2	0.0	0.0	0.0	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	35	2007	873	49	1018	1058	0	0	163	252	0	0
V/C Ratio(X)	0.35	0.35	0.01	0.36	0.77	0.78	0.00	0.00	0.01	0.26	0.00	0.00
Avail Cap(c_a), veh/h	169	2171	944	169	1085	1128	0	0	663	711	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.3	6.9	5.5	32.8	9.8	9.9	0.0	0.0	27.6	28.9	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.2	0.0	4.4	4.0	4.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.1	0.1	0.3	7.9	8.3	0.0	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	7.1	5.5	37.3	13.9	13.9	0.0	0.0	27.6	29.5	0.0	0.0
LnGrp LOS	D	A	A	D	B	B	A	A	C	C	A	A
Approach Vol, veh/h		717			1623			1			65	
Approach Delay, s/veh		7.6			14.1			27.6			29.5	
Approach LOS		A			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.4	7.0	48.6		13.4	6.4	49.2				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	45.0		30.0	7.0	45.0				
Max Q Clear Time (g_c+1), s		2.0	2.7	9.2		5.1	2.5	26.2				
Green Ext Time (p_c), s		0.0	0.0	10.7		0.3	0.0	16.0				

Intersection Summary

HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	328	223	143	113	577	164	403	1223	75	116	770	508
Future Volume (veh/h)	328	223	143	113	577	164	403	1223	75	116	770	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	357	242	0	123	627	33	438	1329	32	126	837	297
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
Percent Heavy Veh, %	10	10	10	2	2	2	6	6	6	6	6	6
Cap, veh/h	419	700		150	587	256	505	1941	592	218	1055	462
Arrive On Green	0.13	0.21	0.00	0.08	0.17	0.17	0.15	0.39	0.39	0.07	0.31	0.31
Sat Flow, veh/h	3237	3328	1485	1781	3554	1548	3346	4944	1509	3346	3441	1507
Grp Volume(v), veh/h	357	242	0	123	627	33	438	1329	32	126	837	297
Grp Sat Flow(s),veh/h/ln	1618	1664	1485	1781	1777	1548	1673	1648	1509	1673	1721	1507
Q Serve(g_s), s	13.1	7.5	0.0	8.2	20.0	2.2	15.5	27.0	1.6	4.4	27.0	20.6
Cycle Q Clear(g_c), s	13.1	7.5	0.0	8.2	20.0	2.2	15.5	27.0	1.6	4.4	27.0	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	700		150	587	256	505	1941	592	218	1055	462
V/C Ratio(X)	0.85	0.35		0.82	1.07	0.13	0.87	0.68	0.05	0.58	0.79	0.64
Avail Cap(c_a), veh/h	535	700		294	587	256	691	1941	592	415	1137	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	40.7	0.0	54.5	50.5	43.1	50.2	30.5	22.8	55.0	38.5	36.2
Incr Delay (d2), s/veh	10.3	0.6	0.0	8.0	56.7	0.2	7.9	1.3	0.1	1.8	4.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	3.1	0.0	4.0	13.5	0.9	7.0	10.9	0.6	1.9	12.0	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	41.3	0.0	62.5	107.2	43.3	58.1	31.9	22.9	56.8	42.9	40.1
LnGrp LOS	E	D		E	F	D	E	C	C	E	D	D
Approach Vol, veh/h		599			783			1799			1260	
Approach Delay, s/veh		53.6			97.5			38.1			43.6	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	55.0	17.7	33.0	25.8	44.6	23.2	27.5				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	15.0	40.0	20.0	25.0	25.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+1), s	10.4	29.0	10.2	9.5	17.5	29.0	15.1	22.0				
Green Ext Time (p_c), s	0.2	8.9	0.1	2.2	0.8	7.6	0.6	0.0				

Intersection Summary

HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	368	34	24	780	22	59	8	28	11	5	16
Future Volume (veh/h)	7	368	34	24	780	22	59	8	28	11	5	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	418	20	27	886	13	67	9	6	12	6	3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	27	1162	503	82	1272	551	388	41	248	261	111	36
Arrive On Green	0.01	0.33	0.33	0.05	0.36	0.36	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1538	1781	3554	1539	1265	256	1550	658	697	226
Grp Volume(v), veh/h	8	418	20	27	886	13	76	0	6	21	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1538	1781	1777	1539	1521	0	1550	1581	0	0
Q Serve(g_s), s	0.2	3.3	0.3	0.5	7.8	0.2	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	3.3	0.3	0.5	7.8	0.2	1.3	0.0	0.1	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.88		1.00	0.57		0.14
Lane Grp Cap(c), veh/h	27	1162	503	82	1272	551	429	0	248	408	0	0
V/C Ratio(X)	0.30	0.36	0.04	0.33	0.70	0.02	0.18	0.00	0.02	0.05	0.00	0.00
Avail Cap(c_a), veh/h	343	1563	677	343	1563	677	1386	0	1279	1421	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.7	9.3	8.3	16.8	10.0	7.6	13.4	0.0	12.9	13.0	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.2	0.0	2.3	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.0	0.1	0.2	2.3	0.0	0.5	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	9.5	8.4	19.1	11.0	7.6	13.5	0.0	12.9	13.0	0.0	0.0
LnGrp LOS	C	A	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		446			926			82			21	
Approach Delay, s/veh		9.7			11.2			13.4			13.0	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.8	6.7	17.9		11.8	5.5	19.0				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+1), s		3.3	2.5	5.3		3.4	2.2	9.8				
Green Ext Time (p_c), s		0.2	0.0	2.1		0.0	0.0	3.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											10.9	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary  
32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	356	11	27	721	136	33	23	46	184	22	88
Future Volume (veh/h)	45	356	11	27	721	136	33	23	46	184	22	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	379	6	29	767	79	35	24	16	196	23	79
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	1268	549	82	1193	516	327	198	422	349	45	101
Arrive On Green	0.07	0.36	0.36	0.05	0.34	0.34	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1539	1781	3554	1538	798	728	1555	863	165	371
Grp Volume(v), veh/h	48	379	6	29	767	79	59	0	16	298	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1539	1781	1777	1538	1527	0	1555	1400	0	0
Q Serve(g_s), s	1.3	4.0	0.1	0.8	9.5	1.9	0.0	0.0	0.4	9.2	0.0	0.0
Cycle Q Clear(g_c), s	1.3	4.0	0.1	0.8	9.5	1.9	1.2	0.0	0.4	10.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.59		1.00	0.66		0.27
Lane Grp Cap(c), veh/h	120	1268	549	82	1193	516	524	0	422	494	0	0
V/C Ratio(X)	0.40	0.30	0.01	0.35	0.64	0.15	0.11	0.00	0.04	0.60	0.00	0.00
Avail Cap(c_a), veh/h	683	2384	1032	683	2384	1032	831	0	745	793	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.3	12.1	10.8	24.1	14.7	12.1	14.3	0.0	14.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.1	0.0	2.6	0.6	0.1	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.4	0.0	0.4	3.4	0.6	0.5	0.0	0.1	3.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	12.2	10.8	26.7	15.3	12.3	14.3	0.0	14.0	18.2	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		433			875			75			298	
Approach Delay, s/veh		13.7			15.4			14.3			18.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.2	7.4	24.6		20.2	8.5	23.5				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+11), s		3.2	2.8	6.0		12.4	3.3	11.5				
Green Ext Time (p_c), s		0.2	0.0	2.7		1.0	0.1	6.0				

Intersection Summary

HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	429	106	236	695	274	111	433	361	147	451	61
Future Volume (veh/h)	72	429	106	236	695	274	111	433	361	147	451	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	79	471	97	259	764	265	122	476	259	162	496	57
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	734	150	239	823	286	129	570	308	195	944	108
Arrive On Green	0.06	0.25	0.25	0.14	0.32	0.32	0.07	0.26	0.26	0.11	0.30	0.30
Sat Flow, veh/h	1781	2927	599	1767	2558	887	1767	2197	1188	1767	3181	364
Grp Volume(v), veh/h	79	285	283	259	527	502	122	381	354	162	274	279
Grp Sat Flow(s),veh/h/ln	1781	1777	1748	1767	1763	1682	1767	1763	1622	1767	1763	1782
Q Serve(g_s), s	4.2	13.7	13.9	13.0	27.8	27.8	6.6	19.7	19.8	8.6	12.4	12.5
Cycle Q Clear(g_c), s	4.2	13.7	13.9	13.0	27.8	27.8	6.6	19.7	19.8	8.6	12.4	12.5
Prop In Lane	1.00		0.34	1.00		0.53	1.00		0.73	1.00		0.20
Lane Grp Cap(c), veh/h	114	445	438	239	567	541	129	457	421	195	523	529
V/C Ratio(X)	0.69	0.64	0.65	1.08	0.93	0.93	0.95	0.83	0.84	0.83	0.52	0.53
Avail Cap(c_a), veh/h	130	483	475	239	589	562	129	558	513	313	741	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	32.1	32.2	41.6	31.5	31.5	44.4	33.6	33.7	41.9	28.1	28.2
Incr Delay (d2), s/veh	9.4	1.7	1.9	82.2	20.2	21.0	62.6	8.9	10.1	4.9	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.0	6.0	11.0	14.6	14.1	5.1	9.3	8.8	4.0	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	33.9	34.1	123.8	51.7	52.5	107.0	42.6	43.9	46.7	29.0	29.0
LnGrp LOS	D	C	C	F	D	D	F	D	D	D	C	C
Approach Vol, veh/h		647			1288			857			715	
Approach Delay, s/veh		36.4			66.5			52.3			33.0	
Approach LOS		D			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	31.9	18.0	30.6	12.0	35.5	11.2	37.4				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	30.4	13.0	26.1	7.0	40.4	7.0	32.1					
Max Q Clear Time (g_c+fl), s	21.8	15.0	15.9	8.6	14.5	6.2	29.8					
Green Ext Time (p_c), s	0.1	3.1	0.0	1.7	0.0	3.5	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D

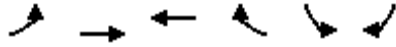
Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
 34: Bellegrave Ave & Proposed Driveway B

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	27	913	836	18	65	61	
Future Volume (veh/h)	27	913	836	18	65	61	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1870	1870	
Adj Flow Rate, veh/h	29	971	889	18	69	10	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	3	3	3	3	2	2	
Cap, veh/h	64	2133	1459	30	124	18	
Arrive On Green	0.04	0.61	0.41	0.41	0.08	0.08	
Sat Flow, veh/h	1767	3618	3627	72	1514	219	
Grp Volume(v), veh/h	29	971	443	464	80	0	
Grp Sat Flow(s),veh/h/ln	1767	1763	1763	1843	1755	0	
Q Serve(g_s), s	0.5	4.3	5.7	5.7	1.3	0.0	
Cycle Q Clear(g_c), s	0.5	4.3	5.7	5.7	1.3	0.0	
Prop In Lane	1.00			0.04	0.86	0.12	
Lane Grp Cap(c), veh/h	64	2133	728	761	144	0	
V/C Ratio(X)	0.46	0.46	0.61	0.61	0.56	0.00	
Avail Cap(c_a), veh/h	307	3370	1103	1153	1129	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	13.6	3.1	6.6	6.6	12.7	0.0	
Incr Delay (d2), s/veh	5.0	0.2	0.8	0.8	3.3	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.2	0.2	1.2	1.3	0.5	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.6	3.2	7.5	7.4	16.0	0.0	
LnGrp LOS	B	A	A	A	B	A	
Approach Vol, veh/h		1000	907		80		
Approach Delay, s/veh		3.7	7.4		16.0		
Approach LOS		A	A		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				21.9	6.9	5.5	16.4
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				27.5	18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s				6.3	3.3	2.5	7.7
Green Ext Time (p_c), s				7.2	0.1	0.0	4.2
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			5.9				
HCM 6th LOS			A				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	844	98	39	700	23	114	10	136	5	22	40
Future Volume (veh/h)	36	844	98	39	700	23	114	10	136	5	22	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	38	898	69	41	745	14	121	11	29	5	23	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	399	1027	848	173	1951	857	153	357	292	16	214	176
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.09	0.19	0.19	0.01	0.12	0.12
Sat Flow, veh/h	700	1856	1532	577	3526	1548	1767	1856	1515	1767	1856	1528
Grp Volume(v), veh/h	38	898	69	41	745	14	121	11	29	5	23	6
Grp Sat Flow(s),veh/h/ln	700	1856	1532	577	1763	1548	1767	1856	1515	1767	1856	1528
Q Serve(g_s), s	2.5	31.6	1.6	5.0	9.0	0.3	5.1	0.4	1.2	0.2	0.8	0.3
Cycle Q Clear(g_c), s	11.5	31.6	1.6	36.7	9.0	0.3	5.1	0.4	1.2	0.2	0.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	1027	848	173	1951	857	153	357	292	16	214	176
V/C Ratio(X)	0.10	0.87	0.08	0.24	0.38	0.02	0.79	0.03	0.10	0.31	0.11	0.03
Avail Cap(c_a), veh/h	438	1129	932	205	2146	942	187	945	772	164	921	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	14.6	7.9	30.5	9.6	7.6	33.9	24.8	25.1	37.2	29.9	29.7
Incr Delay (d2), s/veh	0.1	7.3	0.0	0.7	0.1	0.0	13.8	0.0	0.1	3.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	13.4	0.5	0.7	3.1	0.1	2.7	0.2	0.4	0.1	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	21.9	7.9	31.2	9.7	7.6	47.6	24.8	25.2	41.1	30.0	29.7
LnGrp LOS	B	C	A	C	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1005			800			161			34	
Approach Delay, s/veh		20.6			10.7			42.0			31.6	
Approach LOS		C			B			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.5	15.2		48.8	5.7	21.0		48.8				
Change Period (Y+Rc), s	5.0	6.5		7.0	5.0	6.5		7.0				
Max Green Setting (Gmax), s	37.5	37.5		46.0	7.0	38.5		46.0				
Max Q Clear Time (g_c+1), s	2.8	2.8		38.7	2.2	3.2		33.6				
Green Ext Time (p_c), s	0.0	0.1		3.2	0.0	0.1		5.9				

Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	24	5	651	271	627	74	1004	437	255	625	60
Future Volume (veh/h)	13	24	5	651	271	627	74	1004	437	255	625	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1826	1826	1826	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	14	26	1	700	291	607	80	1080	370	274	672	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	10	10	5	5	5	6	6	6	6	6	6
Cap, veh/h	32	103	46	749	427	630	102	1298	917	299	1691	754
Arrive On Green	0.02	0.03	0.03	0.22	0.23	0.23	0.06	0.38	0.38	0.17	0.49	0.49
Sat Flow, veh/h	1668	3328	1485	3374	1826	1547	1725	3441	1529	1725	3441	1535
Grp Volume(v), veh/h	14	26	1	700	291	607	80	1080	370	274	672	32
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1687	1826	1547	1725	1721	1529	1725	1721	1535
Q Serve(g_s), s	0.9	0.8	0.1	21.8	15.5	25.0	4.9	30.4	13.7	16.7	13.2	1.2
Cycle Q Clear(g_c), s	0.9	0.8	0.1	21.8	15.5	25.0	4.9	30.4	13.7	16.7	13.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	103	46	749	427	630	102	1298	917	299	1691	754
V/C Ratio(X)	0.44	0.25	0.02	0.94	0.68	0.96	0.79	0.83	0.40	0.92	0.40	0.04
Avail Cap(c_a), veh/h	94	187	83	749	427	630	195	1476	996	299	1691	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	50.5	50.2	40.8	37.3	30.9	49.6	30.2	11.3	43.4	17.2	14.1
Incr Delay (d2), s/veh	9.2	1.3	0.2	18.9	4.4	27.0	12.4	3.8	0.3	31.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.0	10.9	7.4	19.4	2.4	13.0	4.5	9.7	5.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	51.8	50.4	59.7	41.7	57.9	62.0	34.0	11.6	74.8	17.3	14.1
LnGrp LOS	E	D	D	E	D	E	E	C	B	E	B	B
Approach Vol, veh/h		41			1598			1530			978	
Approach Delay, s/veh		54.9			55.7			30.0			33.3	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	46.3	28.2	9.3	10.8	58.5	6.5	31.0				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	10.5	45.8	23.7	6.0	12.1	52.2	6.0	23.7				
Max Q Clear Time (g_c+1/3), s	10.5	32.4	23.8	2.8	6.9	15.2	2.9	27.0				
Green Ext Time (p_c), s	0.0	7.5	0.0	0.0	0.1	5.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔	↑↑	↔	↔	↑↑	↔
Traffic Volume (veh/h)	140	722	50	95	1253	96	109	614	166	160	626	136
Future Volume (veh/h)	140	722	50	95	1253	96	109	614	166	160	626	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	157	811	20	107	1408	55	122	690	105	180	703	74
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	224	1920	586	172	1842	570	151	858	375	212	980	429
Arrive On Green	0.07	0.39	0.39	0.05	0.37	0.37	0.09	0.24	0.24	0.12	0.28	0.28
Sat Flow, veh/h	3374	4985	1521	3374	4985	1541	1767	3526	1541	1767	3526	1543
Grp Volume(v), veh/h	157	811	20	107	1408	55	122	690	105	180	703	74
Grp Sat Flow(s),veh/h/ln	1687	1662	1521	1687	1662	1541	1767	1763	1541	1767	1763	1543
Q Serve(g_s), s	4.5	11.9	0.8	3.1	24.8	2.3	6.8	18.4	5.5	10.0	17.9	3.6
Cycle Q Clear(g_c), s	4.5	11.9	0.8	3.1	24.8	2.3	6.8	18.4	5.5	10.0	17.9	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	1920	586	172	1842	570	151	858	375	212	980	429
V/C Ratio(X)	0.70	0.42	0.03	0.62	0.76	0.10	0.81	0.80	0.28	0.85	0.72	0.17
Avail Cap(c_a), veh/h	845	2248	686	1183	2248	695	443	1060	463	443	1060	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	22.5	19.1	46.4	27.6	20.6	44.8	35.5	30.7	43.0	32.5	27.3
Incr Delay (d2), s/veh	1.5	0.1	0.0	2.7	1.3	0.1	3.8	3.4	0.3	3.6	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.6	0.3	1.4	9.8	0.8	3.1	8.2	2.1	4.5	7.8	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	22.7	19.1	49.1	28.9	20.6	48.6	38.9	31.0	46.6	34.5	27.5
LnGrp LOS	D	C	B	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		988			1570			917			957	
Approach Delay, s/veh		26.5			30.0			39.3			36.2	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	43.9	13.0	33.2	11.1	42.4	16.5	29.8				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	35.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0				
Max Q Clear Time (g_c+1.5), s	15.1	13.9	8.8	19.9	6.5	26.8	12.0	20.4				
Green Ext Time (p_c), s	0.3	6.6	0.1	3.1	0.2	10.1	0.1	3.0				

Intersection Summary

HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1067	58	86	1368	78	98	210	133	110	204	27
Future Volume (veh/h)	33	1067	58	86	1368	78	98	210	133	110	204	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	38	1212	30	98	1555	50	111	239	28	125	232	31
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	59	1564	679	125	1694	753	140	311	257	156	623	272
Arrive On Green	0.03	0.45	0.45	0.07	0.49	0.49	0.08	0.17	0.17	0.09	0.18	0.18
Sat Flow, veh/h	1739	3469	1505	1739	3469	1543	1767	1856	1536	1767	3526	1537
Grp Volume(v), veh/h	38	1212	30	98	1555	50	111	239	28	125	232	31
Grp Sat Flow(s),veh/h/ln	1739	1735	1505	1739	1735	1543	1767	1856	1536	1767	1763	1537
Q Serve(g_s), s	1.9	26.6	1.0	5.0	37.5	1.5	5.6	11.1	1.4	6.3	5.2	1.5
Cycle Q Clear(g_c), s	1.9	26.6	1.0	5.0	37.5	1.5	5.6	11.1	1.4	6.3	5.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	1564	679	125	1694	753	140	311	257	156	623	272
V/C Ratio(X)	0.64	0.78	0.04	0.79	0.92	0.07	0.79	0.77	0.11	0.80	0.37	0.11
Avail Cap(c_a), veh/h	578	1728	750	578	1728	768	587	822	680	587	1561	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	20.9	13.9	41.2	21.4	12.2	40.8	35.9	31.9	40.4	32.8	31.2
Incr Delay (d2), s/veh	4.3	2.2	0.0	4.1	8.3	0.0	3.7	1.5	0.1	3.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	10.6	0.3	2.3	16.0	0.5	2.5	5.1	0.5	2.8	2.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	23.1	13.9	45.3	29.7	12.3	44.5	37.4	31.9	43.9	32.9	31.3
LnGrp LOS	D	C	B	D	C	B	D	D	C	D	C	C
Approach Vol, veh/h		1280			1703			378			388	
Approach Delay, s/veh		23.6			30.1			39.1			36.3	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.6	11.7	21.5	11.0	46.2	12.5	20.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.0	45.0	30.0	40.0	30.0	45.0	30.0	40.0				
Max Q Clear Time (g_c+1), s	13.9	39.5	7.6	7.2	7.0	28.6	8.3	13.1				
Green Ext Time (p_c), s	0.0	4.6	0.1	1.1	0.1	9.4	0.1	0.9				

Intersection Summary

HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	168	1037	68	294	1330	200	131	516	404	200	395	87
Future Volume (veh/h)	168	1037	68	294	1330	200	131	516	404	200	395	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	179	1103	32	313	1415	133	139	549	212	213	420	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	4	4	4	4	4	4
Cap, veh/h	237	2212	684	369	1676	745	196	909	280	271	1020	314
Arrive On Green	0.07	0.44	0.44	0.11	0.48	0.48	0.06	0.18	0.18	0.08	0.20	0.20
Sat Flow, veh/h	3374	4985	1542	3374	3469	1543	3401	5025	1547	3401	5025	1548
Grp Volume(v), veh/h	179	1103	32	313	1415	133	139	549	212	213	420	20
Grp Sat Flow(s),veh/h/ln	1687	1662	1542	1687	1735	1543	1700	1675	1547	1700	1675	1548
Q Serve(g_s), s	5.7	17.4	1.3	10.0	39.2	5.4	4.4	11.1	14.3	6.8	8.0	1.1
Cycle Q Clear(g_c), s	5.7	17.4	1.3	10.0	39.2	5.4	4.4	11.1	14.3	6.8	8.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	2212	684	369	1676	745	196	909	280	271	1020	314
V/C Ratio(X)	0.76	0.50	0.05	0.85	0.84	0.18	0.71	0.60	0.76	0.79	0.41	0.06
Avail Cap(c_a), veh/h	414	2212	684	414	1676	745	386	1343	413	386	1343	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	21.9	17.4	48.1	24.8	16.1	50.9	41.4	42.8	49.7	38.1	35.4
Incr Delay (d2), s/veh	1.9	0.8	0.1	12.7	5.4	0.5	1.8	0.2	2.0	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.8	0.5	4.8	16.7	2.0	1.9	4.6	5.6	3.0	3.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	22.7	17.5	60.7	30.2	16.6	52.7	41.7	44.8	53.8	38.2	35.4
LnGrp LOS	D	C	B	E	C	B	D	D	D	D	D	D
Approach Vol, veh/h		1314			1861			900			653	
Approach Delay, s/veh		26.5			34.4			44.1			43.2	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	54.7	10.8	27.9	12.2	59.0	13.3	25.5				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	13.5	34.1	12.5	29.4	13.5	34.1	12.5	29.4				
Max Q Clear Time (g_c+1/2g), s	11.0	19.4	6.4	10.0	7.7	41.2	8.8	16.3				
Green Ext Time (p_c), s	0.0	4.1	0.0	1.5	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1133	634	0	1204	686	0	0	0	194	0	790
Future Volume (veh/h)	0	1133	634	0	1204	686	0	0	0	194	0	790
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826				1826	1826	1826
Adj Flow Rate, veh/h	0	1180	312	0	1254	715				202	0	778
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	5	5				5	5	5
Cap, veh/h	0	2459	761	0	2459	1203				997	0	887
Arrive On Green	0.00	0.49	0.49	0.00	0.99	0.99				0.29	0.00	0.29
Sat Flow, veh/h	0	5149	1543	0	5149	1540				3478	0	3095
Grp Volume(v), veh/h	0	1180	312	0	1254	715				202	0	778
Grp Sat Flow(s),veh/h/ln	0	1662	1543	0	1662	1540				1739	0	1547
Q Serve(g_s), s	0.0	8.6	7.1	0.0	0.4	2.1				2.4	0.0	13.2
Cycle Q Clear(g_c), s	0.0	8.6	7.1	0.0	0.4	2.1				2.4	0.0	13.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2459	761	0	2459	1203				997	0	887
V/C Ratio(X)	0.00	0.48	0.41	0.00	0.51	0.59				0.20	0.00	0.88
Avail Cap(c_a), veh/h	0	2459	761	0	2459	1203				1069	0	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.80				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.3	8.9	0.0	0.2	0.0				14.9	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.7	1.6	0.0	0.6	1.7				0.0	0.0	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	2.2	0.0	0.2	0.7				0.9	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.9	10.5	0.0	0.8	1.8				14.9	0.0	27.0
LnGrp LOS	A	A	B	A	A	A				B	A	C
Approach Vol, veh/h		1492			1969						980	
Approach Delay, s/veh		10.0			1.2						24.5	
Approach LOS		B			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		33.4		21.6		33.4						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		26.0		16.9		26.0						
Max Q Clear Time (g_c+I1), s		10.6		15.2		4.1						
Green Ext Time (p_c), s		6.1		0.6		8.8						

Intersection Summary

HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.



HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	670	576	0	1180	293	712	2	544	0	0	0
Future Volume (veh/h)	0	670	576	0	1180	293	712	2	544	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	0	698	600	0	1229	153	743	0	360			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	5	5	0	5	5	5	5	5			
Cap, veh/h	0	2613	1203	0	2613	809	889	0	791			
Arrive On Green	0.00	1.00	1.00	0.00	0.52	0.52	0.26	0.00	0.26			
Sat Flow, veh/h	0	5149	1540	0	5149	1543	3478	0	3095			
Grp Volume(v), veh/h	0	698	600	0	1229	153	743	0	360			
Grp Sat Flow(s),veh/h/ln	0	1662	1540	0	1662	1543	1739	0	1547			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.6	2.9	11.1	0.0	5.4			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.6	2.9	11.1	0.0	5.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2613	1203	0	2613	809	889	0	791			
V/C Ratio(X)	0.00	0.27	0.50	0.00	0.47	0.19	0.84	0.00	0.45			
Avail Cap(c_a), veh/h	0	2613	1203	0	2613	809	1005	0	895			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.87	0.87	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	8.3	6.9	19.4	0.0	17.2			
Incr Delay (d2), s/veh	0.0	0.2	1.3	0.0	0.6	0.5	5.0	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.4	0.0	2.5	0.9	4.6	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	1.3	0.0	8.9	7.4	24.4	0.0	17.4			
LnGrp LOS	A	A	A	A	A	A	C	A	B			
Approach Vol, veh/h		1298			1382			1103				
Approach Delay, s/veh		0.7			8.7			22.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2			6			8				
Phs Duration (G+Y+Rc), s		35.1			35.1			19.9				
Change Period (Y+Rc), s		6.3			6.3			5.8				
Max Green Setting (Gmax), s		27.0			27.0			15.9				
Max Q Clear Time (g_c+11), s		2.0			10.6			13.1				
Green Ext Time (p_c), s		4.9			6.2			0.9				

Intersection Summary

HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	619	591	127	226	686	162	346	957	181	69	676	634
Future Volume (veh/h)	619	591	127	226	686	162	346	957	181	69	676	634
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	688	657	41	251	762	40	384	1063	91	77	751	477
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	10	10	10	3	3	3	6	6	6	6	6	6
Cap, veh/h	640	1526	472	315	1079	328	448	1776	549	173	1370	423
Arrive On Green	0.20	0.32	0.32	0.09	0.21	0.21	0.13	0.36	0.36	0.05	0.28	0.28
Sat Flow, veh/h	3237	4782	1478	3428	5066	1540	3346	4944	1528	3346	4944	1527
Grp Volume(v), veh/h	688	657	41	251	762	40	384	1063	91	77	751	477
Grp Sat Flow(s),veh/h/ln	1618	1594	1478	1714	1689	1540	1673	1648	1528	1673	1648	1527
Q Serve(g_s), s	25.0	13.7	2.5	9.1	17.6	2.7	14.2	22.2	5.1	2.8	16.4	35.0
Cycle Q Clear(g_c), s	25.0	13.7	2.5	9.1	17.6	2.7	14.2	22.2	5.1	2.8	16.4	35.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	640	1526	472	315	1079	328	448	1776	549	173	1370	423
V/C Ratio(X)	1.07	0.43	0.09	0.80	0.71	0.12	0.86	0.60	0.17	0.45	0.55	1.13
Avail Cap(c_a), veh/h	640	1703	526	678	1804	548	662	1776	549	662	1370	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	34.0	30.1	56.2	46.0	40.2	53.5	33.0	27.6	58.1	38.9	45.7
Incr Delay (d2), s/veh	57.2	0.2	0.1	3.5	0.9	0.2	6.4	0.6	0.1	1.3	0.5	83.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	5.4	0.9	4.1	7.5	1.0	6.4	8.9	1.9	1.2	6.7	23.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.9	34.1	30.2	59.7	46.9	40.3	60.0	33.6	27.7	59.5	39.4	129.2
LnGrp LOS	F	C	C	E	D	D	E	C	C	E	D	F
Approach Vol, veh/h		1386			1053			1538			1305	
Approach Delay, s/veh		70.6			49.7			39.8			73.4	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	46.6	47.3	11.5	50.9	30.0	33.9	21.9	40.5				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	25.0	45.0	25.0	35.0	25.0	45.0	25.0	35.0				
Max Q Clear Time (g_c+I1), s	11.5	15.7	4.8	24.2	27.0	19.6	16.2	37.0				
Green Ext Time (p_c), s	0.5	5.2	0.1	5.6	0.0	5.9	0.7	0.0				

Intersection Summary

HCM 6th Ctrl Delay	58.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	220	63	205	215	112	45	559	155	69	478	51
Future Volume (veh/h)	136	220	63	205	215	112	45	559	155	69	478	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	162	262	13	244	256	31	54	665	85	82	569	26
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	190	310	256	272	405	340	69	2131	651	104	2230	674
Arrive On Green	0.11	0.17	0.17	0.15	0.22	0.22	0.04	0.42	0.42	0.06	0.44	0.44
Sat Flow, veh/h	1781	1870	1548	1781	1870	1574	1753	5025	1534	1753	5025	1518
Grp Volume(v), veh/h	162	262	13	244	256	31	54	665	85	82	569	26
Grp Sat Flow(s),veh/h/ln	1781	1870	1548	1781	1870	1574	1753	1675	1534	1753	1675	1518
Q Serve(g_s), s	9.8	15.0	0.8	14.8	13.7	1.7	3.4	9.7	3.7	5.1	7.8	1.1
Cycle Q Clear(g_c), s	9.8	15.0	0.8	14.8	13.7	1.7	3.4	9.7	3.7	5.1	7.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	310	256	272	405	340	69	2131	651	104	2230	674
V/C Ratio(X)	0.85	0.85	0.05	0.90	0.63	0.09	0.78	0.31	0.13	0.79	0.26	0.04
Avail Cap(c_a), veh/h	227	420	348	413	629	529	120	2131	651	120	2230	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	44.5	38.6	45.7	39.1	34.5	52.4	21.0	19.3	51.1	19.2	17.3
Incr Delay (d2), s/veh	19.8	8.7	0.0	11.3	0.6	0.0	7.0	0.4	0.4	22.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	7.6	0.3	7.4	6.3	0.7	1.6	3.8	1.4	2.9	3.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	53.2	38.6	57.0	39.7	34.5	59.4	21.4	19.7	73.5	19.5	17.4
LnGrp LOS	E	D	D	E	D	C	E	C	B	E	B	B
Approach Vol, veh/h		437			531			804			677	
Approach Delay, s/veh		58.3			47.4			23.8			25.9	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	54.2	21.3	23.5	8.8	56.3	15.8	29.1				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	5	* 31	25.5	24.7	7.5	30.5	14.0	* 37				
Max Q Clear Time (g_c+17), s	11.7	16.8	17.0	5.4	9.8	11.8	15.7					
Green Ext Time (p_c), s	0.0	3.3	0.0	0.2	0.0	2.7	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	39	286	15	7	12	299	514	5	19	516	469
Future Volume (veh/h)	302	39	286	15	7	12	299	514	5	19	516	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	373	48	112	19	9	1	369	635	4	23	637	164
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	416	469	395	37	71	59	406	2483	747	43	1003	439
Arrive On Green	0.24	0.25	0.25	0.02	0.04	0.04	0.23	0.49	0.49	0.02	0.29	0.29
Sat Flow, veh/h	1767	1856	1563	1767	1856	1532	1753	5025	1511	1753	3497	1531
Grp Volume(v), veh/h	373	48	112	19	9	1	369	635	4	23	637	164
Grp Sat Flow(s),veh/h/ln	1767	1856	1563	1767	1856	1532	1753	1675	1511	1753	1749	1531
Q Serve(g_s), s	17.7	1.7	5.0	0.9	0.4	0.1	17.8	6.3	0.1	1.1	13.8	7.4
Cycle Q Clear(g_c), s	17.7	1.7	5.0	0.9	0.4	0.1	17.8	6.3	0.1	1.1	13.8	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	469	395	37	71	59	406	2483	747	43	1003	439
V/C Ratio(X)	0.90	0.10	0.28	0.51	0.13	0.02	0.91	0.26	0.01	0.53	0.64	0.37
Avail Cap(c_a), veh/h	540	1277	1076	118	834	688	455	3492	1050	125	1774	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	24.9	26.1	42.0	40.3	40.1	32.4	12.7	11.1	41.8	27.0	24.7
Incr Delay (d2), s/veh	14.7	0.1	0.4	10.2	0.8	0.1	20.6	0.1	0.0	9.9	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	1.9	0.5	0.2	0.0	9.6	2.3	0.0	0.6	5.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	25.0	26.5	52.3	41.1	40.3	53.0	12.8	11.1	51.8	27.7	25.2
LnGrp LOS	D	C	C	D	D	D	D	B	B	D	C	C
Approach Vol, veh/h		533			29			1008			824	
Approach Delay, s/veh		40.6			48.4			27.5			27.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	47.4	6.3	26.4	24.6	29.4	24.9	7.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	60.3	60.3	5.8	59.7	22.5	44.0	26.5	39.0				
Max Q Clear Time (g_c+1), s	8.3	8.3	2.9	7.0	19.8	15.8	19.7	2.4				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.7	0.3	5.4	0.7	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											30.8	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	141	77	296	175	59	77	610	249	46	618	102
Future Volume (veh/h)	126	141	77	296	175	59	77	610	249	46	618	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	148	166	12	348	206	17	91	718	184	54	727	114
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	185	373	162	390	758	333	116	1742	531	77	979	153
Arrive On Green	0.10	0.11	0.11	0.22	0.22	0.22	0.07	0.35	0.35	0.04	0.33	0.33
Sat Flow, veh/h	1767	3526	1525	1767	3526	1550	1725	4944	1508	1725	2972	466
Grp Volume(v), veh/h	148	166	12	348	206	17	91	718	184	54	421	420
Grp Sat Flow(s),veh/h/ln	1767	1763	1525	1767	1763	1550	1725	1648	1508	1725	1721	1717
Q Serve(g_s), s	6.2	3.4	0.5	14.5	3.7	0.7	3.9	8.4	6.8	2.3	16.5	16.5
Cycle Q Clear(g_c), s	6.2	3.4	0.5	14.5	3.7	0.7	3.9	8.4	6.8	2.3	16.5	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	185	373	162	390	758	333	116	1742	531	77	567	566
V/C Ratio(X)	0.80	0.44	0.07	0.89	0.27	0.05	0.78	0.41	0.35	0.70	0.74	0.74
Avail Cap(c_a), veh/h	582	1857	804	582	1857	817	681	3256	993	681	1133	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	31.8	30.6	28.7	24.8	23.6	34.8	18.6	18.1	35.8	22.6	22.6
Incr Delay (d2), s/veh	3.0	0.8	0.2	8.5	0.2	0.1	4.2	0.2	0.4	4.2	1.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.4	0.2	6.8	1.5	0.2	1.7	3.0	2.3	1.1	6.6	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	32.7	30.8	37.3	25.0	23.7	39.1	18.8	18.5	40.0	24.5	24.5
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		326			571			993			895	
Approach Delay, s/veh		34.2			32.5			20.6			25.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	33.7	20.7	13.5	9.6	32.0	12.5	21.8				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	50.0	25.0	40.0	30.0	50.0	25.0	40.0				
Max Q Clear Time (g_c+1/3), s	14.3	10.4	16.5	5.4	5.9	18.5	8.2	5.7				
Green Ext Time (p_c), s	0.0	6.7	0.2	1.1	0.1	6.2	0.1	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											26.2	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	192	55	495	122	292	64	239	284	504	494	55
Future Volume (veh/h)	42	192	55	495	122	292	64	239	284	504	494	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	44	200	5	322	399	94	67	249	80	525	515	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	10	10	2	2	2	4	4	4	4	4	4
Cap, veh/h	140	279	122	538	565	470	98	712	311	370	823	80
Arrive On Green	0.08	0.08	0.08	0.30	0.30	0.30	0.06	0.20	0.20	0.11	0.26	0.26
Sat Flow, veh/h	1668	3328	1459	1781	1870	1556	1753	3497	1527	3401	3211	311
Grp Volume(v), veh/h	44	200	5	322	399	94	67	249	80	525	280	285
Grp Sat Flow(s),veh/h/ln	1668	1664	1459	1781	1870	1556	1753	1749	1527	1700	1749	1773
Q Serve(g_s), s	1.5	3.5	0.2	9.2	11.3	2.7	2.2	3.6	2.6	6.5	8.5	8.5
Cycle Q Clear(g_c), s	1.5	3.5	0.2	9.2	11.3	2.7	2.2	3.6	2.6	6.5	8.5	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	140	279	122	538	565	470	98	712	311	370	448	454
V/C Ratio(X)	0.31	0.72	0.04	0.60	0.71	0.20	0.68	0.35	0.26	1.42	0.62	0.63
Avail Cap(c_a), veh/h	140	279	122	1104	1159	964	220	1962	857	370	952	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	26.7	25.1	17.7	18.5	15.5	27.6	20.4	20.0	26.6	19.6	19.7
Incr Delay (d2), s/veh	1.3	8.6	0.1	1.1	1.6	0.2	8.0	0.3	0.4	203.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.6	0.1	3.6	4.7	0.9	1.1	1.4	0.9	12.9	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	35.2	25.3	18.8	20.1	15.7	35.6	20.7	20.4	229.9	21.1	21.1
LnGrp LOS	C	D	C	B	C	B	D	C	C	F	C	C
Approach Vol, veh/h		249		815		396		1090				
Approach Delay, s/veh		33.6		19.1		23.1		121.7				
Approach LOS		C		B		C		F				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.0	16.7		9.5	7.9	19.8		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	33.5	33.5		5.0	7.5	32.5		37.0				
Max Q Clear Time (g_c+1), s	19.5	5.6		5.5	4.2	10.5		13.3				
Green Ext Time (p_c), s	0.0	1.9		0.0	0.0	3.5		3.9				

Intersection Summary

HCM 6th Ctrl Delay	65.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↖	↗		↖	↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	245	99	190	42	141	27	190	703	31	41	830	423
Future Volume (veh/h)	245	99	190	42	141	27	190	703	31	41	830	423
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	263	106	144	45	152	21	204	756	31	44	892	206
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	356	414	573	74	256	35	245	1477	61	71	1164	662
Arrive On Green	0.10	0.22	0.22	0.04	0.16	0.16	0.14	0.44	0.44	0.04	0.34	0.34
Sat Flow, veh/h	3456	1870	1574	1781	1601	221	1725	3364	138	1725	3441	1490
Grp Volume(v), veh/h	263	106	144	45	0	173	204	387	400	44	892	206
Grp Sat Flow(s),veh/h/ln	1728	1870	1574	1781	0	1822	1725	1721	1782	1725	1721	1490
Q Serve(g_s), s	5.2	3.3	4.5	1.7	0.0	6.2	8.1	11.4	11.4	1.8	16.2	6.3
Cycle Q Clear(g_c), s	5.2	3.3	4.5	1.7	0.0	6.2	8.1	11.4	11.4	1.8	16.2	6.3
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	356	414	573	74	0	291	245	755	782	71	1164	662
V/C Ratio(X)	0.74	0.26	0.25	0.61	0.00	0.59	0.83	0.51	0.51	0.62	0.77	0.31
Avail Cap(c_a), veh/h	400	945	1020	170	0	884	278	815	844	165	1405	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	22.5	15.6	33.0	0.0	27.3	29.3	14.2	14.2	33.1	20.7	12.7
Incr Delay (d2), s/veh	6.3	0.3	0.2	7.7	0.0	1.9	17.4	0.5	0.5	8.6	2.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.4	1.5	0.9	0.0	2.7	4.4	4.1	4.3	0.9	6.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	22.8	15.9	40.8	0.0	29.3	46.6	14.8	14.7	41.6	22.8	13.0
LnGrp LOS	D	C	B	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		513			218			991			1142	
Approach Delay, s/veh		28.0			31.6			21.3			21.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	28.2	7.4	20.0	7.4	35.3	11.7	15.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	33.0	28.6	6.7	35.4	6.7	33.2	8.1	34.0				
Max Q Clear Time (g_c+fl), s	18.2	18.2	3.7	6.5	3.8	13.4	7.2	8.2				
Green Ext Time (p_c), s	0.1	5.0	0.0	1.1	0.0	5.0	0.1	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											23.5	
HCM 6th LOS											C	



HCM 6th Signalized Intersection Summary  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	638	245	50	1240	0	0	0	0	548	0	238
Future Volume (veh/h)	0	638	245	50	1240	0	0	0	0	548	0	238
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1707	1707	1707	0				1707	1707	1707
Adj Flow Rate, veh/h	0	733	172	57	1425	0				630	0	223
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	13	13	13	13	0				13	13	13
Cap, veh/h	0	2847	872	112	3195	0				712	0	317
Arrive On Green	0.00	0.61	0.61	0.04	0.69	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	4815	1428	3155	4815	0				3252	0	1447
Grp Volume(v), veh/h	0	733	172	57	1425	0				630	0	223
Grp Sat Flow(s),veh/h/ln	0	1554	1428	1577	1554	0				1626	0	1447
Q Serve(g_s), s	0.0	8.7	6.4	2.1	16.6	0.0				22.5	0.0	17.1
Cycle Q Clear(g_c), s	0.0	8.7	6.4	2.1	16.6	0.0				22.5	0.0	17.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2847	872	112	3195	0				712	0	317
V/C Ratio(X)	0.00	0.26	0.20	0.51	0.45	0.00				0.89	0.00	0.70
Avail Cap(c_a), veh/h	0	2847	872	315	3195	0				1314	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.8	10.3	56.9	8.6	0.0				45.4	0.0	43.3
Incr Delay (d2), s/veh	0.0	0.2	0.5	1.3	0.5	0.0				1.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	2.1	0.9	5.3	0.0				9.2	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.0	10.8	58.2	9.0	0.0				46.9	0.0	44.4
LnGrp LOS		A	B	B	E	A				D	A	D
Approach Vol, veh/h		905			1482					853		
Approach Delay, s/veh		11.0			10.9					46.3		
Approach LOS		B			B					D		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.0	79.3		31.8		88.2						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	43.0			48.5		60.0						
Max Q Clear Time (g_c+1/4), s	10.7			24.5		18.6						
Green Ext Time (p_c), s	0.0	6.6		1.7		15.0						

Intersection Summary

HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑		↘	↙	↗	↘		↗
Traffic Volume (veh/h)	218	810	154	0	959	33	370	70	50	37	0	632
Future Volume (veh/h)	218	810	154	0	959	33	370	70	50	37	0	632
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	0	1707	1707	1707	1707	1707	1856	0	1856
Adj Flow Rate, veh/h	242	900	0	0	1066	35	467	0	14	41	0	269
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	13	13	13	0	13	13	13	13	13	3	0	3
Cap, veh/h	163	3349		0	3408	112	604	0	266	0	0	0
Arrive On Green	0.10	0.72	0.00	0.00	0.58	0.58	0.19	0.00	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1626	4661	2547	0	6121	193	3252	0	1435		0	
Grp Volume(v), veh/h	242	900	0	0	798	303	467	0	14		0.0	
Grp Sat Flow(s),veh/h/ln	1626	1554	1273	0	1468	1669	1626	0	1435			
Q Serve(g_s), s	12.0	8.1	0.0	0.0	11.2	11.2	16.4	0.0	1.0			
Cycle Q Clear(g_c), s	12.0	8.1	0.0	0.0	11.2	11.2	16.4	0.0	1.0			
Prop In Lane	1.00		1.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	163	3349		0	2552	967	604	0	266			
V/C Ratio(X)	1.49	0.27		0.00	0.31	0.31	0.77	0.00	0.05			
Avail Cap(c_a), veh/h	163	3349		0	2552	967	1165	0	514			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	54.0	5.9	0.0	0.0	13.0	13.0	46.5	0.0	40.2			
Incr Delay (d2), s/veh	249.4	0.2	0.0	0.0	0.3	0.8	2.2	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.2	2.5	0.0	0.0	3.7	4.4	6.8	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	303.4	6.1	0.0	0.0	13.3	13.8	48.6	0.0	40.3			
LnGrp LOS	F	A		A	B	B	D	A	D			
Approach Vol, veh/h		1142			1101			481				
Approach Delay, s/veh		69.1			13.4			48.4				
Approach LOS		E			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		92.2			16.7	75.5		27.8				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		51.0			* 12	34.0		43.0				
Max Q Clear Time (g_c+I1), s		10.1			14.0	13.2		18.4				
Green Ext Time (p_c), s		5.0			0.0	5.4		2.2				

Intersection Summary

HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	608	50	54	717	51	49	322	73	27	357	79
Future Volume (veh/h)	68	608	50	54	717	51	49	322	73	27	357	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	73	654	24	58	771	51	53	346	23	29	384	23
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	136	1065	988	119	981	65	123	728	318	78	644	281
Arrive On Green	0.08	0.33	0.33	0.07	0.32	0.32	0.07	0.21	0.21	0.05	0.19	0.19
Sat Flow, veh/h	1626	3244	2471	1626	3084	204	1767	3441	1503	1725	3441	1501
Grp Volume(v), veh/h	73	654	24	58	405	417	53	346	23	29	384	23
Grp Sat Flow(s),veh/h/ln	1626	1622	1235	1626	1622	1666	1767	1721	1503	1725	1721	1501
Q Serve(g_s), s	2.5	9.8	0.3	2.0	13.1	13.1	1.7	5.1	0.7	0.9	5.9	0.7
Cycle Q Clear(g_c), s	2.5	9.8	0.3	2.0	13.1	13.1	1.7	5.1	0.7	0.9	5.9	0.7
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	1065	988	119	516	530	123	728	318	78	644	281
V/C Ratio(X)	0.54	0.61	0.02	0.49	0.79	0.79	0.43	0.48	0.07	0.37	0.60	0.08
Avail Cap(c_a), veh/h	423	1688	1463	423	844	867	460	1194	521	449	1194	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	16.3	10.6	25.7	17.9	17.9	25.7	19.9	18.2	26.7	21.4	19.3
Incr Delay (d2), s/veh	1.2	0.6	0.0	1.1	1.0	1.0	0.9	0.5	0.1	1.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.3	0.1	0.8	4.5	4.6	0.7	1.9	0.2	0.4	2.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	16.8	10.6	26.8	18.9	18.9	26.6	20.4	18.3	27.8	22.2	19.5
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	C	B
Approach Vol, veh/h		751			880			422			436	
Approach Delay, s/veh		17.6			19.4			21.1			22.5	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	18.2	8.2	24.6	8.0	16.8	8.8	24.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+1), s	12.5	7.1	4.0	11.8	3.7	7.9	4.5	15.1				
Green Ext Time (p_c), s	0.0	1.8	0.0	4.3	0.0	1.9	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	394	31	251	869	117	69	719	278	117	736	129
Future Volume (veh/h)	84	394	31	251	869	117	69	719	278	117	736	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	92	433	30	276	955	42	76	790	92	129	809	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	114	886	61	341	1058	463	117	990	433	159	1078	472
Arrive On Green	0.07	0.29	0.29	0.11	0.33	0.33	0.07	0.29	0.29	0.09	0.31	0.31
Sat Flow, veh/h	1626	3074	212	3155	3244	1421	1767	3441	1506	1725	3441	1507
Grp Volume(v), veh/h	92	228	235	276	955	42	76	790	92	129	809	49
Grp Sat Flow(s),veh/h/ln	1626	1622	1664	1577	1622	1421	1767	1721	1506	1725	1721	1507
Q Serve(g_s), s	5.0	10.4	10.5	7.6	25.1	1.8	3.7	19.0	4.1	6.6	18.9	2.1
Cycle Q Clear(g_c), s	5.0	10.4	10.5	7.6	25.1	1.8	3.7	19.0	4.1	6.6	18.9	2.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	467	480	341	1058	463	117	990	433	159	1078	472
V/C Ratio(X)	0.80	0.49	0.49	0.81	0.90	0.09	0.65	0.80	0.21	0.81	0.75	0.10
Avail Cap(c_a), veh/h	273	545	559	530	1090	477	297	1156	506	290	1156	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	26.3	26.4	38.9	28.8	20.9	40.7	29.4	24.1	39.8	27.5	21.8
Incr Delay (d2), s/veh	4.9	1.0	1.0	2.6	10.6	0.1	2.2	3.8	0.3	3.8	2.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	4.0	4.2	3.0	10.9	0.6	1.7	8.1	1.5	2.9	7.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	27.3	27.4	41.5	39.3	21.0	42.9	33.2	24.5	43.6	30.3	21.9
LnGrp LOS	D	C	C	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		555			1273			958			987	
Approach Delay, s/veh		30.4			39.2			33.2			31.6	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	31.7	13.7	31.7	9.9	34.0	10.3	35.1				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	15.0	30.0				
Max Q Clear Time (g_c+1), s	10.6	21.0	9.6	12.5	5.7	20.9	7.0	27.1				
Green Ext Time (p_c), s	0.0	4.7	0.0	3.3	0.0	4.5	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				34.4								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	118	528	30	29	828	121	49	193	85	127	103	154
Future Volume (veh/h)	118	528	30	29	828	121	49	193	85	127	103	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	131	587	27	32	920	114	54	214	23	141	114	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	2	2	2
Cap, veh/h	162	1598	73	77	1250	154	120	350	290	181	416	345
Arrive On Green	0.10	0.35	0.35	0.05	0.30	0.30	0.07	0.19	0.19	0.10	0.22	0.22
Sat Flow, veh/h	1626	4561	209	1626	4193	518	1767	1856	1538	1781	1870	1552
Grp Volume(v), veh/h	131	399	215	32	681	353	54	214	23	141	114	47
Grp Sat Flow(s),veh/h/ln	1626	1554	1662	1626	1554	1603	1767	1856	1538	1781	1870	1552
Q Serve(g_s), s	5.0	6.0	6.1	1.2	12.4	12.5	1.9	6.7	0.8	4.9	3.2	1.5
Cycle Q Clear(g_c), s	5.0	6.0	6.1	1.2	12.4	12.5	1.9	6.7	0.8	4.9	3.2	1.5
Prop In Lane	1.00		0.13	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	1089	582	77	927	478	120	350	290	181	416	345
V/C Ratio(X)	0.81	0.37	0.37	0.41	0.73	0.74	0.45	0.61	0.08	0.78	0.27	0.14
Avail Cap(c_a), veh/h	206	1131	605	180	1082	558	196	831	689	197	838	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	15.3	15.3	29.2	19.9	20.0	28.3	23.5	21.1	27.7	20.3	19.7
Incr Delay (d2), s/veh	13.4	0.2	0.4	1.3	2.2	4.4	1.0	2.7	0.2	14.6	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.0	2.2	0.5	4.4	4.9	0.8	3.0	0.3	2.7	1.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	15.5	15.7	30.5	22.2	24.4	29.3	26.2	21.3	42.3	20.7	19.9
LnGrp LOS	D	B	B	C	C	C	C	C	C	D	C	B
Approach Vol, veh/h		745			1066			291			302	
Approach Delay, s/veh		20.1			23.2			26.4			30.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	17.6	7.0	28.1	8.3	19.8	10.3	24.8				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	28.3	7.0	23.0	7.0	28.3	8.0	22.0					
Max Q Clear Time (g_c+1/3), s	8.7	3.2	8.1	3.9	5.2	7.0	14.5					
Green Ext Time (p_c), s	0.0	1.8	0.0	3.6	0.0	0.7	4.0					

Intersection Summary

HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	365	124	115	467	125	245	964	171	249	1501	168
Future Volume (veh/h)	62	365	124	115	467	125	245	964	171	249	1501	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	66	388	36	122	497	126	261	1026	133	265	1597	99
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	64	455	378	108	348	88	289	1321	573	292	1329	583
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.17	0.40	0.40	0.18	0.40	0.40
Sat Flow, veh/h	731	1707	1419	878	1308	332	1668	3328	1443	1668	3328	1460
Grp Volume(v), veh/h	66	388	36	122	0	623	261	1026	133	265	1597	99
Grp Sat Flow(s),veh/h/ln	731	1707	1419	878	0	1640	1668	1664	1443	1668	1664	1460
Q Serve(g_s), s	0.0	24.3	2.2	5.7	0.0	30.0	17.3	30.3	6.9	17.5	45.0	4.9
Cycle Q Clear(g_c), s	30.0	24.3	2.2	30.0	0.0	30.0	17.3	30.3	6.9	17.5	45.0	4.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	455	378	108	0	437	289	1321	573	292	1329	583
V/C Ratio(X)	1.03	0.85	0.10	1.13	0.00	1.43	0.90	0.78	0.23	0.91	1.20	0.17
Avail Cap(c_a), veh/h	64	455	378	108	0	437	370	1329	576	370	1329	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	39.3	31.1	55.2	0.0	41.3	45.7	29.6	22.6	45.6	33.8	21.8
Incr Delay (d2), s/veh	122.1	14.6	0.1	125.1	0.0	205.0	18.8	3.0	0.2	19.4	98.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	11.9	0.8	6.8	0.0	36.8	8.6	12.4	2.4	8.8	35.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	178.4	53.8	31.2	180.3	0.0	246.4	64.5	32.6	22.8	65.0	132.0	21.9
LnGrp LOS	F	D	C	F	A	F	E	C	C	E	F	C
Approach Vol, veh/h		490			745			1420			1961	
Approach Delay, s/veh		69.0			235.6			37.5			117.4	
Approach LOS		E			F			D			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.5	51.2		37.0	24.2	51.5		37.0				
Change Period (Y+Rc), s	4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	25	45.0		30.0	* 25	45.0		30.0				
Max Q Clear Time (g_c+119), s	19.5	32.3		32.0	19.3	47.0		32.0				
Green Ext Time (p_c), s	0.2	6.3		0.0	0.2	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	106.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

<b>Intersection</b>												
Intersection Delay, s/veh	473.3											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	96	586	15	44	640	110	156	366	10	163	444	96
Future Vol, veh/h	96	586	15	44	640	110	156	366	10	163	444	96
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	13	13	13	13	13	13	3	3	3	3	3	3
Mvmt Flow	98	598	15	45	653	112	159	373	10	166	453	98
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	484.5	590.2	288	470.4
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	14%	6%	23%
Vol Thru, %	69%	84%	81%	63%
Vol Right, %	2%	2%	14%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	532	697	794	703
LT Vol	156	96	44	163
Through Vol	366	586	640	444
RT Vol	10	15	110	96
Lane Flow Rate	543	711	810	717
Geometry Grp	1	1	1	1
Degree of Util (X)	1.462	1.943	2.193	1.916
Departure Headway (Hd)	22.018	19.765	18.426	18.886
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	174	192	211	201
Service Time	20.018	17.765	16.426	16.886
HCM Lane V/C Ratio	3.121	3.703	3.839	3.567
HCM Control Delay	288	484.5	590.2	470.4
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	15.3	26.5	33.9	26.9



HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↘		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	6	4	2	361	38	568	5	982	224	504	1313	39
Future Volume (veh/h)	6	4	2	361	38	568	5	982	224	504	1313	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	7	4	1	392	41	255	5	1067	153	548	1427	24
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
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	30	17	40	431	53	332	21	1055	456	384	1778	773
Arrive On Green	0.03	0.03	0.03	0.26	0.26	0.26	0.01	0.32	0.32	0.23	0.53	0.53
Sat Flow, veh/h	1144	654	1512	1668	206	1284	1668	3328	1440	1668	3328	1446
Grp Volume(v), veh/h	11	0	1	392	0	296	5	1067	153	548	1427	24
Grp Sat Flow(s),veh/h/ln1798		0	1512	1668	0	1491	1668	1664	1440	1668	1664	1446
Q Serve(g_s), s	0.8	0.0	0.1	32.0	0.0	25.8	0.4	44.5	11.4	32.3	49.1	1.1
Cycle Q Clear(g_c), s	0.8	0.0	0.1	32.0	0.0	25.8	0.4	44.5	11.4	32.3	49.1	1.1
Prop In Lane	0.64		1.00	1.00		0.86	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	0	40	431	0	385	21	1055	456	384	1778	773
V/C Ratio(X)	0.23	0.00	0.02	0.91	0.00	0.77	0.24	1.01	0.34	1.43	0.80	0.03
Avail Cap(c_a), veh/h	128	0	108	485	0	433	122	1055	456	384	1778	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	0.0	66.6	50.5	0.0	48.2	68.7	48.0	36.7	54.1	26.7	15.5
Incr Delay (d2), s/veh	0.9	0.0	0.1	19.7	0.0	7.3	2.1	30.6	0.4	207.2	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.4	0.0	0.0	0.0	15.7	0.0	10.4	0.2	22.8	4.1	35.6	19.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	0.0	66.7	70.2	0.0	55.5	70.8	78.6	37.1	261.3	29.4	15.5
LnGrp LOS	E	A	E	E	A	E	E	F	D	F	C	B
Approach Vol, veh/h		12		688				1225			1999	
Approach Delay, s/veh		67.7		63.9				73.4			92.8	
Approach LOS		E		E				E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	51.0		9.9	6.5	81.5		42.5				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	32	44.5		10.0	* 10	66.5		40.8				
Max Q Clear Time (g_c+Rc), s	34	46.5		2.8	2.4	51.1		34.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	9.4		1.9				

Intersection Summary

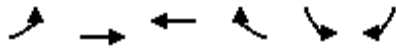
HCM 6th Ctrl Delay	81.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	68	532	1020	351	264	285	
Future Volume (veh/h)	68	532	1020	351	264	285	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1856	1856	
Adj Flow Rate, veh/h	72	560	1074	328	278	253	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	10	10	10	10	3	3	
Cap, veh/h	90	1856	1125	340	286	261	
Arrive On Green	0.05	0.56	0.45	0.45	0.33	0.33	
Sat Flow, veh/h	1668	3416	2605	761	872	794	
Grp Volume(v), veh/h	72	560	706	696	532	0	
Grp Sat Flow(s),veh/h/ln	1668	1664	1664	1615	1669	0	
Q Serve(g_s), s	3.4	7.1	32.2	33.1	24.8	0.0	
Cycle Q Clear(g_c), s	3.4	7.1	32.2	33.1	24.8	0.0	
Prop In Lane	1.00			0.47	0.52	0.48	
Lane Grp Cap(c), veh/h	90	1856	744	721	548	0	
V/C Ratio(X)	0.80	0.30	0.95	0.96	0.97	0.00	
Avail Cap(c_a), veh/h	112	1902	744	722	548	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	36.9	9.3	21.0	21.2	26.1	0.0	
Incr Delay (d2), s/veh	27.0	0.1	21.6	24.9	31.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.0	2.3	15.8	16.3	14.0	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	63.9	9.4	42.5	46.2	57.3	0.0	
LnGrp LOS	E	A	D	D	E	A	
Approach Vol, veh/h		632	1402		532		
Approach Delay, s/veh		15.6	44.3		57.3		
Approach LOS		B	D		E		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			48.5		30.4	8.8	39.8
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			45.1		25.9	5.3	35.3
Max Q Clear Time (g_c+1), s			9.1		26.8	5.4	35.1
Green Ext Time (p_c), s			4.3		0.0	0.0	0.2
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			39.9				
HCM 6th LOS			D				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	127	15	88	63	9	114	339	965	266	478	701	433
Future Volume (veh/h)	127	15	88	63	9	114	339	965	266	478	701	433
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1618	1618	1618	1618	1618	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	134	16	13	66	9	20	357	1016	134	503	738	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	19	19	19	19	19	19	10	10	10	10	10	10
Cap, veh/h	339	305	132	144	243	106	389	1211	669	587	1039	630
Arrive On Green	0.11	0.10	0.10	0.09	0.08	0.08	0.23	0.36	0.36	0.18	0.31	0.31
Sat Flow, veh/h	2990	3075	1333	1541	3075	1333	1668	3328	1459	3237	3328	1477
Grp Volume(v), veh/h	134	16	13	66	9	20	357	1016	134	503	738	199
Grp Sat Flow(s),veh/h/ln	1495	1537	1333	1541	1537	1333	1668	1664	1459	1618	1664	1477
Q Serve(g_s), s	3.5	0.4	0.7	3.4	0.2	1.2	17.6	23.6	4.6	12.7	16.5	7.5
Cycle Q Clear(g_c), s	3.5	0.4	0.7	3.4	0.2	1.2	17.6	23.6	4.6	12.7	16.5	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	305	132	144	243	106	389	1211	669	587	1039	630
V/C Ratio(X)	0.39	0.05	0.10	0.46	0.04	0.19	0.92	0.84	0.20	0.86	0.71	0.32
Avail Cap(c_a), veh/h	710	1277	554	366	1277	554	396	1382	745	768	1382	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	34.4	34.5	36.2	35.8	36.3	31.5	24.6	13.7	33.4	25.6	16.1
Incr Delay (d2), s/veh	0.3	0.1	0.3	2.3	0.0	0.3	25.3	4.3	0.1	6.1	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	0.3	1.4	0.1	0.4	9.6	9.5	1.5	5.3	6.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	34.4	34.8	38.5	35.9	36.6	56.9	28.8	13.8	39.6	26.7	16.3
LnGrp LOS	C	C	C	D	D	D	E	C	B	D	C	B
Approach Vol, veh/h		163			95			1507			1440	
Approach Delay, s/veh		34.9			37.8			34.1			29.8	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	37.2	12.6	14.6	24.3	32.8	14.3	12.9				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	20	35.0	* 20	35.0	* 20	35.0	* 20	35.0				
Max Q Clear Time (g_c+1/4), s	11.7	25.6	5.4	2.7	19.6	18.5	5.5	3.2				
Green Ext Time (p_c), s	0.6	5.1	0.1	0.1	0.0	5.5	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Traffic Volume (veh/h)	65	368	22	925	761	196	32	942	676	122	598	33
Future Volume (veh/h)	65	368	22	925	761	196	32	942	676	122	598	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	67	379	0	954	785	184	33	971	664	126	616	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	123	461		970	971	228	92	938	855	138	993	52
Arrive On Green	0.07	0.14	0.00	0.30	0.36	0.36	0.06	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1668	3416	0	3237	2666	625	1668	3328	1457	1668	3215	167
Grp Volume(v), veh/h	67	379	0	954	490	479	33	971	664	126	318	330
Grp Sat Flow(s),veh/h/ln	1668	1664	0	1618	1664	1626	1668	1664	1457	1668	1664	1718
Q Serve(g_s), s	4.7	13.4	0.0	35.4	32.1	32.1	2.3	34.1	34.1	9.1	19.8	19.9
Cycle Q Clear(g_c), s	4.7	13.4	0.0	35.4	32.1	32.1	2.3	34.1	34.1	9.1	19.8	19.9
Prop In Lane	1.00		0.00	1.00		0.38	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	123	461		970	606	593	92	938	855	138	514	531
V/C Ratio(X)	0.54	0.82		0.98	0.81	0.81	0.36	1.04	0.78	0.91	0.62	0.62
Avail Cap(c_a), veh/h	138	564		970	646	631	138	938	855	138	514	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	50.7	0.0	42.1	34.7	34.7	55.1	43.5	19.5	55.1	35.8	35.8
Incr Delay (d2), s/veh	1.4	8.9	0.0	24.6	7.6	7.8	0.9	39.0	4.1	50.7	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.1	0.0	17.3	14.1	13.8	1.0	19.0	14.6	5.8	8.3	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	59.6	0.0	66.7	42.3	42.5	56.0	82.5	23.6	105.8	37.4	37.4
LnGrp LOS	E	E		E	D	D	E	F	C	F	D	D
Approach Vol, veh/h		446		1923			1668			774		
Approach Delay, s/veh		59.0		54.5			58.5			48.6		
Approach LOS		E		D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	40.6	42.0	23.8	11.4	43.9	14.6	51.1				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	34.1	* 36	20.5	* 10	34.1	* 10	47.0					
Max Q Clear Time (g_c+I), s	36.1	37.4	15.4	4.3	21.9	6.7	34.1					
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	2.2	0.0	6.8				

Intersection Summary

HCM 6th Ctrl Delay	55.3
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↷	↶	↶↷		↶	↶↷
Traffic Volume (veh/h)	48	583	893	219	722	1037
Future Volume (veh/h)	48	583	893	219	722	1037
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	51	0	940	0	760	1092
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	139		1174		648	2668
Arrive On Green	0.04	0.00	0.35	0.00	0.39	0.80
Sat Flow, veh/h	3237	1485	3504	0	1668	3416
Grp Volume(v), veh/h	51	0	940	0	760	1092
Grp Sat Flow(s),veh/h/ln	1618	1485	1664	0	1668	1664
Q Serve(g_s), s	1.2	0.0	19.7	0.0	30.0	7.5
Cycle Q Clear(g_c), s	1.2	0.0	19.7	0.0	30.0	7.5
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	139		1174		648	2668
V/C Ratio(X)	0.37		0.80		1.17	0.41
Avail Cap(c_a), veh/h	1256		1723		648	2668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	22.6	0.0	23.6	2.3
Incr Delay (d2), s/veh	1.6	0.0	1.4	0.0	93.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	7.5	0.0	27.7	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.6	0.0	24.0	0.0	117.4	2.3
LnGrp LOS	D		C		F	A
Approach Vol, veh/h	51		940		1852	
Approach Delay, s/veh	37.6		24.0		49.6	
Approach LOS	D		C		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.7	33.8			68.5	8.8
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30.0	40.0			40.0	30.0
Max Q Clear Time (g_c+Yc), s	30.0	21.7			9.5	3.2
Green Ext Time (p_c), s	0.0	5.6			8.0	0.1

### Intersection Summary





















HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	705	6	164	628	457	0	0	1287	297
Future Volume (veh/h)	0	0	0	705	6	164	628	457	0	0	1287	297
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				778	0	40	675	491	0	0	1384	148
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				853	0	379	777	3191	0	0	2219	531
Arrive On Green				0.24	0.00	0.24	0.07	0.21	0.00	0.00	0.35	0.35
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	6643	1527
Grp Volume(v), veh/h				778	0	40	675	491	0	0	1384	148
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1596	1527
Q Serve(g_s), s				19.3	0.0	1.8	17.5	7.1	0.0	0.0	16.3	6.3
Cycle Q Clear(g_c), s				19.3	0.0	1.8	17.5	7.1	0.0	0.0	16.3	6.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				853	0	379	777	3191	0	0	2219	531
V/C Ratio(X)				0.91	0.00	0.11	0.87	0.15	0.00	0.00	0.62	0.28
Avail Cap(c_a), veh/h				880	0	391	990	3191	0	0	2219	531
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.2	0.0	26.6	40.3	16.0	0.0	0.0	24.5	21.2
Incr Delay (d2), s/veh				13.4	0.0	0.1	5.2	0.1	0.0	0.0	1.3	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.3	0.0	1.8	8.5	2.5	0.0	0.0	5.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				46.7	0.0	26.7	45.5	16.1	0.0	0.0	25.8	22.5
LnGrp LOS				D	A	C	D	B	A	A	C	C
Approach Vol, veh/h					818			1166			1532	
Approach Delay, s/veh					45.7			33.2			25.5	
Approach LOS					D			C			C	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		62.5		27.5	25.4	37.1						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		56.0		22.4	26.0	25.0						
Max Q Clear Time (g_c+I1), s		9.1		21.3	19.5	18.3						
Green Ext Time (p_c), s		3.3		0.4	0.9	4.6						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				32.7								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

# HCM 6th Signalized Intersection Summary

## 2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	343	5	583	608	934	0	0	1792	588
Future Volume (veh/h)	0	0	0	343	5	583	608	934	0	0	1792	588
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				358	0	490	627	963	0	0	1847	258
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				844	0	376	724	3208	0	0	1913	584
Arrive On Green				0.24	0.00	0.24	0.07	0.21	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1546
Grp Volume(v), veh/h				358	0	490	627	963	0	0	1847	258
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1546
Q Serve(g_s), s				7.7	0.0	21.5	16.3	14.4	0.0	0.0	32.1	11.2
Cycle Q Clear(g_c), s				7.7	0.0	21.5	16.3	14.4	0.0	0.0	32.1	11.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				844	0	376	724	3208	0	0	1913	584
V/C Ratio(X)				0.42	0.00	1.30	0.87	0.30	0.00	0.00	0.97	0.44
Avail Cap(c_a), veh/h				844	0	376	800	3208	0	0	1913	584
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.0	0.0	34.3	40.6	18.8	0.0	0.0	27.4	20.9
Incr Delay (d2), s/veh				0.3	0.0	155.1	0.9	0.0	0.0	0.0	13.9	2.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.1	0.0	23.8	7.5	6.4	0.0	0.0	13.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.3	0.0	189.4	41.5	18.8	0.0	0.0	41.3	23.3
LnGrp LOS				C	A	F	D	B	A	A	D	C
Approach Vol, veh/h					848			1590			2105	
Approach Delay, s/veh					121.8			27.8			39.1	
Approach LOS					F			C			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		62.7			23.0	39.7		27.3				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		57.0			21.0	32.0		21.5				
Max Q Clear Time (g_c+I1), s		16.4			18.3	34.1		23.5				
Green Ext Time (p_c), s		4.5			0.7	0.0		0.0				

### Intersection Summary

HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D

### Notes

User approved volume balancing among the lanes for turning movement.



HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1	562	0	0	0	0	1022	737	458	1535	0
Future Volume (veh/h)	68	1	562	0	0	0	0	1022	737	458	1535	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	48	0	537				0	1087	403	487	1633	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	362	0	644				0	2854	684	561	3375	0
Arrive On Green	0.20	0.00	0.20				0.00	0.45	0.45	0.33	1.00	0.00
Sat Flow, veh/h	1767	0	3145				0	6643	1530	3428	5233	0
Grp Volume(v), veh/h	48	0	537				0	1087	403	487	1633	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1596	1530	1714	1689	0
Q Serve(g_s), s	2.0	0.0	14.7				0.0	10.2	17.8	12.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	14.7				0.0	10.2	17.8	12.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	362	0	644				0	2854	684	561	3375	0
V/C Ratio(X)	0.13	0.00	0.83				0.00	0.38	0.59	0.87	0.48	0.00
Avail Cap(c_a), veh/h	518	0	923				0	2854	684	914	3375	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.60	0.60	0.00
Uniform Delay (d), s/veh	29.3	0.0	34.3				0.0	16.6	18.7	29.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	4.6				0.0	0.4	3.7	1.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	5.7				0.0	3.4	6.3	4.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	0.0	38.9				0.0	17.0	22.4	31.1	0.3	0.0
LnGrp LOS	C	A	D				A	B	C	C	A	A
Approach Vol, veh/h		585						1490			2120	
Approach Delay, s/veh		38.1						18.4			7.4	
Approach LOS		D						B			A	
Timer - Assigned Phs	1	2					6	8				
Phs Duration (G+Y+Rc), s	19.7	46.0					65.8	24.2				
Change Period (Y+Rc), s	5.0	5.8					5.8	5.8				
Max Green Setting (Gmax), s	24.0	23.0					52.0	26.4				
Max Q Clear Time (g_c+1/4), s	14.0	19.8					2.0	16.7				
Green Ext Time (p_c), s	0.7	2.3					16.8	1.7				

Intersection Summary

HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	0	895	0	0	0	0	1292	287	730	1359	0
Future Volume (veh/h)	299	0	895	0	0	0	0	1292	287	730	1359	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	344	0	976				0	1485	292	839	1562	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	1186	0	528				0	967	189	931	2758	0
Arrive On Green	0.33	0.00	0.33				0.00	0.23	0.23	0.18	0.36	0.00
Sat Flow, veh/h	3619	0	1610				0	4400	830	3428	5233	0
Grp Volume(v), veh/h	344	0	976				0	1184	593	839	1562	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1686	1714	1689	0
Q Serve(g_s), s	6.4	0.0	29.5				0.0	20.6	20.6	21.6	22.2	0.0
Cycle Q Clear(g_c), s	6.4	0.0	29.5				0.0	20.6	20.6	21.6	22.2	0.0
Prop In Lane	1.00		1.00				0.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	1186	0	528				0	771	385	931	2758	0
V/C Ratio(X)	0.29	0.00	1.85				0.00	1.53	1.54	0.90	0.57	0.00
Avail Cap(c_a), veh/h	1186	0	528				0	771	385	990	2758	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.21	0.21	0.00
Uniform Delay (d), s/veh	22.5	0.0	30.3				0.0	34.7	34.7	35.6	20.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	389.5				0.0	247.1	256.2	2.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	67.5				0.0	34.3	35.2	9.3	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	419.7				0.0	281.8	291.0	38.3	20.3	0.0
LnGrp LOS	C	A	F				A	F	F	D	C	A
Approach Vol, veh/h		1320						1777			2401	
Approach Delay, s/veh		316.2						284.9			26.6	
Approach LOS		F						F			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	28.4	26.3	35.3	54.7								
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7								
Max Green Setting (Gmax), s	26.6	19.0	29.5	49.0								
Max Q Clear Time (g_c+Y), s	23.6	22.6	31.5	24.2								
Green Ext Time (p_c), s	0.9	0.0	0.0	7.6								

### Intersection Summary

HCM 6th Ctrl Delay	179.6
HCM 6th LOS	F

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	756	339	175	593	178	352	1214	114	326	1230	364
Future Volume (veh/h)	290	756	339	175	593	178	352	1214	114	326	1230	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	302	788	261	182	618	119	367	1265	113	340	1281	346
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	338	1001	438	217	760	332	398	1259	112	374	998	269
Arrive On Green	0.19	0.28	0.28	0.12	0.22	0.22	0.23	0.27	0.27	0.21	0.25	0.25
Sat Flow, veh/h	1767	3526	1543	1767	3526	1540	1767	4725	422	1767	3950	1066
Grp Volume(v), veh/h	302	788	261	182	618	119	367	904	474	340	1095	532
Grp Sat Flow(s),veh/h/ln	1767	1763	1543	1767	1763	1540	1767	1689	1770	1767	1689	1639
Q Serve(g_s), s	23.1	28.5	20.2	14.0	23.1	9.1	28.1	36.9	36.9	26.0	35.0	35.0
Cycle Q Clear(g_c), s	23.1	28.5	20.2	14.0	23.1	9.1	28.1	36.9	36.9	26.0	35.0	35.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.65
Lane Grp Cap(c), veh/h	338	1001	438	217	760	332	398	900	472	374	853	414
V/C Ratio(X)	0.89	0.79	0.60	0.84	0.81	0.36	0.92	1.00	1.01	0.91	1.28	1.29
Avail Cap(c_a), veh/h	447	1001	438	447	891	389	447	900	472	447	853	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	45.7	42.7	59.4	51.7	46.2	52.5	50.8	50.8	53.3	51.8	51.8
Incr Delay (d2), s/veh	20.5	4.9	3.4	16.4	6.4	1.4	25.2	31.2	42.7	23.1	136.3	145.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	12.7	7.9	7.1	10.6	3.5	14.8	18.9	21.3	13.6	30.4	30.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.1	50.6	46.1	75.9	58.1	47.6	77.7	82.0	93.5	76.4	188.1	197.3
LnGrp LOS	E	D	D	E	E	D	E	F	F	E	F	F
Approach Vol, veh/h		1351			919			1745			1967	
Approach Delay, s/veh		55.2			60.3			84.2			171.3	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.3	40.9	21.0	43.3	35.2	39.0	30.5	33.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+20), s	29.0	38.9	16.0	30.5	30.1	37.0	25.1	25.1				
Green Ext Time (p_c), s	1.3	0.0	1.0	3.2	1.1	0.0	1.4	4.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											102.6	
HCM 6th LOS											F	

HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↕	↗	↖	↕		↖	↕	↗
Traffic Volume (veh/h)	298	476	205	266	464	95	167	919	185	173	1401	424
Future Volume (veh/h)	298	476	205	266	464	95	167	919	185	173	1401	424
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	301	481	197	269	469	85	169	928	177	175	1415	351
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	154	306	125	140	707	127	197	1085	207	204	692	576
Arrive On Green	0.09	0.25	0.25	0.08	0.24	0.24	0.11	0.37	0.37	0.12	0.37	0.37
Sat Flow, veh/h	1767	1243	509	1767	2974	535	1767	2938	560	1767	1856	1546
Grp Volume(v), veh/h	301	0	678	269	277	277	169	557	548	175	1415	351
Grp Sat Flow(s),veh/h/ln	1767	0	1752	1767	1763	1746	1767	1763	1735	1767	1856	1546
Q Serve(g_s), s	11.0	0.0	31.0	10.0	17.9	18.1	11.8	36.7	36.8	12.3	47.0	23.2
Cycle Q Clear(g_c), s	11.0	0.0	31.0	10.0	17.9	18.1	11.8	36.7	36.8	12.3	47.0	23.2
Prop In Lane	1.00		0.29	1.00		0.31	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	154	0	431	140	419	415	197	651	641	204	692	576
V/C Ratio(X)	1.95	0.00	1.57	1.92	0.66	0.67	0.86	0.85	0.86	0.86	2.05	0.61
Avail Cap(c_a), veh/h	154	0	431	140	419	415	463	657	647	463	692	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	0.0	47.5	58.0	43.4	43.5	55.0	36.6	36.7	54.8	39.5	32.1
Incr Delay (d2), s/veh	451.3	0.0	269.4	439.0	3.8	4.0	7.8	10.4	10.7	7.7	475.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.1	0.0	45.1	21.4	8.0	8.0	5.6	17.0	16.8	5.8	111.7	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	508.9	0.0	316.9	497.0	47.2	47.6	62.8	47.1	47.3	62.5	515.2	33.8
LnGrp LOS	F	A	F	F	D	D	E	D	D	E	F	C
Approach Vol, veh/h		979			823			1274			1941	
Approach Delay, s/veh		375.9			194.4			49.3			387.3	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	51.6	17.0	38.0	19.1	52.0	18.0	37.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	47.0	10.0	31.0	33.0	47.0	11.0	30.0				
Max Q Clear Time (g_c+1/3), s	11.3	38.8	12.0	33.0	13.8	49.0	13.0	20.1				
Green Ext Time (p_c), s	0.3	3.5	0.0	0.0	0.3	0.0	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	267.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	383	174	13	193	128	162	1260	21	164	1346	133
Future Volume (veh/h)	147	383	174	13	193	128	162	1260	21	164	1346	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	155	403	172	14	203	36	171	1326	22	173	1417	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	178	298	127	246	523	437	195	1599	27	197	1015	97
Arrive On Green	0.10	0.24	0.24	0.14	0.28	0.28	0.11	0.31	0.31	0.11	0.31	0.31
Sat Flow, veh/h	1767	1226	523	1767	1856	1551	1767	5130	85	1767	3245	309
Grp Volume(v), veh/h	155	0	575	14	203	36	171	873	475	173	765	788
Grp Sat Flow(s),veh/h/ln	1767	0	1749	1767	1856	1551	1767	1689	1838	1767	1763	1792
Q Serve(g_s), s	12.4	0.0	35.0	1.0	12.7	2.5	13.7	34.5	34.5	13.9	45.0	45.0
Cycle Q Clear(g_c), s	12.4	0.0	35.0	1.0	12.7	2.5	13.7	34.5	34.5	13.9	45.0	45.0
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.05	1.00		0.17
Lane Grp Cap(c), veh/h	178	0	426	246	523	437	195	1053	573	197	552	560
V/C Ratio(X)	0.87	0.00	1.35	0.06	0.39	0.08	0.88	0.83	0.83	0.88	1.39	1.41
Avail Cap(c_a), veh/h	246	0	426	246	523	437	307	1057	575	307	552	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	0.0	54.4	53.7	41.7	38.0	63.1	45.9	45.9	63.0	49.4	49.4
Incr Delay (d2), s/veh	16.9	0.0	172.9	0.4	0.7	0.1	10.4	5.9	10.2	11.0	185.5	192.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	35.6	0.5	5.9	0.9	6.6	14.8	16.8	6.7	47.4	49.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.6	0.0	227.3	54.2	42.3	38.1	73.5	51.8	56.2	74.0	235.0	242.3
LnGrp LOS	F	A	F	D	D	D	E	D	E	E	F	F
Approach Vol, veh/h		730		253		1519		1726				
Approach Delay, s/veh		196.2		42.4		55.6		222.1				
Approach LOS		F		D		E		F				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	52.3	26.5	41.5	23.3	52.5	21.0	47.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0				
Max Q Clear Time (g_c+1/6), s	11.9	36.5	3.0	37.0	15.7	47.0	14.4	14.7				
Green Ext Time (p_c), s	0.1	5.9	0.0	0.0	0.1	0.0	0.1	1.6				

Intersection Summary

HCM 6th Ctrl Delay	147.1
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Traffic Volume (veh/h)	46	205	105	121	134	182	110	1005	184	278	1306	62
Future Volume (veh/h)	46	205	105	121	134	182	110	1005	184	278	1306	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	50	223	98	132	146	155	120	1092	188	302	1420	66
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
Percent Heavy Veh, %	3	2	3	2	2	2	3	3	2	2	3	3
Cap, veh/h	70	246	108	160	207	220	150	970	167	335	1460	68
Arrive On Green	0.04	0.20	0.20	0.09	0.25	0.25	0.08	0.32	0.32	0.19	0.43	0.43
Sat Flow, veh/h	1767	1232	541	1781	830	881	1767	3009	516	1781	3431	159
Grp Volume(v), veh/h	50	0	321	132	0	301	120	638	642	302	728	758
Grp Sat Flow(s),veh/h/ln	1767	0	1773	1781	0	1712	1767	1763	1763	1781	1763	1827
Q Serve(g_s), s	2.5	0.0	15.9	6.5	0.0	14.4	6.0	29.0	29.0	14.9	36.4	36.6
Cycle Q Clear(g_c), s	2.5	0.0	15.9	6.5	0.0	14.4	6.0	29.0	29.0	14.9	36.4	36.6
Prop In Lane	1.00		0.31	1.00		0.51	1.00		0.29	1.00		0.09
Lane Grp Cap(c), veh/h	70	0	353	160	0	428	150	568	568	335	750	778
V/C Ratio(X)	0.71	0.00	0.91	0.82	0.00	0.70	0.80	1.12	1.13	0.90	0.97	0.97
Avail Cap(c_a), veh/h	100	0	355	160	0	428	183	568	568	335	750	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	0.0	35.2	40.2	0.0	30.7	40.4	30.5	30.5	35.7	25.3	25.4
Incr Delay (d2), s/veh	12.6	0.0	26.2	27.9	0.0	5.2	18.5	76.4	78.4	26.3	25.7	26.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	9.1	4.1	0.0	6.4	3.3	23.3	23.6	8.5	18.7	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	0.0	61.4	68.1	0.0	35.9	58.9	106.8	108.9	62.0	50.9	51.4
LnGrp LOS	E	A	E	E	A	D	E	F	F	E	D	D
Approach Vol, veh/h		371		433		1400		1788				
Approach Delay, s/veh		60.6		45.7		103.7		53.0				
Approach LOS		E		D		F		D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	33.5	12.6	22.4	12.1	42.8	8.1	27.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.9	29.0	8.1	18.0	9.3	36.6	5.1	21.0				
Max Q Clear Time (g_c+1/3), s	16.9	31.0	8.5	17.9	8.0	38.6	4.5	16.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay	70.7
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary  
9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕	↕↕↕		↕	↕	
Traffic Volume (veh/h)	0	0	0	21	0	24	0	1320	23	74	1549	0
Future Volume (veh/h)	0	0	0	21	0	24	0	1320	23	74	1549	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	22	0	3	0	1375	24	77	1614	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	0	2	3	3	3	3	3	3
Cap, veh/h	0	3	0	83	0	0	3	2251	39	198	2416	0
Arrive On Green	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.44	0.44	0.11	0.69	0.00
Sat Flow, veh/h	0	1402	77	1781	22	0	1767	5125	89	1767	3618	0
Grp Volume(v), veh/h	0	0	0	22	27.4	0	906	493	77	1614	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	C	0	1767	1689	1838	1767	1763	0
Q Serve(g_s), s	0.0	0.0	0.0	0.7		0.0	11.5	11.5	2.3	14.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.7		0.0	11.5	11.5	2.3	14.9	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00		0.05	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	0	3	0	83		3	1483	807	198	2416	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.27		0.00	0.61	0.61	0.39	0.67	0.00	0.00
Avail Cap(c_a), veh/h	0	301	0	955		284	2148	1169	328	2416	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00		0.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	25.8		0.0	12.0	12.0	23.1	5.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7		0.0	0.5	0.9	1.2	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.3		0.0	3.1	3.5	0.9	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	27.4		0.0	12.5	12.9	24.3	5.9	0.0	0.0
LnGrp LOS	A	A	A	C		A	B	B	C	A	A	A
Approach Vol, veh/h		0					1399			1691		
Approach Delay, s/veh		0.0					12.7			6.7		
Approach LOS							B			A		
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	3.8	32.1	10.1	0.0	0.0	45.9						
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5						
Max Green Setting (Gmax), s	10.4	35.6	30.0	9.0	9.0	37.0						
Max Q Clear Time (g_c+I), s	14.3	13.5	2.7	0.0	0.0	16.9						
Green Ext Time (p_c), s	0.1	10.7	0.0	0.0	0.0	12.9						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.5								
HCM 6th LOS				A								



HCM 6th Signalized Intersection Summary  
10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↗		↖	↕			↕	↗
Traffic Volume (veh/h)	27	0	102	0	0	0	127	1412	0	0	1508	17
Future Volume (veh/h)	27	0	102	0	0	0	127	1412	0	0	1508	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	30	0	14	0	0	0	140	1552	0	0	1657	19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	257	0	126	0	156	0	201	2419	0	0	1629	19
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.11	0.69	0.00	0.00	0.46	0.46
Sat Flow, veh/h	1781	0	1542	0	1900	0	1767	3618	0	0	3662	41
Grp Volume(v), veh/h	30	0	14	0	0	0	140	1552	0	0	817	859
Grp Sat Flow(s),veh/h/ln	1781	0	1542	0	1900	0	1767	3618	0	0	3662	41
Q Serve(g_s), s	1.0	0.0	0.5	0.0	0.0	0.0	4.9	16.0	0.0	0.0	29.5	29.5
Cycle Q Clear(g_c), s	1.0	0.0	0.5	0.0	0.0	0.0	4.9	16.0	0.0	0.0	29.5	29.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.02
Lane Grp Cap(c), veh/h	257	0	126	0	156	0	201	2419	0	0	804	843
V/C Ratio(X)	0.12	0.00	0.11	0.00	0.00	0.00	0.70	0.64	0.00	0.00	1.02	1.02
Avail Cap(c_a), veh/h	800	0	596	0	735	0	219	2454	0	0	804	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	0.0	27.5	0.0	0.0	0.0	27.6	5.7	0.0	0.0	17.6	17.6
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	8.4	0.6	0.0	0.0	35.8	35.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.2	0.0	0.0	0.0	2.3	3.0	0.0	0.0	17.2	18.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	27.8	0.0	0.0	0.0	36.0	6.3	0.0	0.0	53.4	53.3
LnGrp LOS	C	A	C	A	A	A	D	A	A	A	F	F
Approach Vol, veh/h	44			0			1692			1676		
Approach Delay, s/veh	27.8			0.0			8.8			53.3		
Approach LOS	C						A			D		
Timer - Assigned Phs	2		4		5		6		8			
Phs Duration (G+Y+Rc), s	51.9		12.8		14.9		37.0		12.8			
Change Period (Y+Rc), s	7.5		7.5		7.5		7.5		7.5			
Max Green Setting (Gmax), s	45.0		25.0		8.0		29.5		25.0			
Max Q Clear Time (g_c+1), s	18.0		3.0		6.9		31.5		0.0			
Green Ext Time (p_c), s	15.3		0.0		0.0		0.0		0.0			

Intersection Summary

HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	161	1074	299	706	645	244	145	1012	741	234	1137	93
Future Volume (veh/h)	161	1074	299	706	645	244	145	1012	741	234	1137	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1119	0	735	672	177	151	1054	0	244	1184	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	237	830		788	735	613	183	865		279	1056	457
Arrive On Green	0.07	0.25	0.00	0.24	0.41	0.41	0.10	0.25	0.00	0.16	0.30	0.30
Sat Flow, veh/h	3291	3385	1510	3291	1781	1485	1767	3526	1572	1767	3526	1524
Grp Volume(v), veh/h	168	1119	0	735	672	177	151	1054	0	244	1184	52
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1646	1781	1485	1767	1763	1572	1767	1763	1524
Q Serve(g_s), s	7.1	35.0	0.0	31.2	50.8	11.3	12.0	35.0	0.0	19.2	42.7	3.5
Cycle Q Clear(g_c), s	7.1	35.0	0.0	31.2	50.8	11.3	12.0	35.0	0.0	19.2	42.7	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	830		788	735	613	183	865		279	1056	457
V/C Ratio(X)	0.71	1.35		0.93	0.91	0.29	0.83	1.22		0.87	1.12	0.11
Avail Cap(c_a), veh/h	807	830		807	735	613	433	865		433	1056	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.7	53.8	0.0	53.1	39.5	27.9	62.7	53.8	0.0	58.7	50.0	36.2
Incr Delay (d2), s/veh	8.0	164.5	0.0	18.0	16.6	0.6	17.6	108.9	0.0	18.1	67.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	33.3	0.0	14.4	24.4	4.0	6.1	27.9	0.0	9.7	27.8	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	218.3	0.0	71.1	56.1	28.5	80.3	162.8	0.0	76.8	117.2	36.5
LnGrp LOS	E	F		E	E	C	F	F		E	F	D
Approach Vol, veh/h		1287			1584			1205			1480	
Approach Delay, s/veh		199.3			60.0			152.4			107.7	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.5	39.0	38.2	39.0	18.8	46.7	14.3	62.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0				
Max Q Clear Time (g_c+D), s	21.2	37.0	33.2	37.0	14.0	44.7	9.1	52.8				
Green Ext Time (p_c), s	1.3	0.0	1.0	0.0	0.9	0.0	1.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	125.0
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖↗	↑↑↑	↗	↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	291	1851	56	346	1491	662	35	627	149	587	865	192
Future Volume (veh/h)	291	1851	56	346	1491	662	35	627	149	587	865	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	297	1889	15	353	1521	457	36	640	71	599	883	186
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	222	1325	403	394	1602	387	63	570	474	231	1161	245
Arrive On Green	0.13	0.27	0.27	0.12	0.26	0.26	0.04	0.31	0.31	0.13	0.40	0.40
Sat Flow, veh/h	1697	4863	1481	3291	6128	1481	1767	1856	1544	1767	2888	608
Grp Volume(v), veh/h	297	1889	15	353	1521	457	36	640	71	599	539	530
Grp Sat Flow(s),veh/h/ln	1697	1621	1481	1646	1532	1481	1767	1856	1544	1767	1763	1734
Q Serve(g_s), s	20.0	41.7	1.1	16.2	37.3	40.0	3.1	47.0	5.1	20.0	40.3	40.3
Cycle Q Clear(g_c), s	20.0	41.7	1.1	16.2	37.3	40.0	3.1	47.0	5.1	20.0	40.3	40.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	222	1325	403	394	1602	387	63	570	474	231	709	697
V/C Ratio(X)	1.34	1.43	0.04	0.90	0.95	1.18	0.57	1.12	0.15	2.59	0.76	0.76
Avail Cap(c_a), veh/h	222	1325	403	430	1602	387	231	570	474	231	709	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	55.7	40.9	66.4	55.5	56.5	72.6	53.0	38.5	66.5	39.4	39.4
Incr Delay (d2), s/veh	179.8	196.1	0.1	18.7	12.6	104.9	3.0	76.2	0.1	729.3	4.3	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.5	40.5	0.4	7.6	15.3	25.6	1.4	33.3	1.9	55.7	17.8	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	246.3	251.8	41.0	85.1	68.1	161.4	75.5	129.2	38.5	795.8	43.7	43.8
LnGrp LOS	F	F	D	F	E	F	E	F	D	F	D	D
Approach Vol, veh/h		2201			2331			747			1668	
Approach Delay, s/veh		249.6			89.0			118.0			313.8	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.5	53.5	24.8	48.2	12.0	68.0	26.5	46.5				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0				
Max Q Clear Time (g_c+20), s	20.0	49.0	18.2	43.7	5.1	42.3	22.0	42.0				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	1.9	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			197.0									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary  
 13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



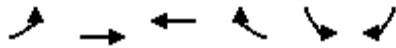
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶↷	↑↑↑		↶↷	↑↑	↶	↶↷	↑↑↑	↶	↶↷	↑↑	↶
Traffic Volume (veh/h)	195	1879	285	903	1907	321	342	734	571	395	913	214
Future Volume (veh/h)	195	1879	285	903	1907	321	342	734	571	395	913	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	203	1957	280	941	1986	249	356	765	273	411	951	121
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	252	1245	178	753	1290	565	409	1099	334	462	820	358
Arrive On Green	0.08	0.23	0.23	0.23	0.38	0.38	0.12	0.21	0.21	0.13	0.23	0.23
Sat Flow, veh/h	3291	5441	777	3291	3385	1484	3483	5147	1564	3483	3582	1565
Grp Volume(v), veh/h	203	1652	585	941	1986	249	356	765	273	411	951	121
Grp Sat Flow(s),veh/h/ln	1646	1532	1622	1646	1692	1484	1742	1716	1564	1742	1791	1565
Q Serve(g_s), s	9.3	35.0	35.0	35.0	58.3	19.1	15.4	21.0	25.4	17.7	35.0	9.9
Cycle Q Clear(g_c), s	9.3	35.0	35.0	35.0	58.3	19.1	15.4	21.0	25.4	17.7	35.0	9.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	1052	371	753	1290	565	409	1099	334	462	820	358
V/C Ratio(X)	0.80	1.57	1.57	1.25	1.54	0.44	0.87	0.70	0.82	0.89	1.16	0.34
Avail Cap(c_a), veh/h	753	1052	371	753	1290	565	569	1099	334	569	820	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	59.0	59.0	59.0	47.3	35.2	66.4	55.6	57.3	65.2	59.0	49.3
Incr Delay (d2), s/veh	4.5	261.6	271.1	123.1	247.0	0.7	9.5	2.0	14.8	13.2	85.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	38.5	41.8	26.9	67.4	6.8	7.2	9.1	11.2	8.5	25.1	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	320.6	330.0	182.1	294.3	35.9	75.9	57.5	72.1	78.4	144.5	50.0
LnGrp LOS	E	F	F	F	F	D	E	E	E	E	F	D
Approach Vol, veh/h		2440			3176			1394			1483	
Approach Delay, s/veh		302.3			240.8			65.1			118.4	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	42.5	42.5	25.4	42.5	19.2	65.8	27.8	40.2				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0				
Max Q Clear Time (g_c+R), s	37.0	37.0	17.4	37.0	11.3	60.3	19.7	27.4				
Green Ext Time (p_c), s	0.0	0.0	0.6	0.0	0.5	0.0	0.5	0.0				

Intersection Summary

HCM 6th Ctrl Delay	208.3
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



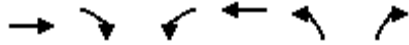
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	2445	1415	0	232	2355
Future Volume (veh/h)	0	2445	1415	0	232	2355
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	2601	1505	0	247	2499
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	2018	1404	0	704	1253
Arrive On Green	0.00	0.41	0.41	0.00	0.41	0.41
Sat Flow, veh/h	0	5184	3563	0	1697	3019
Grp Volume(v), veh/h	0	2601	1505	0	247	2499
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1697	1510
Q Serve(g_s), s	0.0	30.0	30.0	0.0	7.2	30.0
Cycle Q Clear(g_c), s	0.0	30.0	30.0	0.0	7.2	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2018	1404	0	704	1253
V/C Ratio(X)	0.00	1.29	1.07	0.00	0.35	1.99
Avail Cap(c_a), veh/h	0	2018	1404	0	704	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	21.2	21.2	0.0	14.5	21.1
Incr Delay (d2), s/veh	0.0	133.9	45.7	0.0	0.3	450.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	33.9	18.2	0.0	2.6	87.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	155.0	66.9	0.0	14.8	471.6
LnGrp LOS	A	F	F	A	B	F
Approach Vol, veh/h		2601	1505		2746	
Approach Delay, s/veh		155.0	66.9		430.5	
Approach LOS		F	E		F	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		36.8		35.5		36.8
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		32.0		32.0		32.0
Green Ext Time (p_c), s		0.0		0.0		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			246.1			
HCM 6th LOS			F			

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	785	1888	171	510	1017	124
Future Volume (veh/h)	785	1888	171	510	1017	124
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	826	1825	180	537	1071	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1711	1029	269	2450	1155	514
Arrive On Green	0.35	0.35	0.08	0.50	0.34	0.34
Sat Flow, veh/h	5024	1466	3291	5024	3393	1510
Grp Volume(v), veh/h	826	1825	180	537	1071	56
Grp Sat Flow(s),veh/h/ln	1621	1466	1646	1621	1697	1510
Q Serve(g_s), s	11.3	30.0	4.5	5.3	25.9	2.2
Cycle Q Clear(g_c), s	11.3	30.0	4.5	5.3	25.9	2.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1711	1029	269	2450	1155	514
V/C Ratio(X)	0.48	1.77	0.67	0.22	0.93	0.11
Avail Cap(c_a), veh/h	1711	1029	1158	2450	1194	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	8.7	38.0	11.8	27.1	19.3
Incr Delay (d2), s/veh	0.2	351.8	2.9	0.0	12.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	120.8	1.8	1.6	11.9	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.8	360.4	40.9	11.8	39.3	19.4
LnGrp LOS	C	F	D	B	D	B
Approach Vol, veh/h	2651			717	1127	
Approach Delay, s/veh	254.9			19.1	38.3	
Approach LOS	F			B	D	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	30.0	37.3		50.3	35.0	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	30.0	30.0		30.0	30.0	
Max Q Clear Time (g_c+1/5), s	10.5	32.0		7.3	27.9	
Green Ext Time (p_c), s	0.5	0.0		3.1	1.1	

Intersection Summary

HCM 6th Ctrl Delay	163.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	77	0	0	0	0	46	0	0	0
Future Volume (veh/h)	0	0	0	77	0	0	0	0	46	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	308	0	0	0	0	32	0	0	0
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	13	27	12	456	479	406	0	0	100	0	119	0
Arrive On Green	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	1870	1585	0	0	1579	0	1870	0
Grp Volume(v), veh/h	0	0	0	308	0	0	0	0	32	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	0	0	1579	0	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	13	27	12	456	479	406	0	0	100	0	119	0
V/C Ratio(X)	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00
Avail Cap(c_a), veh/h	673	5105	2277	2088	4172	3535	0	0	3820	0	4525	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			308			32			0		
Approach Delay, s/veh	0.0			6.2			7.7			0.0		
Approach LOS				A			A					
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	5.3		7.9		0.0		5.3		0.0		7.9	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	32.0		15.5		19.0		32.0		5.0		29.5	
Max Q Clear Time (g_c+I1), s	2.3		4.1		0.0		0.0		0.0		0.0	
Green Ext Time (p_c), s	0.1		0.7		0.0		0.0		0.0		0.0	
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			6.3									
HCM 6th LOS			A									



HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔↔	↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	63	43	19	23	76	68	103	1637	28	134	1832	56
Future Volume (veh/h)	63	43	19	23	76	68	103	1637	28	134	1832	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	68	46	4	25	82	10	111	1760	14	144	1970	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	226	418	36	127	347	150	260	1644	722	271	2379	727
Arrive On Green	0.07	0.13	0.13	0.04	0.10	0.10	0.08	0.47	0.47	0.08	0.47	0.47
Sat Flow, veh/h	3456	3304	283	3456	3554	1535	3428	3526	1547	3428	5066	1547
Grp Volume(v), veh/h	68	24	26	25	82	10	111	1760	14	144	1970	28
Grp Sat Flow(s),veh/h/ln	1728	1777	1810	1728	1777	1535	1714	1763	1547	1714	1689	1547
Q Serve(g_s), s	1.6	1.0	1.1	0.6	1.8	0.5	2.7	40.0	0.4	3.5	28.9	0.8
Cycle Q Clear(g_c), s	1.6	1.0	1.1	0.6	1.8	0.5	2.7	40.0	0.4	3.5	28.9	0.8
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	225	229	127	347	150	260	1644	722	271	2379	727
V/C Ratio(X)	0.30	0.11	0.11	0.20	0.24	0.07	0.43	1.07	0.02	0.53	0.83	0.04
Avail Cap(c_a), veh/h	806	414	422	806	829	358	800	1644	722	800	2379	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	33.2	33.2	40.1	35.7	35.1	37.8	22.9	12.3	38.0	19.7	12.3
Incr Delay (d2), s/veh	0.7	0.1	0.1	0.8	0.1	0.1	1.1	43.7	0.0	1.6	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.4	0.5	0.3	0.8	0.2	1.1	23.4	0.1	1.4	9.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	33.3	33.3	40.8	35.9	35.2	39.0	66.6	12.3	39.6	22.3	12.3
LnGrp LOS	D	C	C	D	D	D	D	F	B	D	C	B
Approach Vol, veh/h		118			117			1885			2142	
Approach Delay, s/veh		36.5			36.9			64.6			23.3	
Approach LOS		D			D			E			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	47.5	8.1	18.3	11.5	47.8	10.6	15.9				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	20.0	40.0	20.0	20.0	20.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+I), s	11.5	42.0	2.6	3.1	4.7	30.9	3.6	3.8				
Green Ext Time (p_c), s	0.3	0.0	0.0	0.1	0.2	7.1	0.1	0.2				

Intersection Summary

HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC  
18: Park Place & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	176	28	33	142	27	19
Future Vol, veh/h	176	28	33	142	27	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	200	32	38	161	31	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	232	0	357
Stage 1	-	-	-	-	200
Stage 2	-	-	-	-	157
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1333	-	615
Stage 1	-	-	-	-	814
Stage 2	-	-	-	-	855
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1333	-	597
Mov Cap-2 Maneuver	-	-	-	-	597
Stage 1	-	-	-	-	814
Stage 2	-	-	-	-	830

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	702	-	-	1333	-
HCM Lane V/C Ratio	0.074	-	-	0.028	-
HCM Control Delay (s)	10.5	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	157	38	82	146	28	50
Future Volume (veh/h)	157	38	82	146	28	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	169	16	88	157	30	7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	899	388	274	2092	82	19
Arrive On Green	0.25	0.25	0.15	0.59	0.06	0.06
Sat Flow, veh/h	3647	1533	1781	3647	1377	321
Grp Volume(v), veh/h	169	16	88	157	38	0
Grp Sat Flow(s),veh/h/ln	1777	1533	1781	1777	1744	0
Q Serve(g_s), s	1.5	0.3	1.8	0.8	0.9	0.0
Cycle Q Clear(g_c), s	1.5	0.3	1.8	0.8	0.9	0.0
Prop In Lane		1.00	1.00		0.79	0.18
Lane Grp Cap(c), veh/h	899	388	274	2092	104	0
V/C Ratio(X)	0.19	0.04	0.32	0.08	0.36	0.00
Avail Cap(c_a), veh/h	3015	1301	648	3015	1395	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.1	11.6	15.5	3.7	18.6	0.0
Incr Delay (d2), s/veh	0.1	0.1	0.7	0.0	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.6	0.1	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	11.7	16.2	3.7	21.2	0.0
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	185			245	38	
Approach Delay, s/veh	12.2			8.2	21.2	
Approach LOS	B			A	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		9.5	13.9	17.9		31.8
Change Period (Y+Rc), s		7.0	7.5	7.5		7.5
Max Green Setting (Gmax), s		33.0	15.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		2.9	3.8	3.5		2.8
Green Ext Time (p_c), s		0.1	0.1	1.1		1.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.8			
HCM 6th LOS			B			
<b>Notes</b>						
User approved volume balancing among the lanes for turning movement.						

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	207	15	46	224	9	32
Future Vol, veh/h	207	15	46	224	9	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	223	16	49	241	10	34

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	239	0	450 120
Stage 1	-	-	-	-	231 -
Stage 2	-	-	-	-	219 -
Critical Hdwy	-	-	4.16	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.23	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1318	-	538 909
Stage 1	-	-	-	-	785 -
Stage 2	-	-	-	-	796 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1318	-	518 909
Mov Cap-2 Maneuver	-	-	-	-	518 -
Stage 1	-	-	-	-	785 -
Stage 2	-	-	-	-	767 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	780	-	-	1318	-
HCM Lane V/C Ratio	0.057	-	-	0.038	-
HCM Control Delay (s)	9.9	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 21: Sumner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	86	40	113	2	57	36	71	727	6	110	916	141
Future Volume (veh/h)	86	40	113	2	57	36	71	727	6	110	916	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	91	43	20	2	61	5	76	773	6	117	974	146
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	117	341	148	5	263	21	97	985	8	150	889	133
Arrive On Green	0.07	0.14	0.14	0.00	0.08	0.08	0.05	0.54	0.54	0.08	0.56	0.56
Sat Flow, veh/h	1781	2405	1041	1781	3320	268	1767	1839	14	1781	1573	236
Grp Volume(v), veh/h	91	31	32	2	32	34	76	0	779	117	0	1120
Grp Sat Flow(s),veh/h/ln	1781	1777	1670	1781	1777	1812	1767	0	1853	1781	0	1809
Q Serve(g_s), s	3.8	1.2	1.3	0.1	1.3	1.3	3.2	0.0	25.8	4.9	0.0	43.2
Cycle Q Clear(g_c), s	3.8	1.2	1.3	0.1	1.3	1.3	3.2	0.0	25.8	4.9	0.0	43.2
Prop In Lane	1.00		0.62	1.00		0.15	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	117	252	237	5	141	144	97	0	993	150	0	1022
V/C Ratio(X)	0.78	0.12	0.14	0.41	0.23	0.24	0.78	0.00	0.78	0.78	0.00	1.10
Avail Cap(c_a), veh/h	128	430	404	116	418	427	122	0	993	291	0	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	28.6	28.7	38.1	33.0	33.0	35.7	0.0	14.2	34.3	0.0	16.6
Incr Delay (d2), s/veh	24.2	0.2	0.3	47.8	0.8	0.8	22.0	0.0	4.2	8.4	0.0	58.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.5	0.5	0.1	0.5	0.6	1.9	0.0	9.6	2.3	0.0	29.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	28.9	29.0	85.9	33.8	33.9	57.7	0.0	18.4	42.7	0.0	74.8
LnGrp LOS	E	C	C	F	C	C	E	A	B	D	A	F
Approach Vol, veh/h		154			68			855				1237
Approach Delay, s/veh		46.9			35.4			21.9				71.7
Approach LOS		D			D			C				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	45.5	4.7	15.3	8.7	47.7	9.5	10.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	36.0	5.0	18.5	5.3	43.2	5.5	18.0				
Max Q Clear Time (g_c+I1), s	6.9	27.8	2.1	3.3	5.2	45.2	5.8	3.3				
Green Ext Time (p_c), s	0.1	3.2	0.0	0.2	0.0	0.0	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				50.6								
HCM 6th LOS				D								

HCM 6th TWSC  
 22: Proposed Driveway B & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour

Intersection						
Int Delay, s/veh	8.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	14	143	187	14	81	70
Future Vol, veh/h	14	143	187	14	81	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	18	186	243	18	105	91

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	204	0	606	102
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	495	-
Critical Hdwy	-	-	4.16	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.23	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1358	-	429	933
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	578	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1358	-	352	933
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	475	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.7	17
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	495	-	-	1358	-
HCM Lane V/C Ratio	0.396	-	-	0.179	-
HCM Control Delay (s)	17	-	-	8.2	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	0.7	-

HCM 6th Signalized Intersection Summary  
23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	82	1	107	194	1	7	0	83	1	1	0
Future Volume (veh/h)	0	82	1	107	194	1	7	0	83	1	1	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	0	106	1	139	252	1	9	0	17	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	3	3	2
Cap, veh/h	6	653	6	211	1679	7	22	0	73	6	69	0
Arrive On Green	0.00	0.18	0.18	0.12	0.46	0.46	0.01	0.00	0.05	0.00	0.04	0.00
Sat Flow, veh/h	1781	3607	34	1781	3630	14	1781	0	1537	1767	1856	0
Grp Volume(v), veh/h	0	52	55	139	123	130	9	0	17	1	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1864	1781	1777	1868	1781	0	1537	1767	1856	0
Q Serve(g_s), s	0.0	0.7	0.7	2.1	1.1	1.1	0.1	0.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.7	0.7	2.1	1.1	1.1	0.1	0.0	0.3	0.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	6	321	337	211	822	864	22	0	73	6	69	0
V/C Ratio(X)	0.00	0.16	0.16	0.66	0.15	0.15	0.42	0.00	0.23	0.16	0.01	0.00
Avail Cap(c_a), veh/h	322	1157	1214	451	1286	1352	322	0	2058	320	2484	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.6	9.6	11.6	4.3	4.3	13.6	0.0	12.7	13.8	12.8	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	3.5	0.1	0.1	12.4	0.0	1.6	11.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.6	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.8	9.8	15.1	4.4	4.4	26.0	0.0	14.3	24.7	12.9	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	B	C	B	A
Approach Vol, veh/h		107			392			26				2
Approach Delay, s/veh		9.8			8.2			18.3				18.8
Approach LOS		A			A			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	5.8	7.8	9.5	4.8	5.5	0.0	17.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	37.0	7.0	18.0	5.0	37.0	5.0	20.0				
Max Q Clear Time (g_c+I1), s	2.0	2.3	4.1	2.7	2.1	2.0	0.0	3.1				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.4	0.0	0.0	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.0								
HCM 6th LOS				A								



HCM 6th Signalized Intersection Summary  
24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔		↔	↔		↔↑↑↑	↔↑↑↑		↔↑↑↑	↔↑↑↑	
Traffic Volume (veh/h)	149	0	24	6	0	53	43	1453	4	0	1698	302
Future Volume (veh/h)	149	0	24	6	0	53	43	1453	4	0	1698	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	155	0	5	6	0	6	45	1514	4	0	1769	306
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	343	0	152	3	0	2	107	3779	10	3	2449	419
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.06	0.71	0.71	0.00	0.56	0.56
Sat Flow, veh/h	3456	0	1537	1810	0	1610	1795	5300	14	1795	4404	753
Grp Volume(v), veh/h	155	0	5	6	0	6	45	980	538	0	1373	702
Grp Sat Flow(s),veh/h/ln	1728	0	1537	1810	0	1610	1795	1716	1883	1795	1716	1726
Q Serve(g_s), s	2.8	0.0	0.2	0.1	0.0	0.1	1.6	7.6	7.6	0.0	19.7	20.2
Cycle Q Clear(g_c), s	2.8	0.0	0.2	0.1	0.0	0.1	1.6	7.6	7.6	0.0	19.7	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		0.44
Lane Grp Cap(c), veh/h	343	0	152	3	0	2	107	2447	1343	3	1908	960
V/C Ratio(X)	0.45	0.00	0.03	2.21	0.00	2.48	0.42	0.40	0.40	0.00	0.72	0.73
Avail Cap(c_a), veh/h	1817	0	808	951	0	846	944	2447	1343	944	2061	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	0.0	27.1	33.3	0.0	33.3	30.2	3.8	3.8	0.0	10.9	11.1
Incr Delay (d2), s/veh	1.1	0.0	0.1	767.1	0.0	938.9	3.2	0.2	0.3	0.0	1.3	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.1	0.6	0.0	0.7	0.7	1.1	1.3	0.0	5.4	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	0.0	27.2	800.4	0.0	972.2	33.4	4.0	4.1	0.0	12.2	13.8
LnGrp LOS	C	A	C	F	A	F	C	A	A	A	B	B
Approach Vol, veh/h		160			12			1563			2075	
Approach Delay, s/veh		29.3			886.3			4.9			12.8	
Approach LOS		C			F			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.5	43.5	0.0	12.6	0.0	54.0	12.6	0.0				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	35.0	40.0	35.0	35.0	35.0	40.0	35.0	35.0				
Max Q Clear Time (g_c+1), s	13.6	22.2	0.0	0.0	0.0	9.6	4.8	0.0				
Green Ext Time (p_c), s	0.1	14.8	0.0	0.0	0.0	16.1	0.6	0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	73	4	45	27	4	58	36	1671	40	65	1681	90
Future Volume (veh/h)	73	4	45	27	4	58	36	1671	40	65	1681	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	78	4	9	29	4	13	39	1797	16	70	1808	40
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	403	102	229	407	77	249	146	1429	430	214	1626	490
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.08	0.28	0.28	0.12	0.32	0.32
Sat Flow, veh/h	1386	504	1133	1391	380	1236	1767	5066	1523	1767	5066	1525
Grp Volume(v), veh/h	78	0	13	29	0	17	39	1797	16	70	1808	40
Grp Sat Flow(s),veh/h/ln	1386	0	1637	1391	0	1616	1767	1689	1523	1767	1689	1525
Q Serve(g_s), s	2.6	0.0	0.3	0.9	0.0	0.5	1.1	15.0	0.4	1.9	17.1	1.0
Cycle Q Clear(g_c), s	3.0	0.0	0.3	1.3	0.0	0.5	1.1	15.0	0.4	1.9	17.1	1.0
Prop In Lane	1.00		0.69	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	403	0	330	407	0	326	146	1429	430	214	1626	490
V/C Ratio(X)	0.19	0.00	0.04	0.07	0.00	0.05	0.27	1.26	0.04	0.33	1.11	0.08
Avail Cap(c_a), veh/h	1088	0	1139	1094	0	1124	332	1429	430	332	1626	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	17.1	17.6	0.0	17.1	22.9	19.1	13.8	21.4	18.1	12.6
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.1	1.2	121.8	0.0	1.1	59.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	0.3	0.0	0.2	0.4	20.5	0.1	0.7	13.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	17.1	17.7	0.0	17.2	24.1	140.9	13.9	22.4	77.8	12.7
LnGrp LOS	B	A	B	B	A	B	C	F	B	C	F	B
Approach Vol, veh/h		91			46			1852			1918	
Approach Delay, s/veh		18.4			17.5			137.3			74.4	
Approach LOS		B			B			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	22.5		16.7	11.9	24.6		16.7				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	15.0		37.0	10.0	15.0		37.0				
Max Q Clear Time (g_c+1), s	13.9	17.0		5.0	3.1	19.1		3.3				
Green Ext Time (p_c), s	0.1	0.0		0.4	0.0	0.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	102.3
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary  
26: Sumner Ave & E Parkview St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	80	3	22	16	6	124	64	596	55	108	806	62
Future Volume (veh/h)	80	3	22	16	6	124	64	596	55	108	806	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	84	3	4	17	6	20	67	627	49	114	848	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	371	5	7	218	40	85	125	1192	93	177	1304	89
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.07	0.36	0.36	0.10	0.39	0.39
Sat Flow, veh/h	1369	49	65	529	363	776	1767	3313	259	1767	3348	229
Grp Volume(v), veh/h	91	0	0	43	0	0	67	333	343	114	446	460
Grp Sat Flow(s),veh/h/ln	1484	0	0	1668	0	0	1767	1763	1809	1767	1763	1814
Q Serve(g_s), s	1.0	0.0	0.0	0.0	0.0	0.0	1.1	4.7	4.7	1.9	6.5	6.5
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.7	0.0	0.0	1.1	4.7	4.7	1.9	6.5	6.5
Prop In Lane	0.92		0.04	0.40		0.47	1.00		0.14	1.00		0.13
Lane Grp Cap(c), veh/h	383	0	0	343	0	0	125	634	651	177	687	707
V/C Ratio(X)	0.24	0.00	0.00	0.13	0.00	0.00	0.54	0.53	0.53	0.64	0.65	0.65
Avail Cap(c_a), veh/h	1035	0	0	1058	0	0	282	1011	1038	310	1039	1070
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	0.0	12.8	0.0	0.0	14.1	7.9	7.9	13.6	7.8	7.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	0.0	0.0	3.6	0.7	0.7	3.9	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.2	0.0	0.0	0.4	1.0	1.0	0.7	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	0.0	12.9	0.0	0.0	17.7	8.6	8.6	17.4	8.9	8.8
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		91			43			743			1020	
Approach Delay, s/veh		13.5			12.9			9.4			9.8	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	15.8		7.9	6.7	16.7		7.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	18.0		18.0	5.0	18.5		18.0				
Max Q Clear Time (g_c+1), s	13.9	6.7		3.7	3.1	8.5		2.7				
Green Ext Time (p_c), s	0.0	2.9		0.3	0.0	3.7		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.9								
HCM 6th LOS				A								

HCM 6th TWSC  
27: Mill Creek Ave & E Amanecer Privado

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	39	0	18	14	0	16	26	36	3	0	33	77
Future Vol, veh/h	39	0	18	14	0	16	26	36	3	0	33	77
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	3	3	2
Mvmt Flow	49	0	23	18	0	20	33	45	4	0	41	96

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	178	204	69	134	250	25	137	0	0	49	0	0
Stage 1	89	89	-	113	113	-	-	-	-	-	-	-
Stage 2	89	115	-	21	137	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	768	691	980	824	652	1045	1445	-	-	1549	-	-
Stage 1	908	820	-	880	801	-	-	-	-	-	-	-
Stage 2	908	799	-	995	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	740	675	980	791	637	1045	1445	-	-	1549	-	-
Mov Cap-2 Maneuver	740	675	-	791	637	-	-	-	-	-	-	-
Stage 1	887	820	-	860	783	-	-	-	-	-	-	-
Stage 2	870	781	-	972	782	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9.1	3	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1445	-	-	802	909	1549	-	-
HCM Lane V/C Ratio	0.022	-	-	0.089	0.041	-	-	-
HCM Control Delay (s)	7.5	-	-	9.9	9.1	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0	-	-

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	533	513	128	264	329	153	90	919	223	138	973	727
Future Volume (veh/h)	533	513	128	264	329	153	90	919	223	138	973	727
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	544	523	36	269	336	57	92	938	137	141	993	469
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	455	931	407	327	421	349	79	1611	491	168	1866	569
Arrive On Green	0.13	0.26	0.26	0.10	0.23	0.23	0.04	0.31	0.31	0.09	0.36	0.36
Sat Flow, veh/h	3428	3526	1542	3428	1856	1540	1795	5147	1569	1795	5147	1570
Grp Volume(v), veh/h	544	523	36	269	336	57	92	938	137	141	993	469
Grp Sat Flow(s),veh/h/ln	1714	1763	1542	1714	1856	1540	1795	1716	1569	1795	1716	1570
Q Serve(g_s), s	15.0	14.5	2.0	8.7	19.3	3.4	5.0	17.3	7.4	8.7	17.2	30.7
Cycle Q Clear(g_c), s	15.0	14.5	2.0	8.7	19.3	3.4	5.0	17.3	7.4	8.7	17.2	30.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	455	931	407	327	421	349	79	1611	491	168	1866	569
V/C Ratio(X)	1.20	0.56	0.09	0.82	0.80	0.16	1.16	0.58	0.28	0.84	0.53	0.82
Avail Cap(c_a), veh/h	455	1435	628	394	722	600	79	1758	536	175	2031	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	35.9	31.3	50.2	41.3	35.1	54.0	32.6	29.2	50.4	28.4	32.7
Incr Delay (d2), s/veh	107.8	0.8	0.1	9.5	4.9	0.3	150.0	0.6	0.4	26.1	0.3	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	6.0	0.7	4.0	9.0	1.2	5.5	7.0	2.7	5.0	6.7	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	156.8	36.7	31.5	59.6	46.2	35.4	204.0	33.2	29.7	76.5	28.8	41.6
LnGrp LOS	F	D	C	E	D	D	F	C	C	E	C	D
Approach Vol, veh/h		1103			662			1167			1603	
Approach Delay, s/veh		95.8			50.7			46.2			36.7	
Approach LOS		F			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	42.6	16.8	37.1	11.0	48.2	21.0	32.8				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	11.0	38.6	13.0	46.0	5.0	44.6	15.0	44.0				
Max Q Clear Time (g_c+I1), s	10.7	19.3	10.7	16.5	7.0	32.7	17.0	21.3				
Green Ext Time (p_c), s	0.0	8.6	0.1	4.9	0.0	7.8	0.0	2.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				55.6								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1734	0	4	846	87	15	0	42	45	0	32
Future Volume (veh/h)	34	1734	0	4	846	87	15	0	42	45	0	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		1.00	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	39	1970	0	5	961	94	17	0	0	51	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	88	2314	1032	16	1991	195	240	0	0	233	0	0
Arrive On Green	0.05	0.67	0.00	0.01	0.63	0.63	0.10	0.00	0.00	0.10	0.00	0.00
Sat Flow, veh/h	1739	3469	1547	1739	3184	311	1501	0	0	1429	0	0
Grp Volume(v), veh/h	39	1970	0	5	524	531	17	0	0	51	0	0
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1760	1501	0	0	1429	0	0
Q Serve(g_s), s	1.8	35.3	0.0	0.2	13.1	13.1	0.0	0.0	0.0	1.8	0.0	0.0
Cycle Q Clear(g_c), s	1.8	35.3	0.0	0.2	13.1	13.1	0.7	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	88	2314	1032	16	1085	1101	240	0	0	233	0	0
V/C Ratio(X)	0.44	0.85	0.00	0.31	0.48	0.48	0.07	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	151	2366	1055	151	1183	1201	617	0	0	612	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.2	10.4	0.0	39.7	8.1	8.1	32.9	0.0	0.0	33.7	0.0	0.0
Incr Delay (d2), s/veh	3.5	3.5	0.0	10.7	0.7	0.7	0.1	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	11.0	0.0	0.1	4.2	4.2	0.3	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	13.8	0.0	50.4	8.8	8.8	33.1	0.0	0.0	34.2	0.0	0.0
LnGrp LOS	D	B	A	D	A	A	C	A	A	C	A	A
Approach Vol, veh/h		2009			1060			17			51	
Approach Delay, s/veh		14.4			9.0			33.1			34.2	
Approach LOS		B			A			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.1	5.7	60.8		14.1	9.1	57.4				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	55.0		30.0	7.0	55.0				
Max Q Clear Time (g_c+1), s		2.7	2.2	37.3		4.6	3.8	15.1				
Green Ext Time (p_c), s		0.0	0.0	16.5		0.2	0.0	17.2				

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	671	671	477	81	364	103	165	1020	124	130	1171	414
Future Volume (veh/h)	671	671	477	81	364	103	165	1020	124	130	1171	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	714	714	0	86	387	20	176	1085	46	138	1246	261
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	3	3	3
Cap, veh/h	595	855		117	483	210	242	1792	546	239	1243	545
Arrive On Green	0.18	0.25	0.00	0.07	0.14	0.14	0.07	0.35	0.35	0.07	0.35	0.35
Sat Flow, veh/h	3374	3469	1547	1781	3554	1544	3428	5066	1545	3428	3526	1545
Grp Volume(v), veh/h	714	714	0	86	387	20	176	1085	46	138	1246	261
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1781	1777	1544	1714	1689	1545	1714	1763	1545
Q Serve(g_s), s	20.0	22.2	0.0	5.4	12.0	1.3	5.7	20.0	2.2	4.4	40.0	14.9
Cycle Q Clear(g_c), s	20.0	22.2	0.0	5.4	12.0	1.3	5.7	20.0	2.2	4.4	40.0	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	595	855		117	483	210	242	1792	546	239	1243	545
V/C Ratio(X)	1.20	0.84		0.73	0.80	0.10	0.73	0.61	0.08	0.58	1.00	0.48
Avail Cap(c_a), veh/h	595	855		314	627	272	756	1792	546	453	1243	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	40.6	0.0	52.0	47.5	42.9	51.6	30.2	24.4	51.2	36.7	28.6
Incr Delay (d2), s/veh	105.7	7.9	0.0	6.4	5.1	0.1	3.1	0.9	0.1	1.6	26.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	10.2	0.0	2.6	5.6	0.5	2.4	7.7	0.8	1.9	20.2	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	152.4	48.5	0.0	58.4	52.6	43.0	54.7	31.0	24.6	52.8	62.8	30.0
LnGrp LOS	F	D		E	D	D	D	C	C	D	F	C
Approach Vol, veh/h		1428			493			1307			1645	
Approach Delay, s/veh		100.4			53.2			34.0			56.7	
Approach LOS		F			D			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	47.6	15.0	35.5	15.5	47.5	27.5	22.9				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	15.0	40.0	20.0	25.0	25.0	40.0	20.0	20.0				
Max Q Clear Time (g_c+I), s	10.4	22.0	7.4	24.2	7.7	42.0	22.0	14.0				
Green Ext Time (p_c), s	0.2	10.7	0.1	0.5	0.3	0.0	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	63.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	865	42	9	474	20	38	5	18	19	7	20
Future Volume (veh/h)	37	865	42	9	474	20	38	5	18	19	7	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	901	24	9	494	12	40	5	2	20	7	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	1295	561	30	1131	489	364	35	218	291	83	15
Arrive On Green	0.06	0.36	0.36	0.02	0.32	0.32	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1539	1781	3554	1537	1229	247	1551	856	593	107
Grp Volume(v), veh/h	39	901	24	9	494	12	45	0	2	29	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1539	1781	1777	1537	1476	0	1551	1556	0	0
Q Serve(g_s), s	0.7	7.7	0.4	0.2	3.9	0.2	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	7.7	0.4	0.2	3.9	0.2	0.8	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.89		1.00	0.69		0.07
Lane Grp Cap(c), veh/h	112	1295	561	30	1131	489	398	0	218	390	0	0
V/C Ratio(X)	0.35	0.70	0.04	0.30	0.44	0.02	0.11	0.00	0.01	0.07	0.00	0.00
Avail Cap(c_a), veh/h	351	1600	693	351	1600	692	1407	0	1309	1444	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.9	9.6	7.3	17.3	9.6	8.3	13.5	0.0	13.1	13.3	0.0	0.0
Incr Delay (d2), s/veh	1.8	1.0	0.0	5.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	0.1	0.1	1.1	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	10.6	7.3	22.8	9.9	8.3	13.5	0.0	13.2	13.4	0.0	0.0
LnGrp LOS	B	B	A	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		964			515			47			29	
Approach Delay, s/veh		10.8			10.0			13.5			13.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.0	5.6	18.9		11.0	7.2	17.3				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s		2.8	2.2	9.7		2.5	2.7	5.9				
Green Ext Time (p_c), s		0.1	0.0	3.1		0.1	0.0	2.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											10.7	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary  
32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	819	19	39	476	75	18	11	28	74	13	30
Future Volume (veh/h)	55	819	19	39	476	75	18	11	28	74	13	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	836	10	40	486	35	18	11	6	76	13	18
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	1354	587	110	1291	559	267	132	247	290	53	40
Arrive On Green	0.08	0.38	0.38	0.06	0.36	0.36	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1540	1781	3554	1539	820	823	1548	912	333	252
Grp Volume(v), veh/h	56	836	10	40	486	35	29	0	6	107	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1781	1777	1539	1644	0	1548	1497	0	0
Q Serve(g_s), s	1.3	8.1	0.2	0.9	4.3	0.6	0.0	0.0	0.1	1.8	0.0	0.0
Cycle Q Clear(g_c), s	1.3	8.1	0.2	0.9	4.3	0.6	0.6	0.0	0.1	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.62		1.00	0.71		0.17
Lane Grp Cap(c), veh/h	142	1354	587	110	1291	559	399	0	247	383	0	0
V/C Ratio(X)	0.40	0.62	0.02	0.36	0.38	0.06	0.07	0.00	0.02	0.28	0.00	0.00
Avail Cap(c_a), veh/h	832	2906	1260	832	2906	1259	1046	0	904	1001	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.7	10.7	8.3	19.3	10.0	8.9	15.3	0.0	15.2	16.2	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.5	0.0	2.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.4	0.0	0.4	1.3	0.2	0.2	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	11.2	8.3	21.3	10.2	8.9	15.4	0.0	15.2	16.3	0.0	0.0
LnGrp LOS	C	B	A	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h		902			561			35			107	
Approach Delay, s/veh		11.7			10.9			15.3			16.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.8	7.6	22.3		12.8	8.4	21.6				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.6	2.9	10.1		4.6	3.3	6.3				
Green Ext Time (p_c), s		0.1	0.1	6.2		0.3	0.1	3.4				

Intersection Summary

HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	685	173	384	444	130	89	535	299	191	597	57
Future Volume (veh/h)	46	685	173	384	444	130	89	535	299	191	597	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	47	706	160	396	458	113	92	552	245	197	615	54
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	714	162	330	1086	266	110	537	237	227	958	84
Arrive On Green	0.05	0.25	0.25	0.19	0.39	0.39	0.06	0.23	0.23	0.13	0.29	0.29
Sat Flow, veh/h	1781	2866	649	1767	2799	685	1767	2365	1047	1767	3273	287
Grp Volume(v), veh/h	47	438	428	396	287	284	92	411	386	197	331	338
Grp Sat Flow(s),veh/h/ln	1781	1777	1738	1767	1763	1721	1767	1763	1650	1767	1763	1797
Q Serve(g_s), s	2.9	27.6	27.6	21.0	13.4	13.6	5.8	25.5	25.5	12.3	18.4	18.4
Cycle Q Clear(g_c), s	2.9	27.6	27.6	21.0	13.4	13.6	5.8	25.5	25.5	12.3	18.4	18.4
Prop In Lane	1.00		0.37	1.00		0.40	1.00		0.63	1.00		0.16
Lane Grp Cap(c), veh/h	85	443	433	330	684	668	110	400	374	227	516	526
V/C Ratio(X)	0.55	0.99	0.99	1.20	0.42	0.43	0.84	1.03	1.03	0.87	0.64	0.64
Avail Cap(c_a), veh/h	127	443	433	330	684	668	110	400	374	346	635	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	42.1	42.1	45.7	25.2	25.2	52.1	43.5	43.5	48.1	34.6	34.6
Incr Delay (d2), s/veh	2.1	39.6	40.3	115.3	0.2	0.2	38.3	52.3	54.9	9.5	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	16.7	16.4	19.3	5.3	5.2	3.7	16.5	15.7	5.8	7.8	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	81.7	82.4	161.0	25.3	25.4	90.5	95.8	98.4	57.5	36.1	36.2
LnGrp LOS	D	F	F	F	C	C	F	F	F	E	D	D
Approach Vol, veh/h		913		967		889		866				
Approach Delay, s/veh		80.6		80.9		96.4		41.0				
Approach LOS		F		F		F		D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.4	32.5	26.0	34.5	12.0	39.9	10.4	50.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	27.0	25.5	21.0	28.0	7.0	40.5	8.0	41.0				
Max Q Clear Time (g_c+1/3), s	14.3	27.5	23.0	29.6	7.8	20.4	4.9	15.6				
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.0	3.6	0.0	1.8				

Intersection Summary

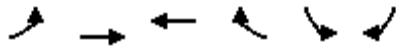
HCM 6th Ctrl Delay	75.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 34: Bellegrave Ave & Proposed Driveway B

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	13	1144	939	127	40	38	
Future Volume (veh/h)	13	1144	939	127	40	38	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1870	1870	
Adj Flow Rate, veh/h	14	1217	999	124	43	4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	3	3	3	3	2	2	
Cap, veh/h	32	2290	1526	189	87	8	
Arrive On Green	0.02	0.65	0.48	0.48	0.05	0.05	
Sat Flow, veh/h	1767	3618	3249	392	1581	147	
Grp Volume(v), veh/h	14	1217	558	565	48	0	
Grp Sat Flow(s),veh/h/ln	1767	1763	1763	1785	1765	0	
Q Serve(g_s), s	0.2	5.6	7.3	7.3	0.8	0.0	
Cycle Q Clear(g_c), s	0.2	5.6	7.3	7.3	0.8	0.0	
Prop In Lane	1.00			0.22	0.90	0.08	
Lane Grp Cap(c), veh/h	32	2290	852	863	97	0	
V/C Ratio(X)	0.43	0.53	0.65	0.65	0.50	0.00	
Avail Cap(c_a), veh/h	296	3716	1302	1319	1095	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	14.8	2.9	5.9	5.9	14.0	0.0	
Incr Delay (d2), s/veh	8.8	0.2	0.9	0.9	3.9	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.7	0.7	0.4	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	23.6	3.0	6.8	6.8	17.9	0.0	
LnGrp LOS	C	A	A	A	B	A	
Approach Vol, veh/h		1231	1123		48		
Approach Delay, s/veh		3.3	6.8		17.9		
Approach LOS		A	A		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				24.3	6.2	5.1	19.2
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				32.1	18.9	5.1	22.5
Max Q Clear Time (g_c+1), s				7.6	2.8	2.2	9.3
Green Ext Time (p_c), s				8.8	0.1	0.0	5.4
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			5.2				
HCM 6th LOS			A				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1068	95	129	971	25	66	15	88	7	28	30
Future Volume (veh/h)	22	1068	95	129	971	25	66	15	88	7	28	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	1136	85	137	1033	20	70	16	11	7	30	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	369	1308	1081	168	2486	1092	92	243	197	21	169	139
Arrive On Green	0.71	0.71	0.71	0.71	0.71	0.71	0.05	0.13	0.13	0.01	0.09	0.09
Sat Flow, veh/h	532	1856	1534	453	3526	1549	1767	1856	1503	1767	1856	1521
Grp Volume(v), veh/h	23	1136	85	137	1033	20	70	16	11	7	30	2
Grp Sat Flow(s),veh/h/ln	532	1856	1534	453	1763	1549	1767	1856	1503	1767	1856	1521
Q Serve(g_s), s	2.3	56.8	2.1	29.2	14.9	0.5	4.8	0.9	0.8	0.5	1.8	0.1
Cycle Q Clear(g_c), s	17.2	56.8	2.1	86.0	14.9	0.5	4.8	0.9	0.8	0.5	1.8	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	369	1308	1081	168	2486	1092	92	243	197	21	169	139
V/C Ratio(X)	0.06	0.87	0.08	0.82	0.42	0.02	0.76	0.07	0.06	0.33	0.18	0.01
Avail Cap(c_a), veh/h	369	1308	1081	168	2486	1092	101	586	474	101	586	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	13.7	5.6	49.4	7.5	5.4	57.1	46.4	46.4	59.8	51.2	50.4
Incr Delay (d2), s/veh	0.1	6.5	0.0	26.1	0.1	0.0	22.2	0.0	0.0	3.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	20.6	0.6	5.3	4.6	0.1	2.7	0.4	0.3	0.2	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	20.2	5.6	75.5	7.6	5.4	79.3	46.5	46.4	63.0	51.4	50.4
LnGrp LOS	B	C	A	E	A	A	E	D	D	E	D	D
Approach Vol, veh/h		1244			1190			97			39	
Approach Delay, s/veh		19.0			15.4			70.2			53.4	
Approach LOS		B			B			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.3	17.6		93.0	6.5	22.5		93.0				
Change Period (Y+Rc), s	5.0	6.5		7.0	5.0	6.5		7.0				
Max Green Setting (Gmax), s	38.5			86.0	7.0	38.5		86.0				
Max Q Clear Time (g_c+1/3), s	3.8			88.0	2.5	2.9		58.8				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.0		11.0				

Intersection Summary

HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	155	27	705	39	360	11	762	668	704	1072	9
Future Volume (veh/h)	78	155	27	705	39	360	11	762	668	704	1072	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	160	1	727	40	312	11	786	642	726	1105	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	1	1	1	3	3	3	3	3	3
Cap, veh/h	99	138	61	613	298	765	26	1118	773	567	2197	980
Arrive On Green	0.06	0.04	0.04	0.18	0.16	0.16	0.01	0.32	0.32	0.32	0.62	0.62
Sat Flow, veh/h	1668	3328	1485	3483	1885	1598	1767	3526	1565	1767	3526	1572
Grp Volume(v), veh/h	80	160	1	727	40	312	11	786	642	726	1105	6
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1742	1885	1598	1767	1763	1565	1767	1763	1572
Q Serve(g_s), s	6.9	6.0	0.1	25.5	2.6	18.3	0.9	28.4	46.0	46.5	24.9	0.2
Cycle Q Clear(g_c), s	6.9	6.0	0.1	25.5	2.6	18.3	0.9	28.4	46.0	46.5	24.9	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	138	61	613	298	765	26	1118	773	567	2197	980
V/C Ratio(X)	0.81	1.16	0.02	1.19	0.13	0.41	0.42	0.70	0.83	1.28	0.50	0.01
Avail Cap(c_a), veh/h	162	138	61	613	298	765	73	1118	773	567	2197	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.4	69.5	66.7	59.8	52.5	24.5	70.8	43.5	31.6	49.3	15.0	10.3
Incr Delay (d2), s/veh	14.4	126.7	0.1	99.8	0.2	0.3	10.4	2.0	7.6	139.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	5.0	0.0	19.4	1.2	6.7	0.5	12.2	19.7	41.4	9.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	196.2	66.8	159.6	52.7	24.8	81.2	45.5	39.2	188.8	15.2	10.3
LnGrp LOS	F	F	E	F	D	C	F	D	D	F	B	B
Approach Vol, veh/h		241			1079			1439			1837	
Approach Delay, s/veh		157.7			116.6			43.0			83.8	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	51.0	52.0	30.0	12.0	6.6	96.4	13.1	28.9				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	46.5	46.0	25.5	6.0	6.0	86.5	14.1	17.4				
Max Q Clear Time (g_c+R), s	46.5	48.0	27.5	8.0	2.9	26.9	8.9	20.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	8.7	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	82.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗	↔	↑↑	↗	↔	↑↑	↗
Traffic Volume (veh/h)	213	1411	94	248	1008	167	75	590	168	261	706	182
Future Volume (veh/h)	213	1411	94	248	1008	167	75	590	168	261	706	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	220	1455	32	256	1039	70	77	608	85	269	728	113
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	284	1784	544	331	1854	573	98	748	327	297	1145	502
Arrive On Green	0.08	0.35	0.35	0.09	0.36	0.36	0.06	0.21	0.21	0.17	0.32	0.32
Sat Flow, veh/h	3483	5147	1570	3483	5147	1591	1767	3526	1539	1767	3526	1544
Grp Volume(v), veh/h	220	1455	32	256	1039	70	77	608	85	269	728	113
Grp Sat Flow(s),veh/h/ln	1742	1716	1570	1742	1716	1591	1767	1763	1539	1767	1763	1544
Q Serve(g_s), s	7.0	29.0	1.5	8.1	18.2	3.3	4.8	18.5	5.2	16.8	19.8	6.0
Cycle Q Clear(g_c), s	7.0	29.0	1.5	8.1	18.2	3.3	4.8	18.5	5.2	16.8	19.8	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	1784	544	331	1854	573	98	748	327	297	1145	502
V/C Ratio(X)	0.78	0.82	0.06	0.77	0.56	0.12	0.78	0.81	0.26	0.90	0.64	0.23
Avail Cap(c_a), veh/h	774	2060	628	1084	2060	637	393	941	411	393	1145	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	33.4	24.5	49.7	28.8	24.1	52.4	42.2	36.9	45.9	32.3	27.7
Incr Delay (d2), s/veh	1.7	2.3	0.0	2.9	0.3	0.1	5.0	4.0	0.3	17.2	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	11.8	0.6	3.5	7.2	1.2	2.2	8.1	1.9	8.5	8.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	35.8	24.5	52.6	29.1	24.2	57.4	46.2	37.2	63.1	33.4	27.8
LnGrp LOS	D	D	C	D	C	C	E	D	D	E	C	C
Approach Vol, veh/h		1707			1365			770			1110	
Approach Delay, s/veh		37.7			33.3			46.3			40.0	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	44.5	10.8	42.0	13.7	46.0	23.4	29.4				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	35.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0				
Max Q Clear Time (g_c+10), s	11.0	31.0	6.8	21.8	9.0	20.2	18.8	20.5				
Green Ext Time (p_c), s	0.6	8.0	0.0	2.6	0.2	7.5	0.1	2.3				

Intersection Summary

HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	1773	62	155	1375	105	62	106	117	95	167	36
Future Volume (veh/h)	29	1773	62	155	1375	105	62	106	117	95	167	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	31	1866	29	163	1447	76	65	112	18	100	176	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	54	1784	775	198	2072	922	84	182	149	128	433	188
Arrive On Green	0.03	0.50	0.50	0.11	0.58	0.58	0.05	0.10	0.10	0.07	0.12	0.12
Sat Flow, veh/h	1795	3582	1555	1795	3582	1593	1767	1856	1523	1767	3526	1529
Grp Volume(v), veh/h	31	1866	29	163	1447	76	65	112	18	100	176	38
Grp Sat Flow(s),veh/h/ln	1795	1791	1555	1795	1791	1593	1767	1856	1523	1767	1763	1529
Q Serve(g_s), s	1.5	45.0	0.9	8.0	25.8	1.9	3.3	5.2	1.0	5.0	4.2	2.0
Cycle Q Clear(g_c), s	1.5	45.0	0.9	8.0	25.8	1.9	3.3	5.2	1.0	5.0	4.2	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	1784	775	198	2072	922	84	182	149	128	433	188
V/C Ratio(X)	0.58	1.05	0.04	0.82	0.70	0.08	0.78	0.62	0.12	0.78	0.41	0.20
Avail Cap(c_a), veh/h	596	1784	775	596	2072	922	587	822	674	587	1561	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	22.7	11.6	39.3	13.5	8.4	42.6	39.1	37.2	41.2	36.6	35.6
Incr Delay (d2), s/veh	3.6	34.4	0.0	3.3	1.1	0.0	5.6	1.3	0.1	3.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	24.6	0.3	3.5	8.8	0.6	1.5	2.4	0.4	2.3	1.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	57.1	11.6	42.6	14.6	8.5	48.2	40.4	37.3	45.2	36.8	35.8
LnGrp LOS	D	F	B	D	B	A	D	D	D	D	D	D
Approach Vol, veh/h		1926			1686			195			314	
Approach Delay, s/veh		56.3			17.0			42.7			39.4	
Approach LOS		E			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	57.8	8.8	16.6	14.5	50.5	11.0	14.4				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.0	45.0	30.0	40.0	30.0	45.0	30.0	40.0				
Max Q Clear Time (g_c+1), s	13.5	27.8	5.3	6.2	10.0	47.0	7.0	7.2				
Green Ext Time (p_c), s	0.0	10.8	0.0	0.8	0.1	0.0	0.1	0.4				

Intersection Summary

HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	320	1520	112	538	1134	296	236	722	258	352	699	241
Future Volume (veh/h)	320	1520	112	538	1134	296	236	722	258	352	699	241
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	327	1551	42	549	1157	152	241	737	52	359	713	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	385	1886	583	491	1422	632	300	961	296	416	1132	349
Arrive On Green	0.11	0.37	0.37	0.14	0.40	0.40	0.09	0.19	0.19	0.12	0.22	0.22
Sat Flow, veh/h	3483	5147	1591	3483	3582	1592	3483	5147	1585	3483	5147	1587
Grp Volume(v), veh/h	327	1551	42	549	1157	152	241	737	52	359	713	55
Grp Sat Flow(s),veh/h/ln	1742	1716	1591	1742	1791	1592	1742	1716	1585	1742	1716	1587
Q Serve(g_s), s	10.1	30.1	1.9	15.5	31.7	7.0	7.5	15.0	3.0	11.1	13.8	3.1
Cycle Q Clear(g_c), s	10.1	30.1	1.9	15.5	31.7	7.0	7.5	15.0	3.0	11.1	13.8	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1886	583	491	1422	632	300	961	296	416	1132	349
V/C Ratio(X)	0.85	0.82	0.07	1.12	0.81	0.24	0.80	0.77	0.18	0.86	0.63	0.16
Avail Cap(c_a), veh/h	491	1886	583	491	1422	632	491	1380	425	491	1380	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	31.6	22.7	47.2	29.6	22.1	49.3	42.5	37.6	47.5	38.8	34.7
Incr Delay (d2), s/veh	9.0	4.2	0.2	77.3	5.2	0.9	1.9	0.9	0.1	11.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	12.4	0.7	11.7	13.7	2.7	3.2	6.2	1.2	5.3	5.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	35.8	22.9	124.5	34.8	23.0	51.2	43.3	37.7	59.1	39.1	34.7
LnGrp LOS	E	D	C	F	C	C	D	D	D	E	D	C
Approach Vol, veh/h		1920			1858			1030			1127	
Approach Delay, s/veh		39.1			60.3			44.9			45.3	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	46.2	14.0	29.8	16.7	49.6	17.6	26.1				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	15.5	29.0	15.5	29.5	15.5	29.0	15.5	29.5				
Max Q Clear Time (g_c+1/7), s	11.5	32.1	9.5	15.8	12.1	33.7	13.1	17.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	47.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1570	890	0	1513	545	0	0	0	293	1	837
Future Volume (veh/h)	0	1570	890	0	1513	545	0	0	0	293	1	837
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	1885	1885
Adj Flow Rate, veh/h	0	1602	416	0	1544	556				300	0	810
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	1	1				1	1	1
Cap, veh/h	0	2502	774	0	2502	1242				1055	0	939
Arrive On Green	0.00	0.49	0.49	0.00	0.97	0.97				0.29	0.00	0.29
Sat Flow, veh/h	0	5316	1593	0	5316	1589				3591	0	3195
Grp Volume(v), veh/h	0	1602	416	0	1544	556				300	0	810
Grp Sat Flow(s),veh/h/ln	0	1716	1593	0	1716	1589				1795	0	1598
Q Serve(g_s), s	0.0	12.8	10.0	0.0	1.1	0.8				3.5	0.0	13.2
Cycle Q Clear(g_c), s	0.0	12.8	10.0	0.0	1.1	0.8				3.5	0.0	13.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2502	774	0	2502	1242				1055	0	939
V/C Ratio(X)	0.00	0.64	0.54	0.00	0.62	0.45				0.28	0.00	0.86
Avail Cap(c_a), veh/h	0	2502	774	0	2502	1242				1169	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.5	9.8	0.0	0.4	0.1				15.0	0.0	18.4
Incr Delay (d2), s/veh	0.0	1.3	2.7	0.0	0.9	0.9				0.1	0.0	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	3.0	0.0	0.3	0.4				1.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.8	12.5	0.0	1.3	1.0				15.0	0.0	24.8
LnGrp LOS	A	B	B	A	A	A				B	A	C
Approach Vol, veh/h		2018			2100						1110	
Approach Delay, s/veh		12.0			1.2						22.2	
Approach LOS		B			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		33.0		22.0		33.0						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		25.0		17.9		25.0						
Max Q Clear Time (g_c+I1), s		14.8		15.2		3.1						
Green Ext Time (p_c), s		5.9		1.0		9.0						

Intersection Summary

HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	1309	492	0	1620	157	443	0	442	0	0	0
Future Volume (veh/h)	0	1309	492	0	1620	157	443	0	442	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No		No		No		No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	1885	1885			
Adj Flow Rate, veh/h	0	1349	507	0	1670	86	457	0	408			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	1	1			
Cap, veh/h	0	3083	1242	0	3083	955	650	0	578			
Arrive On Green	0.00	1.00	1.00	0.00	0.60	0.60	0.18	0.00	0.18			
Sat Flow, veh/h	0	5316	1591	0	5316	1594	3591	0	3195			
Grp Volume(v), veh/h	0	1349	507	0	1670	86	457	0	408			
Grp Sat Flow(s),veh/h/ln	0	1716	1591	0	1716	1594	1795	0	1598			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.6	1.3	6.6	0.0	6.6			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.6	1.3	6.6	0.0	6.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3083	1242	0	3083	955	650	0	578			
V/C Ratio(X)	0.00	0.44	0.41	0.00	0.54	0.09	0.70	0.00	0.71			
Avail Cap(c_a), veh/h	0	3083	1242	0	3083	955	1038	0	924			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.72	0.72	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	6.5	4.7	21.1	0.0	21.1			
Incr Delay (d2), s/veh	0.0	0.3	0.7	0.0	0.7	0.2	0.5	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.2	0.0	2.3	0.3	2.6	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.7	0.0	7.2	4.9	21.7	0.0	21.7			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1856			1756			865				
Approach Delay, s/veh		0.4			7.1			21.7				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.2				39.2		15.8				
Change Period (Y+Rc), s		6.3				6.3		5.8				
Max Green Setting (Gmax), s		27.0				27.0		15.9				
Max Q Clear Time (g_c+I1), s		2.0				12.6		8.6				
Green Ext Time (p_c), s		7.8				7.0		1.4				

Intersection Summary

HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	519	1009	281	143	392	52	301	777	114	152	914	672
Future Volume (veh/h)	519	1009	281	143	392	52	301	777	114	152	914	672
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	541	1051	88	149	408	10	314	809	42	158	952	427
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	3	3	3
Cap, veh/h	620	1439	444	228	867	263	393	1833	567	228	1590	491
Arrive On Green	0.18	0.29	0.29	0.07	0.17	0.17	0.11	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	3374	4985	1539	3428	5066	1536	3428	5066	1566	3428	5066	1565
Grp Volume(v), veh/h	541	1051	88	149	408	10	314	809	42	158	952	427
Grp Sat Flow(s),veh/h/ln	1687	1662	1539	1714	1689	1536	1714	1689	1566	1714	1689	1565
Q Serve(g_s), s	16.2	19.8	4.5	4.4	7.5	0.6	9.3	12.6	1.8	4.7	16.5	26.8
Cycle Q Clear(g_c), s	16.2	19.8	4.5	4.4	7.5	0.6	9.3	12.6	1.8	4.7	16.5	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	620	1439	444	228	867	263	393	1833	567	228	1590	491
V/C Ratio(X)	0.87	0.73	0.20	0.65	0.47	0.04	0.80	0.44	0.07	0.69	0.60	0.87
Avail Cap(c_a), veh/h	811	2158	666	824	2193	665	824	1833	567	824	1706	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	33.3	27.9	47.4	38.8	35.9	44.8	25.2	21.7	47.5	30.1	33.7
Incr Delay (d2), s/veh	7.7	0.7	0.2	2.4	0.4	0.1	2.8	0.2	0.1	2.8	0.5	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	7.5	1.6	1.9	3.0	0.2	3.9	4.7	0.6	2.0	6.3	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	34.1	28.1	49.7	39.2	36.0	47.7	25.4	21.8	50.2	30.7	47.5
LnGrp LOS	D	C	C	D	D	D	D	C	C	D	C	D
Approach Vol, veh/h		1680			567			1165			1537	
Approach Delay, s/veh		38.5			41.9			31.2			37.4	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	37.0	11.9	43.1	24.1	24.8	16.9	38.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	25.0	45.0	25.0	35.0	25.0	45.0	25.0	35.0				
Max Q Clear Time (g_c+1), s	10.4	21.8	6.7	14.6	18.2	9.5	11.3	28.8				
Green Ext Time (p_c), s	0.3	7.3	0.3	5.1	0.9	2.7	0.6	3.7				

Intersection Summary

HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	208	36	169	226	116	79	668	179	132	589	91
Future Volume (veh/h)	72	208	36	169	226	116	79	668	179	132	589	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	75	217	7	176	235	28	82	696	104	138	614	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	95	288	238	203	408	344	104	2384	728	157	2537	767
Arrive On Green	0.05	0.15	0.15	0.11	0.22	0.22	0.06	0.46	0.46	0.09	0.49	0.49
Sat Flow, veh/h	1781	1870	1546	1781	1870	1574	1795	5147	1572	1795	5147	1555
Grp Volume(v), veh/h	75	217	7	176	235	28	82	696	104	138	614	45
Grp Sat Flow(s),veh/h/ln	1781	1870	1546	1781	1870	1574	1795	1716	1572	1795	1716	1555
Q Serve(g_s), s	5.0	13.3	0.5	11.7	13.5	1.7	5.4	10.1	4.6	9.1	8.2	1.8
Cycle Q Clear(g_c), s	5.0	13.3	0.5	11.7	13.5	1.7	5.4	10.1	4.6	9.1	8.2	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	288	238	203	408	344	104	2384	728	157	2537	767
V/C Ratio(X)	0.79	0.75	0.03	0.87	0.58	0.08	0.79	0.29	0.14	0.88	0.24	0.06
Avail Cap(c_a), veh/h	193	541	447	304	670	564	157	2384	728	157	2537	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	48.6	43.1	52.3	41.9	37.3	55.8	20.0	18.5	54.1	17.5	15.9
Incr Delay (d2), s/veh	5.3	1.5	0.0	11.1	0.5	0.0	7.3	0.3	0.4	37.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.2	0.2	5.7	6.1	0.6	2.6	3.9	1.7	5.7	3.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	50.1	43.2	63.4	42.4	37.4	63.1	20.3	18.9	92.1	17.7	16.0
LnGrp LOS	E	D	D	E	D	D	E	C	B	F	B	B
Approach Vol, veh/h		299			439			882			797	
Approach Delay, s/veh		52.8			50.5			24.1			30.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	63.1	18.1	23.8	11.4	66.7	10.4	31.5				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	10.5	* 33	20.5	34.7	10.5	32.5	13.0	* 43				
Max Q Clear Time (g_c+ll), s	12.1	13.7	15.3	7.4	10.2	7.0	15.5					
Green Ext Time (p_c), s	0.0	3.0	0.0	0.1	0.0	2.6	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	6	238	11	4	9	331	818	5	21	469	216
Future Volume (veh/h)	201	6	238	11	4	9	331	818	5	21	469	216
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	203	6	57	11	4	2	334	826	4	21	474	55
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	261	313	263	25	64	54	406	2412	725	45	958	419
Arrive On Green	0.15	0.17	0.17	0.01	0.03	0.03	0.23	0.47	0.47	0.02	0.27	0.27
Sat Flow, veh/h	1767	1856	1558	1767	1856	1546	1795	5147	1546	1795	3582	1567
Grp Volume(v), veh/h	203	6	57	11	4	2	334	826	4	21	474	55
Grp Sat Flow(s),veh/h/ln	1767	1856	1558	1767	1856	1546	1795	1716	1546	1795	1791	1567
Q Serve(g_s), s	6.1	0.1	1.8	0.3	0.1	0.1	9.8	5.6	0.1	0.6	6.2	1.5
Cycle Q Clear(g_c), s	6.1	0.1	1.8	0.3	0.1	0.1	9.8	5.6	0.1	0.6	6.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	313	263	25	64	54	406	2412	725	45	958	419
V/C Ratio(X)	0.78	0.02	0.22	0.44	0.06	0.04	0.82	0.34	0.01	0.47	0.50	0.13
Avail Cap(c_a), veh/h	716	1887	1585	159	1302	1085	856	5974	1795	194	2836	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	19.3	19.9	27.2	25.9	25.9	20.4	9.3	7.9	26.7	17.2	15.5
Incr Delay (d2), s/veh	4.9	0.0	0.4	11.9	0.4	0.3	4.2	0.1	0.0	7.5	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.1	0.6	0.2	0.1	0.0	3.8	1.5	0.0	0.3	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	19.3	20.3	39.1	26.3	26.2	24.7	9.4	7.9	34.2	17.6	15.6
LnGrp LOS	C	B	C	D	C	C	C	A	A	C	B	B
Approach Vol, veh/h		266			17			1164			550	
Approach Delay, s/veh		26.0			34.6			13.8			18.0	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	30.5	5.3	13.9	17.1	19.4	12.7	6.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.0	64.5	5.0	56.5	26.5	44.0	22.5	39.0				
Max Q Clear Time (g_c+1), s	12.6	7.6	2.3	3.8	11.8	8.2	8.1	2.1				
Green Ext Time (p_c), s	0.0	5.9	0.0	0.2	0.8	3.1	0.4	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											16.8	
HCM 6th LOS											B	



HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	130	65	200	79	32	79	575	225	57	652	98
Future Volume (veh/h)	95	130	65	200	79	32	79	575	225	57	652	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	102	140	13	215	85	6	85	618	134	61	701	99
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	131	407	176	264	642	282	112	1679	512	94	995	140
Arrive On Green	0.07	0.12	0.12	0.15	0.18	0.18	0.06	0.33	0.33	0.05	0.32	0.32
Sat Flow, veh/h	1767	3526	1528	1767	3526	1550	1767	5066	1545	1767	3094	437
Grp Volume(v), veh/h	102	140	13	215	85	6	85	618	134	61	399	401
Grp Sat Flow(s),veh/h/ln	1767	1763	1528	1767	1763	1550	1767	1689	1545	1767	1763	1768
Q Serve(g_s), s	3.4	2.2	0.5	7.1	1.2	0.2	2.8	5.6	3.8	2.0	11.9	11.9
Cycle Q Clear(g_c), s	3.4	2.2	0.5	7.1	1.2	0.2	2.8	5.6	3.8	2.0	11.9	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	131	407	176	264	642	282	112	1679	512	94	567	568
V/C Ratio(X)	0.78	0.34	0.07	0.81	0.13	0.02	0.76	0.37	0.26	0.65	0.70	0.71
Avail Cap(c_a), veh/h	737	2354	1020	737	2354	1035	885	4228	1289	885	1471	1475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	24.4	23.6	24.7	20.5	20.1	27.6	15.2	14.7	27.8	17.8	17.8
Incr Delay (d2), s/veh	3.7	0.5	0.2	2.3	0.1	0.0	4.0	0.1	0.3	2.8	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.8	0.2	2.8	0.4	0.1	1.2	1.7	1.1	0.8	4.1	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	24.9	23.8	27.0	20.6	20.1	31.6	15.4	14.9	30.6	19.4	19.5
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		255			306			837			861	
Approach Delay, s/veh		27.2			25.1			17.0			20.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	26.9	12.9	12.4	8.3	26.3	9.0	16.4				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	50.0	25.0	40.0	30.0	50.0	25.0	40.0				
Max Q Clear Time (g_c+14), s	14.0	7.6	9.1	4.2	4.8	13.9	5.4	3.2				
Green Ext Time (p_c), s	0.0	4.6	0.1	0.8	0.1	4.9	0.1	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					20.5							
HCM 6th LOS					C							

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	185	46	334	93	518	68	690	496	390	450	19
Future Volume (veh/h)	47	185	46	334	93	518	68	690	496	390	450	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	49	193	3	222	273	378	71	719	266	406	469	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	1	1	1
Cap, veh/h	118	236	103	548	575	479	93	1044	457	308	1151	44
Arrive On Green	0.07	0.07	0.07	0.31	0.31	0.31	0.05	0.29	0.29	0.09	0.33	0.33
Sat Flow, veh/h	1739	3469	1519	1781	1870	1556	1795	3582	1568	3483	3512	135
Grp Volume(v), veh/h	49	193	3	222	273	378	71	719	266	406	239	248
Grp Sat Flow(s),veh/h/ln	1739	1735	1519	1781	1870	1556	1795	1791	1568	1742	1791	1856
Q Serve(g_s), s	2.0	4.0	0.1	7.3	8.7	16.3	2.9	13.1	10.7	6.5	7.6	7.6
Cycle Q Clear(g_c), s	2.0	4.0	0.1	7.3	8.7	16.3	2.9	13.1	10.7	6.5	7.6	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	118	236	103	548	575	479	93	1044	457	308	587	608
V/C Ratio(X)	0.41	0.82	0.03	0.41	0.47	0.79	0.76	0.69	0.58	1.32	0.41	0.41
Avail Cap(c_a), veh/h	118	236	103	896	941	783	164	1631	714	308	811	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	33.8	32.0	20.1	20.6	23.3	34.4	23.1	22.2	33.5	19.2	19.2
Incr Delay (d2), s/veh	2.3	19.8	0.1	0.5	0.6	3.0	11.9	0.8	1.2	164.7	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.3	0.1	2.9	3.6	5.9	1.5	4.9	3.6	9.5	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	53.7	32.1	20.6	21.3	26.2	46.3	23.9	23.4	198.3	19.6	19.6
LnGrp LOS	D	D	C	C	C	C	D	C	C	F	B	B
Approach Vol, veh/h		245		873		1056		893				
Approach Delay, s/veh		49.7		23.3		25.3		100.9				
Approach LOS		D		C		C		F				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.0	25.9		9.5	8.3	28.6		27.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5	33.5		5.0	6.7	33.3		37.0				
Max Q Clear Time (g_c+1), s	10.5	15.1		6.0	4.9	9.6		18.3				
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	2.5		3.5				

Intersection Summary

HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↖	↗		↖	↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	385	155	105	41	120	27	219	773	51	95	876	289
Future Volume (veh/h)	385	155	105	41	120	27	219	773	51	95	876	289
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	401	161	51	43	125	19	228	805	50	99	912	133
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	417	415	586	72	224	34	263	1379	86	127	1174	698
Arrive On Green	0.12	0.22	0.22	0.04	0.14	0.14	0.15	0.41	0.41	0.07	0.33	0.33
Sat Flow, veh/h	3456	1870	1574	1781	1577	240	1767	3365	209	1767	3526	1526
Grp Volume(v), veh/h	401	161	51	43	0	144	228	422	433	99	912	133
Grp Sat Flow(s),veh/h/ln	1728	1870	1574	1781	0	1817	1767	1763	1811	1767	1763	1526
Q Serve(g_s), s	8.1	5.2	1.5	1.7	0.0	5.2	8.9	13.1	13.1	3.9	16.4	3.7
Cycle Q Clear(g_c), s	8.1	5.2	1.5	1.7	0.0	5.2	8.9	13.1	13.1	3.9	16.4	3.7
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	417	415	586	72	0	258	263	723	742	127	1174	698
V/C Ratio(X)	0.96	0.39	0.09	0.60	0.00	0.56	0.87	0.58	0.58	0.78	0.78	0.19
Avail Cap(c_a), veh/h	417	953	1039	167	0	877	263	766	787	223	1451	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	23.3	14.4	33.2	0.0	28.2	29.3	16.1	16.1	32.1	21.1	11.5
Incr Delay (d2), s/veh	34.2	0.6	0.1	7.7	0.0	1.9	24.7	1.0	1.0	9.7	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.2	0.5	0.8	0.0	2.3	5.2	4.6	4.7	1.9	6.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	23.9	14.5	40.9	0.0	30.1	53.9	17.1	17.1	41.9	23.3	11.7
LnGrp LOS	E	C	B	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		613			187			1083			1144	
Approach Delay, s/veh		50.0			32.6			24.9			23.6	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	28.0	7.3	20.1	9.6	33.4	13.0	14.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	29.0	6.6	35.9	8.9	30.6	8.5	34.0				
Max Q Clear Time (g_c+fl), s	10.5	18.4	3.7	7.2	5.9	15.1	10.1	7.2				
Green Ext Time (p_c), s	0.0	4.6	0.0	1.0	0.1	4.4	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											29.9	
HCM 6th LOS											C	

# HCM 6th Signalized Intersection Summary

## 48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1310	485	269	1240	0	0	0	0	619	3	427
Future Volume (veh/h)	0	1310	485	269	1240	0	0	0	0	619	3	427
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1781	1781	1781
Adj Flow Rate, veh/h	0	1323	362	272	1253	0				627	0	384
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	8	8	8	8	0				8	8	8
Cap, veh/h	0	2373	727	323	3040	0				947	0	421
Arrive On Green	0.00	0.49	0.49	0.10	0.63	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	5024	1490	3291	5024	0				3393	0	1510
Grp Volume(v), veh/h	0	1323	362	272	1253	0				627	0	384
Grp Sat Flow(s),veh/h/ln	0	1621	1490	1646	1621	0				1697	0	1510
Q Serve(g_s), s	0.0	23.0	19.7	9.8	15.6	0.0				19.6	0.0	29.5
Cycle Q Clear(g_c), s	0.0	23.0	19.7	9.8	15.6	0.0				19.6	0.0	29.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2373	727	323	3040	0				947	0	421
V/C Ratio(X)	0.00	0.56	0.50	0.84	0.41	0.00				0.66	0.00	0.91
Avail Cap(c_a), veh/h	0	2373	727	329	3040	0				1371	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.6	20.8	53.2	11.4	0.0				38.2	0.0	41.8
Incr Delay (d2), s/veh	0.0	1.0	2.4	16.5	0.4	0.0				0.3	0.0	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.4	6.9	4.7	5.1	0.0				8.2	0.0	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.6	23.2	69.7	11.8	0.0				38.5	0.0	52.8
LnGrp LOS		A	C	C	E	B	A			D	A	D
Approach Vol, veh/h		1685			1525					1011		
Approach Delay, s/veh		22.7			22.1					43.9		
Approach LOS		C			C					D		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	66.5	64.5		39.0		81.0						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	43.0	43.0		48.5		60.0						
Max Q Clear Time (g_c+I1), s	25.0	25.0		31.5		17.6						
Green Ext Time (p_c), s	0.0	9.7		2.0		10.7						

### Intersection Summary

HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗		↑↑↑		↘	↙	↗	↘		↗
Traffic Volume (veh/h)	345	1356	247	0	1461	93	294	123	203	142	0	661
Future Volume (veh/h)	345	1356	247	0	1461	93	294	123	203	142	0	661
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	0	1781	1781	1781	1781	1781	1856	0	1856
Adj Flow Rate, veh/h	348	1370	0	0	1476	89	210	245	109	143	0	148
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	0	8	8	8	8	8	3	0	3
Cap, veh/h	141	3504		0	3557	214	312	327	275	0	0	0
Arrive On Green	0.08	0.72	0.00	0.00	0.60	0.60	0.18	0.18	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1697	4863	2657	0	6198	358	1697	1781	1497		0	
Grp Volume(v), veh/h	348	1370	0	0	1140	425	210	245	109		0.0	
Grp Sat Flow(s),veh/h/ln	1697	1621	1329	0	1532	1710	1697	1781	1497			
Q Serve(g_s), s	10.0	13.2	0.0	0.0	15.9	15.9	13.8	15.6	7.7			
Cycle Q Clear(g_c), s	10.0	13.2	0.0	0.0	15.9	15.9	13.8	15.6	7.7			
Prop In Lane	1.00		1.00	0.00		0.21	1.00		1.00			
Lane Grp Cap(c), veh/h	141	3504		0	2749	1023	312	327	275			
V/C Ratio(X)	2.46	0.39		0.00	0.41	0.42	0.67	0.75	0.40			
Avail Cap(c_a), veh/h	141	3504		0	2749	1023	636	668	562			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	55.0	6.5	0.0	0.0	12.9	12.9	45.6	46.4	43.1			
Incr Delay (d2), s/veh	678.4	0.3	0.0	0.0	0.5	1.2	2.5	3.4	0.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh	30.8	3.8	0.0	0.0	5.3	6.2	6.0	7.2	2.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	733.4	6.9	0.0	0.0	13.4	14.1	48.2	49.8	44.1			
LnGrp LOS	F	A		A	B	B	D	D	D			
Approach Vol, veh/h		1718			1565			564				
Approach Delay, s/veh		154.0			13.6			48.1				
Approach LOS		F			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		92.5			14.7	77.8		27.5				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		49.0			* 10	34.0		45.0				
Max Q Clear Time (g_c+11), s		15.2			12.0	17.9		17.6				
Green Ext Time (p_c), s		7.2			0.0	6.9		2.7				

Intersection Summary

HCM 6th Ctrl Delay	81.4
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	895	101	101	719	43	89	356	51	66	326	96
Future Volume (veh/h)	116	895	101	101	719	43	89	356	51	66	326	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	129	994	53	112	799	45	99	396	15	73	362	23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	161	1245	1182	154	1184	67	156	606	264	137	570	248
Arrive On Green	0.10	0.37	0.37	0.09	0.36	0.36	0.09	0.17	0.17	0.08	0.16	0.16
Sat Flow, veh/h	1697	3385	2581	1697	3254	183	1781	3526	1536	1767	3526	1535
Grp Volume(v), veh/h	129	994	53	112	416	428	99	396	15	73	362	23
Grp Sat Flow(s),veh/h/ln	1697	1692	1290	1697	1692	1745	1781	1763	1536	1767	1763	1535
Q Serve(g_s), s	5.0	17.7	0.8	4.3	14.0	14.0	3.6	7.1	0.6	2.7	6.5	0.9
Cycle Q Clear(g_c), s	5.0	17.7	0.8	4.3	14.0	14.0	3.6	7.1	0.6	2.7	6.5	0.9
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	1245	1182	154	616	635	156	606	264	137	570	248
V/C Ratio(X)	0.80	0.80	0.04	0.73	0.67	0.67	0.64	0.65	0.06	0.53	0.64	0.09
Avail Cap(c_a), veh/h	377	1504	1380	377	752	775	396	1045	455	393	1045	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	19.1	10.2	29.9	18.1	18.1	29.8	26.1	23.4	30.0	26.4	24.1
Incr Delay (d2), s/veh	3.4	2.6	0.0	2.4	1.1	1.0	1.6	1.1	0.1	1.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.3	0.2	1.7	4.8	4.9	1.5	2.8	0.2	1.1	2.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	21.7	10.2	32.3	19.2	19.1	31.3	27.2	23.5	31.2	27.5	24.2
LnGrp LOS	C	C	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1176			956			510			458	
Approach Delay, s/veh		22.4			20.7			27.9			27.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	17.6	10.1	30.5	9.9	16.9	10.4	30.3				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	15.0	20.0	15.0	30.0	15.0	20.0	15.0	30.0				
Max Q Clear Time (g_c+14), s	14.5	9.1	6.3	19.7	5.6	8.5	7.0	16.0				
Green Ext Time (p_c), s	0.0	1.7	0.0	4.6	0.0	1.5	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	850	82	279	521	151	87	898	509	169	698	109
Future Volume (veh/h)	169	850	82	279	521	151	87	898	509	169	698	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	895	81	294	548	44	92	945	304	178	735	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	207	914	83	353	938	411	116	1019	446	208	1203	527
Arrive On Green	0.12	0.29	0.29	0.11	0.28	0.28	0.07	0.29	0.29	0.12	0.34	0.34
Sat Flow, veh/h	1697	3133	284	3291	3385	1481	1781	3526	1543	1767	3526	1545
Grp Volume(v), veh/h	178	483	493	294	548	44	92	945	304	178	735	39
Grp Sat Flow(s),veh/h/ln	1697	1692	1724	1646	1692	1481	1781	1763	1543	1767	1763	1545
Q Serve(g_s), s	10.6	29.1	29.1	9.0	14.4	2.3	5.2	26.8	17.9	10.2	17.8	1.8
Cycle Q Clear(g_c), s	10.6	29.1	29.1	9.0	14.4	2.3	5.2	26.8	17.9	10.2	17.8	1.8
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	494	503	353	938	411	116	1019	446	208	1203	527
V/C Ratio(X)	0.86	0.98	0.98	0.83	0.58	0.11	0.79	0.93	0.68	0.86	0.61	0.07
Avail Cap(c_a), veh/h	247	494	503	480	987	432	260	1028	450	258	1203	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	36.1	36.1	45.0	32.1	27.7	47.4	35.5	32.4	44.5	28.2	22.9
Incr Delay (d2), s/veh	19.9	35.1	34.8	6.7	1.0	0.2	4.4	14.0	4.6	17.5	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	16.1	16.3	3.9	5.7	0.8	2.4	12.8	6.9	5.3	7.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	71.2	70.9	51.7	33.1	27.8	51.8	49.6	36.9	62.0	29.2	23.0
LnGrp LOS	E	E	E	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		1154			886			1341			952	
Approach Delay, s/veh		70.0			39.0			46.8			35.1	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	35.7	15.0	36.0	10.7	41.1	16.5	34.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	15.0	30.0				
Max Q Clear Time (g_c+1/2), s	11.2	28.8	11.0	31.1	7.2	19.8	12.6	16.4				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	4.1	0.0	3.8				

Intersection Summary

HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	274	1040	58	80	584	157	21	87	46	127	145	165
Future Volume (veh/h)	274	1040	58	80	584	157	21	87	46	127	145	165
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	291	1106	57	85	621	113	22	93	9	135	154	49
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	243	1498	77	146	1073	192	63	340	282	180	463	384
Arrive On Green	0.14	0.32	0.32	0.09	0.26	0.26	0.04	0.18	0.18	0.10	0.25	0.25
Sat Flow, veh/h	1697	4728	243	1697	4133	740	1781	1870	1549	1781	1870	1554
Grp Volume(v), veh/h	291	758	405	85	485	249	22	93	9	135	154	49
Grp Sat Flow(s),veh/h/ln	1697	1621	1729	1697	1621	1631	1781	1870	1549	1781	1870	1554
Q Serve(g_s), s	9.0	13.1	13.1	3.0	8.2	8.4	0.8	2.7	0.3	4.6	4.2	1.5
Cycle Q Clear(g_c), s	9.0	13.1	13.1	3.0	8.2	8.4	0.8	2.7	0.3	4.6	4.2	1.5
Prop In Lane	1.00		0.14	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1027	548	146	841	423	63	340	282	180	463	384
V/C Ratio(X)	1.20	0.74	0.74	0.58	0.58	0.59	0.35	0.27	0.03	0.75	0.33	0.13
Avail Cap(c_a), veh/h	243	1240	661	189	1137	572	199	814	674	199	814	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	19.1	19.1	27.6	20.2	20.3	29.5	22.1	21.1	27.4	19.4	18.3
Incr Delay (d2), s/veh	120.9	1.9	3.6	1.4	0.7	1.4	1.2	0.7	0.1	11.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.4	5.0	1.2	2.7	2.9	0.3	1.2	0.1	2.3	1.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.7	21.0	22.7	28.9	20.9	21.7	30.7	22.8	21.2	38.6	19.8	18.5
LnGrp LOS	F	C	C	C	C	C	C	C	C	D	B	B
Approach Vol, veh/h	1454				819		124				338	
Approach Delay, s/veh	46.9				21.9		24.1				27.1	
Approach LOS	D				C		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	17.1	9.4	25.9	6.2	21.2	13.0	22.3				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	27.3	7.0	24.0	7.0	27.3	9.0	22.0					
Max Q Clear Time (g_c+1/6), s	4.7	5.0	15.1	2.8	6.2	11.0	10.4					
Green Ext Time (p_c), s	0.0	0.7	0.0	4.7	0.0	0.8	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	463	318	195	417	251	178	1723	163	134	1187	119
Future Volume (veh/h)	154	463	318	195	417	251	178	1723	163	134	1187	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	160	482	111	203	434	243	185	1795	124	140	1236	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	70	516	429	90	309	173	216	1471	638	169	1378	605
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.13	0.43	0.43	0.10	0.41	0.41
Sat Flow, veh/h	726	1781	1482	784	1065	596	1697	3385	1468	1697	3385	1484
Grp Volume(v), veh/h	160	482	111	203	0	677	185	1795	124	140	1236	55
Grp Sat Flow(s),veh/h/ln	726	1781	1482	784	0	1661	1697	1692	1468	1697	1692	1484
Q Serve(g_s), s	0.0	27.3	6.0	2.7	0.0	30.0	11.1	45.0	5.4	8.4	35.3	2.4
Cycle Q Clear(g_c), s	30.0	27.3	6.0	30.0	0.0	30.0	11.1	45.0	5.4	8.4	35.3	2.4
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	516	429	90	0	481	216	1471	638	169	1378	605
V/C Ratio(X)	2.30	0.93	0.26	2.25	0.00	1.41	0.86	1.22	0.19	0.83	0.90	0.09
Avail Cap(c_a), veh/h	70	516	429	90	0	481	410	1471	638	410	1471	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	35.8	28.2	51.5	0.0	36.8	44.3	29.3	18.1	45.7	28.6	18.9
Incr Delay (d2), s/veh	627.9	24.3	0.3	596.6	0.0	195.1	3.8	105.4	0.1	3.9	7.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	14.6	2.1	17.2	0.0	37.5	4.6	37.5	1.7	3.5	14.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	679.7	60.1	28.5	648.1	0.0	231.9	48.1	134.7	18.2	49.6	36.0	19.0
LnGrp LOS	F	E	C	F	A	F	D	F	B	D	D	B
Approach Vol, veh/h		753			880			2104			1431	
Approach Delay, s/veh		187.1			327.9			120.2			36.7	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	51.5		37.0	17.9	48.7		37.0				
Change Period (Y+Rc), s	4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	25	45.0		30.0	* 25	45.0		30.0				
Max Q Clear Time (g_c+I), s	10.4	47.0		32.0	13.1	37.3		32.0				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.2	4.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	142.2
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	584.7											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	108	706	51	18	659	152	52	598	29	162	340	54
Future Vol, veh/h	108	706	51	18	659	152	52	598	29	162	340	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	3	3	3	3	3	3
Mvmt Flow	115	751	54	19	701	162	55	636	31	172	362	57
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	726.5	672.3	489.3	349.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	12%	2%	29%
Vol Thru, %	88%	82%	79%	61%
Vol Right, %	4%	6%	18%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	679	865	829	556
LT Vol	52	108	18	162
Through Vol	598	706	659	340
RT Vol	29	51	152	54
Lane Flow Rate	722	920	882	591
Geometry Grp	1	1	1	1
Degree of Util (X)	1.934	2.485	2.359	1.585
Departure Headway (Hd)	22.93	21.308	21.873	25.922
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	166	184	176	148
Service Time	20.93	19.308	19.873	23.922
HCM Lane V/C Ratio	4.349	5	5.011	3.993
HCM Control Delay	489.3	726.5	672.3	349.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	23.2	35.8	32.4	15.5

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↘	↙	↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	6	42	8	343	1	598	3	1515	394	593	1409	26
Future Volume (veh/h)	6	42	8	343	1	598	3	1515	394	593	1409	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	6	44	1	361	1	285	3	1595	335	624	1483	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	13	96	89	283	1	245	13	1354	587	370	2066	898
Arrive On Green	0.06	0.06	0.06	0.16	0.16	0.16	0.01	0.40	0.40	0.22	0.61	0.61
Sat Flow, veh/h	221	1623	1509	1739	5	1506	1697	3385	1467	1697	3385	1472
Grp Volume(v), veh/h	50	0	1	361	0	286	3	1595	335	624	1483	16
Grp Sat Flow(s),veh/h/ln1844	0	1509	1739	0	1512	1697	1692	1467	1697	1692	1472	0
Q Serve(g_s), s	3.9	0.0	0.1	24.1	0.0	24.1	0.3	59.2	26.3	32.3	44.9	0.6
Cycle Q Clear(g_c), s	3.9	0.0	0.1	24.1	0.0	24.1	0.3	59.2	26.3	32.3	44.9	0.6
Prop In Lane	0.12		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	0	89	283	0	246	13	1354	587	370	2066	898
V/C Ratio(X)	0.46	0.00	0.01	1.27	0.00	1.16	0.23	1.18	0.57	1.68	0.72	0.02
Avail Cap(c_a), veh/h	135	0	110	283	0	246	130	1354	587	370	2066	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	0.0	65.5	61.9	0.0	61.9	73.0	44.4	34.5	57.8	20.0	11.3
Incr Delay (d2), s/veh	1.1	0.0	0.0	148.2	0.0	108.1	3.1	88.0	1.3	319.7	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln1.8	0.0	0.0	0.0	22.1	0.0	16.5	0.1	39.9	9.2	46.2	16.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.4	0.0	65.5	210.1	0.0	170.0	76.1	132.4	35.8	377.6	21.2	11.4
LnGrp LOS	E	A	E	F	A	F	E	F	D	F	C	B
Approach Vol, veh/h		51			647			1933			2123	
Approach Delay, s/veh		68.4			192.4			115.6			125.9	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	65.7		15.0	5.9	96.8		30.3				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	32	59.2		10.8	* 11	80.2		24.1				
Max Q Clear Time (g_c+R), s	34	61.2		5.9	2.3	46.9		26.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	12.7		0.0				

Intersection Summary

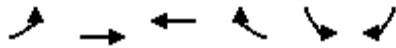
HCM 6th Ctrl Delay	130.1
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	295	1133	764	352	284	112	
Future Volume (veh/h)	295	1133	764	352	284	112	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1856	1856	
Adj Flow Rate, veh/h	311	1193	804	295	299	98	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	5	5	5	5	3	3	
Cap, veh/h	353	2124	853	313	330	108	
Arrive On Green	0.20	0.61	0.34	0.34	0.26	0.26	
Sat Flow, veh/h	1739	3561	2577	911	1288	422	
Grp Volume(v), veh/h	311	1193	561	538	398	0	
Grp Sat Flow(s),veh/h/ln	1739	1735	1735	1662	1715	0	
Q Serve(g_s), s	11.9	13.9	21.5	21.5	15.4	0.0	
Cycle Q Clear(g_c), s	11.9	13.9	21.5	21.5	15.4	0.0	
Prop In Lane	1.00			0.55	0.75	0.25	
Lane Grp Cap(c), veh/h	353	2124	596	571	440	0	
V/C Ratio(X)	0.88	0.56	0.94	0.94	0.91	0.00	
Avail Cap(c_a), veh/h	368	2154	596	571	464	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	26.5	7.8	21.8	21.8	24.7	0.0	
Incr Delay (d2), s/veh	20.5	0.3	23.4	24.4	20.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	6.4	3.6	11.3	11.0	7.9	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	47.0	8.2	45.3	46.2	45.2	0.0	
LnGrp LOS	D	A	D	D	D	A	
Approach Vol, veh/h		1504	1099		398		
Approach Delay, s/veh		16.2	45.7		45.2		
Approach LOS		B	D		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				46.4	22.0	18.4	28.0
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				42.5	18.5	14.5	23.5
Max Q Clear Time (g_c+1), s				15.9	17.4	13.9	23.5
Green Ext Time (p_c), s				9.1	0.2	0.1	0.0
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			30.9				
HCM 6th LOS			C				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (veh/h)	388	75	404	239	19	558	203	809	77	162	1194	250
Future Volume (veh/h)	388	75	404	239	19	558	203	809	77	162	1194	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	392	76	160	241	19	336	205	817	39	164	1206	109
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	452	768	335	268	838	366	232	1186	753	280	1012	652
Arrive On Green	0.13	0.22	0.22	0.15	0.24	0.24	0.14	0.35	0.35	0.09	0.30	0.30
Sat Flow, veh/h	3374	3469	1515	1739	3469	1517	1697	3385	1483	3291	3385	1502
Grp Volume(v), veh/h	392	76	160	241	19	336	205	817	39	164	1206	109
Grp Sat Flow(s),veh/h/ln	1687	1735	1515	1739	1735	1517	1697	1692	1483	1646	1692	1502
Q Serve(g_s), s	13.3	2.0	10.8	15.9	0.5	25.3	13.9	24.2	1.6	5.6	35.0	5.2
Cycle Q Clear(g_c), s	13.3	2.0	10.8	15.9	0.5	25.3	13.9	24.2	1.6	5.6	35.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	452	768	335	268	838	366	232	1186	753	280	1012	652
V/C Ratio(X)	0.87	0.10	0.48	0.90	0.02	0.92	0.89	0.69	0.05	0.59	1.19	0.17
Avail Cap(c_a), veh/h	577	1038	453	297	1038	454	290	1186	753	563	1012	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	36.3	39.7	48.6	33.8	43.2	49.6	32.5	14.7	51.6	41.0	20.3
Incr Delay (d2), s/veh	9.3	0.1	1.1	26.4	0.0	18.9	20.0	1.7	0.0	0.7	96.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.8	3.9	8.6	0.2	10.9	6.9	9.5	0.5	2.2	27.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	36.3	40.7	75.0	33.8	62.1	69.6	34.2	14.8	52.3	137.0	20.4
LnGrp LOS	E	D	D	E	C	E	E	C	B	D	F	C
Approach Vol, veh/h		628			596			1061			1479	
Approach Delay, s/veh		51.5			66.4			40.3			119.0	
Approach LOS		D			E			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	47.5	22.8	32.1	20.7	41.5	20.4	34.5				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	20	35.0	* 20	35.0	* 20	35.0	* 20	35.0				
Max Q Clear Time (g_c+1/6), s	17.6	26.2	17.9	12.8	15.9	37.0	15.3	27.3				
Green Ext Time (p_c), s	0.2	3.3	0.1	0.9	0.1	0.0	0.4	0.4				

Intersection Summary

HCM 6th Ctrl Delay	77.3
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↖	↗
Traffic Volume (veh/h)	117	634	42	644	525	169	30	595	936	423	985	100
Future Volume (veh/h)	117	634	42	644	525	169	30	595	936	423	985	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	126	682	0	692	565	162	32	640	949	455	1059	104
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	136	694		705	877	251	85	782	657	331	1169	115
Arrive On Green	0.08	0.20	0.00	0.21	0.33	0.33	0.05	0.23	0.23	0.20	0.38	0.38
Sat Flow, veh/h	1739	3561	0	3374	2651	757	1697	3385	1479	1697	3108	305
Grp Volume(v), veh/h	126	682	0	692	369	358	32	640	949	455	576	587
Grp Sat Flow(s),veh/h/ln	1739	1735	0	1687	1735	1673	1697	1692	1479	1697	1692	1720
Q Serve(g_s), s	10.4	28.4	0.0	29.6	26.2	26.4	2.6	26.0	33.5	28.3	46.7	46.8
Cycle Q Clear(g_c), s	10.4	28.4	0.0	29.6	26.2	26.4	2.6	26.0	33.5	28.3	46.7	46.8
Prop In Lane	1.00		0.00	1.00		0.45	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	136	694		705	574	554	85	782	657	331	637	647
V/C Ratio(X)	0.93	0.98		0.98	0.64	0.65	0.38	0.82	1.44	1.37	0.91	0.91
Avail Cap(c_a), veh/h	136	694		705	574	554	132	782	657	331	637	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	57.8	0.0	57.1	41.2	41.3	66.7	52.9	40.8	58.3	42.8	42.8
Incr Delay (d2), s/veh	55.5	29.9	0.0	29.1	2.8	3.0	1.0	6.4	208.3	186.4	16.2	16.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	15.0	0.0	15.2	11.4	11.1	1.1	11.3	60.4	28.8	21.3	21.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.0	87.6	0.0	86.2	44.0	44.2	67.7	59.3	249.1	244.7	58.9	58.9
LnGrp LOS	F	F		F	D	D	E	E	F	F	E	E
Approach Vol, veh/h		808		1419			1621		1618			
Approach Delay, s/veh		93.0		64.6			170.6		111.2			
Approach LOS		F		E			F		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	40.0	36.0	36.0	11.9	61.1	17.0	55.0				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	28	33.5	* 30	29.0	* 11	50.5	* 11	48.0				
Max Q Clear Time (g_c+Rc), s	30	35.5	31.6	30.4	4.6	48.8	12.4	28.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.8	0.0	5.8				

Intersection Summary

HCM 6th Ctrl Delay	114.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↷		↶	↷
Traffic Volume (veh/h)	89	899	1012	118	534	1361
Future Volume (veh/h)	89	899	1012	118	534	1361
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	95	0	1077	0	568	1448
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	183		1280		601	2681
Arrive On Green	0.06	0.00	0.38	0.00	0.35	0.79
Sat Flow, veh/h	3291	1510	3563	0	1697	3474
Grp Volume(v), veh/h	95	0	1077	0	568	1448
Grp Sat Flow(s),veh/h/ln	1646	1510	1692	0	1697	1692
Q Serve(g_s), s	2.2	0.0	22.9	0.0	25.6	12.2
Cycle Q Clear(g_c), s	2.2	0.0	22.9	0.0	25.6	12.2
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	183		1280		601	2681
V/C Ratio(X)	0.52		0.84		0.95	0.54
Avail Cap(c_a), veh/h	1254		1719		646	2681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	22.3	0.0	24.7	3.0
Incr Delay (d2), s/veh	2.3	0.0	2.7	0.0	21.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	8.0	0.0	12.2	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.4	0.0	25.0	0.0	46.2	3.2
LnGrp LOS	D		C		D	A
Approach Vol, veh/h	95		1077		2016	
Approach Delay, s/veh	38.4		25.0		15.3	
Approach LOS	D		C		B	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	32.6	36.3			68.9	9.9
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30.0	40.0			40.0	30.0
Max Q Clear Time (g_c+Y), s	27.6	24.9			14.2	4.2
Green Ext Time (p_c), s	0.3	4.9			8.9	0.3

Intersection Summary





















HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	420	0	360	710	1420	0	0	570	200
Future Volume (veh/h)	0	0	0	420	0	360	710	1420	0	0	570	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1811	1811	1811	1811	1811	0	0	1811	1811
Adj Flow Rate, veh/h				512	0	150	747	1495	0	0	600	82
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				6	6	6	6	6	0	0	6	6
Cap, veh/h				593	0	264	819	3458	0	0	2485	595
Arrive On Green				0.17	0.00	0.17	0.16	0.47	0.00	0.00	0.40	0.40
Sat Flow, veh/h				3450	0	1535	3346	5107	0	0	6484	1492
Grp Volume(v), veh/h				512	0	150	747	1495	0	0	600	82
Grp Sat Flow(s),veh/h/ln				1725	0	1535	1673	1648	0	0	1558	1492
Q Serve(g_s), s				13.0	0.0	8.1	19.7	18.1	0.0	0.0	5.8	3.1
Cycle Q Clear(g_c), s				13.0	0.0	8.1	19.7	18.1	0.0	0.0	5.8	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				593	0	264	819	3458	0	0	2485	595
V/C Ratio(X)				0.86	0.00	0.57	0.91	0.43	0.00	0.00	0.24	0.14
Avail Cap(c_a), veh/h				636	0	283	855	3458	0	0	2485	595
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.68	0.68	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.2	0.0	34.2	36.7	12.0	0.0	0.0	18.0	17.2
Incr Delay (d2), s/veh				11.3	0.0	2.3	9.5	0.3	0.0	0.0	0.2	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	7.0	9.2	6.9	0.0	0.0	1.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				47.5	0.0	36.6	46.2	12.3	0.0	0.0	18.2	17.7
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					662			2242			682	
Approach Delay, s/veh					45.1			23.6			18.2	
Approach LOS					D			C			B	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.7		21.3	27.0	41.7						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		61.8		16.6	23.0	33.8						
Max Q Clear Time (g_c+I1), s		20.1		15.0	21.7	7.8						
Green Ext Time (p_c), s		13.9		0.5	0.3	4.2						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.5								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

# HCM 6th Signalized Intersection Summary

## 2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶↷	↶↷↶			↶↷↶	↶
Traffic Volume (veh/h)	0	0	0	200	0	570	340	1920	0	0	1110	420
Future Volume (veh/h)	0	0	0	200	0	570	340	1920	0	0	1110	420
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				No
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				202	0	513	343	1939	0	0	1121	137
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				1232	0	548	411	2522	0	0	1644	501
Arrive On Green				0.35	0.00	0.35	0.08	0.33	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1544
Grp Volume(v), veh/h				202	0	513	343	1939	0	0	1121	137
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1544
Q Serve(g_s), s				3.0	0.0	23.7	7.4	25.7	0.0	0.0	14.4	4.9
Cycle Q Clear(g_c), s				3.0	0.0	23.7	7.4	25.7	0.0	0.0	14.4	4.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	548	411	2522	0	0	1644	501
V/C Ratio(X)				0.16	0.00	0.94	0.83	0.77	0.00	0.00	0.68	0.27
Avail Cap(c_a), veh/h				1282	0	570	411	2522	0	0	1644	501
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.39	0.39	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	0.0	23.6	33.7	21.1	0.0	0.0	22.0	18.8
Incr Delay (d2), s/veh				0.1	0.0	22.6	5.9	0.9	0.0	0.0	2.3	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.1	0.0	11.0	3.3	10.2	0.0	0.0	5.3	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				16.9	0.0	46.2	39.6	22.0	0.0	0.0	24.3	20.1
LnGrp LOS				B	A	D	D	C	A	A	C	C
Approach Vol, veh/h						715		2282			1258	
Approach Delay, s/veh						37.9		24.7			23.8	
Approach LOS						D		C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		43.0			13.0	30.0		32.0				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		36.3			9.0	23.3		27.2				
Max Q Clear Time (g_c+I1), s		27.7			9.4	16.4		25.7				
Green Ext Time (p_c), s		5.6			0.0	3.0		0.5				

### Intersection Summary

HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	0	510	0	0	0	0	1640	530	220	770	0
Future Volume (veh/h)	490	0	510	0	0	0	0	1640	530	220	770	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811				0	1811	1811	1811	1811	0
Adj Flow Rate, veh/h	629	0	243				0	1726	240	232	811	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6				0	6	6	6	6	0
Cap, veh/h	776	0	345				0	3127	750	297	3195	0
Arrive On Green	0.22	0.00	0.22				0.00	0.50	0.50	0.18	1.00	0.00
Sat Flow, veh/h	3450	0	1535				0	6484	1494	3346	5107	0
Grp Volume(v), veh/h	629	0	243				0	1726	240	232	811	0
Grp Sat Flow(s),veh/h/ln	1725	0	1535				0	1558	1494	1673	1648	0
Q Serve(g_s), s	15.6	0.0	13.1				0.0	17.2	8.6	6.0	0.0	0.0
Cycle Q Clear(g_c), s	15.6	0.0	13.1				0.0	17.2	8.6	6.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	776	0	345				0	3127	750	297	3195	0
V/C Ratio(X)	0.81	0.00	0.70				0.00	0.55	0.32	0.78	0.25	0.00
Avail Cap(c_a), veh/h	1158	0	515				0	3127	750	335	3195	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	33.1	0.0	32.1				0.0	15.4	13.3	36.2	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	2.6				0.0	0.7	1.1	7.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	4.8				0.0	5.5	2.8	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	0.0	34.8				0.0	16.1	14.4	43.8	0.2	0.0
LnGrp LOS	D	A	C				A	B	B	D	A	A
Approach Vol, veh/h		872						1966			1043	
Approach Delay, s/veh		35.5						15.9			9.9	
Approach LOS		D						B			A	
Timer - Assigned Phs	1	2					6	8				
Phs Duration (G+Y+Rc), s	3.0	51.0					64.0	26.0				
Change Period (Y+Rc), s	5.0	5.8					5.8	5.8				
Max Green Setting (Gmax), s	3.0	34.2					48.2	30.2				
Max Q Clear Time (g_c+1), s	3.0	19.2					2.0	17.6				
Green Ext Time (p_c), s	0.0	10.4					6.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	630	0	240	0	0	0	0	1630	340	290	1020	0
Future Volume (veh/h)	630	0	240	0	0	0	0	1630	340	290	1020	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	656	0	164				0	1698	312	302	1062	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	765	0	340				0	2099	382	320	3219	0
Arrive On Green	0.21	0.00	0.21				0.00	0.49	0.49	0.03	0.21	0.00
Sat Flow, veh/h	3619	0	1610				0	4462	782	3428	5233	0
Grp Volume(v), veh/h	656	0	164				0	1332	678	302	1062	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1700	1714	1689	0
Q Serve(g_s), s	13.1	0.0	6.7				0.0	25.0	25.5	6.6	13.4	0.0
Cycle Q Clear(g_c), s	13.1	0.0	6.7				0.0	25.0	25.5	6.6	13.4	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	765	0	340				0	1650	831	320	3219	0
V/C Ratio(X)	0.86	0.00	0.48				0.00	0.81	0.82	0.94	0.33	0.00
Avail Cap(c_a), veh/h	830	0	369				0	1650	831	320	3219	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	28.5	0.0	26.0				0.0	16.2	16.3	36.1	16.1	0.0
Incr Delay (d2), s/veh	8.4	0.0	1.1				0.0	4.3	8.7	28.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	2.4				0.0	8.8	10.0	4.0	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.0	27.0				0.0	20.5	25.0	65.1	16.3	0.0
LnGrp LOS	D	A	C				A	C	C	E	B	A
Approach Vol, veh/h		820						2010			1364	
Approach Delay, s/veh		34.9						22.0			27.1	
Approach LOS		C						C			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	1.0	42.4	21.6	53.4								
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7								
Max Green Setting (Gmax), s	35.3		17.2	46.3								
Max Q Clear Time (g_c+I), s	27.5		15.1	15.4								
Green Ext Time (p_c), s	0.0	5.2	0.8	4.7								

### Intersection Summary

HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	730	170	180	780	200	310	1340	270	160	710	190
Future Volume (veh/h)	250	730	170	180	780	200	310	1340	270	160	710	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	263	768	71	189	821	106	326	1411	255	168	747	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	248	922	403	227	881	385	359	1509	272	155	992	201
Arrive On Green	0.14	0.26	0.26	0.13	0.25	0.25	0.21	0.36	0.36	0.09	0.24	0.24
Sat Flow, veh/h	1767	3526	1542	1767	3526	1542	1725	4198	758	1725	4106	832
Grp Volume(v), veh/h	263	768	71	189	821	106	326	1108	558	168	598	302
Grp Sat Flow(s),veh/h/ln	1767	1763	1542	1767	1763	1542	1725	1648	1659	1725	1648	1641
Q Serve(g_s), s	14.0	20.5	3.6	10.4	22.7	5.5	18.4	32.4	32.4	9.0	16.8	17.1
Cycle Q Clear(g_c), s	14.0	20.5	3.6	10.4	22.7	5.5	18.4	32.4	32.4	9.0	16.8	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.51
Lane Grp Cap(c), veh/h	248	922	403	227	881	385	359	1185	596	155	797	397
V/C Ratio(X)	1.06	0.83	0.18	0.83	0.93	0.28	0.91	0.93	0.94	1.08	0.75	0.76
Avail Cap(c_a), veh/h	248	922	403	319	883	386	380	1189	598	155	797	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	34.8	28.5	42.4	36.6	30.2	38.6	30.8	30.9	45.4	35.1	35.2
Incr Delay (d2), s/veh	74.3	7.3	0.4	17.8	16.8	0.8	25.9	13.7	22.9	95.3	4.8	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	9.1	1.3	5.4	11.1	2.0	9.9	13.9	15.5	7.8	6.8	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.2	42.1	29.0	60.2	53.4	31.0	64.6	44.6	53.7	140.7	39.8	45.0
LnGrp LOS	F	D	C	E	D	C	E	D	D	F	D	D
Approach Vol, veh/h		1102			1116			1992			1068	
Approach Delay, s/veh		59.2			52.4			50.4			57.2	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	39.9	16.8	30.1	24.8	28.1	18.0	28.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	36.0	36.0	18.0	21.0	22.0	23.0	14.0	25.0				
Max Q Clear Time (g_c+fl), s	34.4	34.4	12.4	22.5	20.4	19.1	16.0	24.7				
Green Ext Time (p_c), s	0.0	1.5	0.5	0.0	0.3	2.6	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	1050	30	290	900	260	30	630	130	350	440	370
Future Volume (veh/h)	370	1050	30	290	900	260	30	630	130	350	440	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	389	1105	32	305	947	256	32	663	126	368	463	296
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	235	1060	31	222	808	218	1	501	95	395	884	562
Arrive On Green	0.13	0.30	0.30	0.13	0.30	0.30	0.00	0.17	0.17	0.22	0.43	0.43
Sat Flow, veh/h	1767	3497	101	1767	2733	737	1767	2943	559	1767	2053	1305
Grp Volume(v), veh/h	389	557	580	305	610	593	32	397	392	368	397	362
Grp Sat Flow(s),veh/h/ln	1767	1763	1835	1767	1763	1707	1767	1763	1739	1767	1763	1595
Q Serve(g_s), s	18.0	41.0	41.0	17.0	40.0	40.0	0.1	23.0	23.0	27.6	22.4	22.6
Cycle Q Clear(g_c), s	18.0	41.0	41.0	17.0	40.0	40.0	0.1	23.0	23.0	27.6	22.4	22.6
Prop In Lane	1.00		0.06	1.00		0.43	1.00		0.32	1.00		0.82
Lane Grp Cap(c), veh/h	235	535	556	222	521	505	1	300	296	395	759	687
V/C Ratio(X)	1.65	1.04	1.04	1.37	1.17	1.17	24.48	1.32	1.33	0.93	0.52	0.53
Avail Cap(c_a), veh/h	235	535	556	222	521	505	301	300	296	523	759	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	47.1	47.1	59.1	47.6	47.6	67.6	56.1	56.1	51.5	28.3	28.4
Incr Delay (d2), s/veh	312.3	50.3	49.6	193.6	95.3	97.9	10792.5	166.8	168.3	19.3	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.2	24.6	25.6	19.3	30.6	30.0	4.0	23.9	23.7	14.0	9.3	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	370.9	97.4	96.7	252.7	143.0	145.5	10860.2	222.9	224.4	70.8	28.8	29.0
LnGrp LOS	F	F	F	F	F	F	F	F	F	E	C	C
Approach Vol, veh/h		1526			1508			821			1127	
Approach Delay, s/veh		166.9			166.2			638.2			42.6	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.2	28.0	24.0	48.0	0.0	63.2	25.0	47.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	40.0	23.0	17.0	41.0	23.0	40.0	18.0	40.0				
Max Q Clear Time (g_c+29.6), s	29.6	25.0	19.0	43.0	0.0	24.6	20.0	42.0				
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.0	3.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	216.2
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	410	60	90	240	170	290	1390	110	110	800	100
Future Volume (veh/h)	200	410	60	90	240	170	290	1390	110	110	800	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	211	432	52	95	253	70	305	1463	109	116	842	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	246	616	74	120	338	91	336	1738	129	143	1170	127
Arrive On Green	0.14	0.19	0.19	0.07	0.12	0.12	0.19	0.37	0.37	0.08	0.26	0.26
Sat Flow, veh/h	1767	3162	378	1767	2733	739	1725	4688	349	1725	4519	491
Grp Volume(v), veh/h	211	240	244	95	161	162	305	1029	543	116	613	321
Grp Sat Flow(s),veh/h/ln	1767	1763	1777	1767	1763	1709	1725	1648	1741	1725	1648	1715
Q Serve(g_s), s	11.5	12.5	12.7	5.2	8.7	9.0	17.1	28.2	28.2	6.5	16.7	16.8
Cycle Q Clear(g_c), s	11.5	12.5	12.7	5.2	8.7	9.0	17.1	28.2	28.2	6.5	16.7	16.8
Prop In Lane	1.00		0.21	1.00		0.43	1.00		0.20	1.00		0.29
Lane Grp Cap(c), veh/h	246	343	346	120	218	211	336	1222	646	143	854	444
V/C Ratio(X)	0.86	0.70	0.71	0.79	0.74	0.77	0.91	0.84	0.84	0.81	0.72	0.72
Avail Cap(c_a), veh/h	507	590	595	127	218	211	383	1283	678	149	854	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	37.0	37.1	45.3	41.7	41.9	38.9	28.4	28.4	44.5	33.3	33.3
Incr Delay (d2), s/veh	3.4	3.6	3.7	24.4	13.4	16.4	21.8	5.3	9.5	25.1	3.2	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	5.5	5.7	3.0	4.5	4.7	8.8	11.0	12.3	3.6	6.6	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.9	40.7	40.8	69.7	55.1	58.2	60.7	33.7	37.9	69.6	36.5	39.5
LnGrp LOS	D	D	D	E	E	E	E	C	D	E	D	D
Approach Vol, veh/h		695			418			1877			1050	
Approach Delay, s/veh		42.0			59.6			39.3			41.1	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	44.1	13.2	25.7	26.7	33.1	20.2	18.7				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	33.5	38.4	7.1	33.0	21.9	25.0	28.3	11.8				
Max Q Clear Time (g_c+1), s	19.5	30.2	7.2	14.7	19.1	18.8	13.5	11.0				
Green Ext Time (p_c), s	0.0	6.4	0.0	3.6	0.1	3.4	0.2	0.2				

Intersection Summary

HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	240	80	60	250	50	160	730	170	30	610	120
Future Volume (veh/h)	80	240	80	60	250	50	160	730	170	30	610	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	82	247	35	62	258	30	165	753	155	31	629	105
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	2	3	2	2	2	3	3	2	2	3	3
Cap, veh/h	124	479	67	105	456	53	210	1070	220	63	858	143
Arrive On Green	0.07	0.15	0.15	0.06	0.14	0.14	0.12	0.37	0.37	0.04	0.28	0.28
Sat Flow, veh/h	1767	3130	438	1781	3211	370	1767	2911	599	1781	3024	504
Grp Volume(v), veh/h	82	139	143	62	142	146	165	456	452	31	366	368
Grp Sat Flow(s),veh/h/ln	1767	1777	1791	1781	1777	1804	1767	1763	1748	1781	1763	1765
Q Serve(g_s), s	2.1	3.4	3.4	1.6	3.5	3.5	4.2	10.3	10.3	0.8	8.8	8.8
Cycle Q Clear(g_c), s	2.1	3.4	3.4	1.6	3.5	3.5	4.2	10.3	10.3	0.8	8.8	8.8
Prop In Lane	1.00		0.24	1.00		0.20	1.00		0.34	1.00		0.29
Lane Grp Cap(c), veh/h	124	272	274	105	252	256	210	648	642	63	500	501
V/C Ratio(X)	0.66	0.51	0.52	0.59	0.56	0.57	0.78	0.70	0.70	0.49	0.73	0.73
Avail Cap(c_a), veh/h	680	1098	1107	271	684	695	295	788	781	194	686	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	18.2	18.2	21.4	18.7	18.7	20.0	12.6	12.6	22.1	15.1	15.1
Incr Delay (d2), s/veh	5.9	1.5	1.5	5.1	2.0	2.0	8.8	2.2	2.2	5.8	2.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	1.3	1.3	0.7	1.4	1.5	1.9	3.2	3.2	0.4	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	19.7	19.8	26.6	20.7	20.7	28.9	14.8	14.8	27.9	17.7	17.8
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		364			350			1073			765	
Approach Delay, s/veh		21.4			21.7			17.0			18.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	21.7	7.3	11.6	10.1	17.8	7.8	11.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	20.9	7.1	28.9	7.8	18.2	18.0	18.0				
Max Q Clear Time (g_c+1/2R), s	12.8	12.3	3.6	5.4	6.2	10.8	4.1	5.5				
Green Ext Time (p_c), s	0.0	3.4	0.0	1.5	0.1	2.5	0.1	1.3				

Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕ ↑↑↑	↕ ↑↑↑		↕ ↑↑↑	↕ ↑↑↑	
Traffic Volume (veh/h)	10	0	10	150	0	200	10	1330	30	80	920	10
Future Volume (veh/h)	10	0	10	150	0	200	10	1330	30	80	920	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No		No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	11	0	0	158	0	35	11	1400	31	84	968	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	0	2	6	6	6	6	6	6
Cap, veh/h	45	0	0	0	0	0	44	2267	50	202	2760	31
Arrive On Green	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.46	0.46	0.12	0.55	0.55
Sat Flow, veh/h	1781	0	0		0		1725	4975	110	1725	5040	57
Grp Volume(v), veh/h	11	0	0		0.0		11	928	503	84	633	346
Grp Sat Flow(s),veh/h/ln	1781	0	0				1725	1648	1789	1725	1648	1801
Q Serve(g_s), s	0.3	0.0	0.0				0.4	11.9	11.9	2.5	6.0	6.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0				0.4	11.9	11.9	2.5	6.0	6.0
Prop In Lane	1.00		0.00				1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	45	0	0				44	1502	815	202	1805	986
V/C Ratio(X)	0.24	0.00	0.00				0.25	0.62	0.62	0.42	0.35	0.35
Avail Cap(c_a), veh/h	286	0	0				277	2172	1179	280	2178	1190
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	0.0				26.8	11.5	11.5	22.9	7.1	7.1
Incr Delay (d2), s/veh	3.3	0.0	0.0				3.0	0.5	0.9	1.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0				0.2	3.1	3.5	1.0	1.3	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	0.0	0.0				29.8	12.0	12.5	24.3	7.2	7.3
LnGrp LOS	C	A	A				C	B	B	C	A	A
Approach Vol, veh/h		11						1442			1063	
Approach Delay, s/veh		30.1						12.3			8.6	
Approach LOS		C						B			A	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	34.1	33.0		8.9	8.9	38.2						
Change Period (Y+Rc), s	7.5	7.5		7.5	7.5	7.5						
Max Green Setting (Gmax), s	36.9	36.9		9.0	9.0	37.0						
Max Q Clear Time (g_c+I), s	14.5	13.9		2.3	2.4	8.0						
Green Ext Time (p_c), s	0.1	11.2		0.0	0.0	7.7						

Intersection Summary

HCM 6th Ctrl Delay		10.8										
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary  
 10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖	↕			↕	↗
Traffic Volume (veh/h)	50	0	200	0	0	0	340	600	0	0	550	50
Future Volume (veh/h)	50	0	200	0	0	0	340	600	0	0	550	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	53	0	36	0	0	0	358	632	0	0	579	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	340	0	188	0	227	0	390	2169	0	0	864	69
Arrive On Green	0.12	0.00	0.12	0.00	0.00	0.00	0.22	0.62	0.00	0.00	0.26	0.26
Sat Flow, veh/h	1781	0	1568	0	1900	0	1767	3618	0	0	3396	262
Grp Volume(v), veh/h	53	0	36	0	0	0	358	632	0	0	308	317
Grp Sat Flow(s),veh/h/ln	1781	0	1568	0	1900	0	1767	3618	0	0	3396	262
Q Serve(g_s), s	1.5	0.0	1.2	0.0	0.0	0.0	11.2	4.8	0.0	0.0	8.9	8.9
Cycle Q Clear(g_c), s	1.5	0.0	1.2	0.0	0.0	0.0	11.2	4.8	0.0	0.0	8.9	8.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.15
Lane Grp Cap(c), veh/h	340	0	188	0	227	0	390	2169	0	0	461	472
V/C Ratio(X)	0.16	0.00	0.19	0.00	0.00	0.00	0.92	0.29	0.00	0.00	0.67	0.67
Avail Cap(c_a), veh/h	914	0	693	0	840	0	390	2804	0	0	779	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	22.4	0.0	0.0	0.0	21.5	5.1	0.0	0.0	18.7	18.7
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.0	0.0	26.1	0.1	0.0	0.0	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.4	0.0	0.0	0.0	6.7	1.0	0.0	0.0	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	22.8	0.0	0.0	0.0	47.6	5.2	0.0	0.0	20.7	20.7
LnGrp LOS	C	A	C	A	A	A	D	A	A	A	C	C
Approach Vol, veh/h	89			0			990			625		
Approach Delay, s/veh	22.8			0.0			20.5			20.7		
Approach LOS	C						C			C		
Timer - Assigned Phs	2		4		5		6		8			
Phs Duration (G+Y+Rc), s	42.3		14.3		20.0		22.3		14.3			
Change Period (Y+Rc), s	7.5		7.5		7.5		7.5		7.5			
Max Green Setting (Gmax), s	45.0		25.0		12.5		25.0		25.0			
Max Q Clear Time (g_c+1), s	6.8		3.5		13.2		10.9		0.0			
Green Ext Time (p_c), s	5.3		0.0		0.0		3.5		0.0			

Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↑ ↑ ↑	↖	↖ ↗	↑ ↑ ↑ ↑		↖ ↑ ↑ ↑	↑ ↑ ↑ ↑	↖	↖ ↑ ↑ ↑	↑ ↑ ↑ ↑	↖
Traffic Volume (veh/h)	60	1030	290	450	1080	140	660	1020	470	80	700	200
Future Volume (veh/h)	60	1030	290	450	1080	140	660	1020	470	80	700	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	63	1084	0	474	1137	129	695	1074	0	84	737	171
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	6	6	6	6	6	6
Cap, veh/h	109	1130		461	1637	184	584	2358		106	799	183
Arrive On Green	0.03	0.19	0.00	0.15	0.30	0.30	0.34	0.48	0.00	0.06	0.20	0.20
Sat Flow, veh/h	3155	5873	1447	3155	5383	606	1725	4944	1535	1725	4001	917
Grp Volume(v), veh/h	63	1084	0	474	929	337	695	1074	0	84	606	302
Grp Sat Flow(s),veh/h/ln	1577	1468	1447	1577	1468	1585	1725	1648	1535	1725	1648	1622
Q Serve(g_s), s	2.6	23.8	0.0	19.0	24.2	24.4	44.0	18.9	0.0	6.2	23.4	23.8
Cycle Q Clear(g_c), s	2.6	23.8	0.0	19.0	24.2	24.4	44.0	18.9	0.0	6.2	23.4	23.8
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	109	1130		461	1339	482	584	2358		106	658	324
V/C Ratio(X)	0.58	0.96		1.03	0.69	0.70	1.19	0.46		0.79	0.92	0.93
Avail Cap(c_a), veh/h	218	1130		461	1339	482	584	2358		173	659	325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	52.0	0.0	55.5	39.9	40.0	43.0	22.7	0.0	60.2	51.0	51.2
Incr Delay (d2), s/veh	10.0	18.1	0.0	49.2	2.0	5.7	101.8	0.3	0.0	24.1	18.8	33.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.8	0.0	10.4	8.6	9.9	34.0	6.9	0.0	3.3	10.9	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	70.1	0.0	104.7	41.9	45.6	144.8	23.0	0.0	84.2	69.8	85.0
LnGrp LOS	E	E		F	D	D	F	C		F	E	F
Approach Vol, veh/h		1147	A		1740		1769	A		992		
Approach Delay, s/veh		70.2			59.7		70.8			75.6		
Approach LOS		E			E		E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	62.0	66.0	23.0	29.0	48.0	30.0	8.5	43.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	57.0	19.0	25.0	44.0	26.0	9.0	35.0				
Max Q Clear Time (g_c+1), s	10.2	20.9	21.0	25.8	46.0	25.8	4.6	26.4				
Green Ext Time (p_c), s	0.1	15.4	0.0	0.0	0.0	0.1	0.1	6.5				

Intersection Summary

HCM 6th Ctrl Delay	68.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	1100	170	180	1220	250	150	410	130	260	350	190
Future Volume (veh/h)	260	1100	170	180	1220	250	150	410	130	260	350	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	268	1134	157	186	1258	58	155	423	113	268	361	148
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	294	1789	246	240	1388	335	182	549	145	294	642	258
Arrive On Green	0.18	0.34	0.34	0.08	0.24	0.24	0.10	0.20	0.20	0.17	0.26	0.26
Sat Flow, veh/h	1626	5247	721	3155	5873	1418	1767	2744	725	1767	2437	982
Grp Volume(v), veh/h	268	951	340	186	1258	58	155	270	266	268	259	250
Grp Sat Flow(s),veh/h/ln	1626	1468	1562	1577	1468	1418	1767	1763	1706	1767	1763	1656
Q Serve(g_s), s	19.4	21.8	22.1	7.0	25.0	3.9	10.4	17.4	17.7	17.9	15.3	15.7
Cycle Q Clear(g_c), s	19.4	21.8	22.1	7.0	25.0	3.9	10.4	17.4	17.7	17.9	15.3	15.7
Prop In Lane	1.00		0.46	1.00		1.00	1.00		0.43	1.00		0.59
Lane Grp Cap(c), veh/h	294	1502	533	240	1388	335	182	353	342	294	464	436
V/C Ratio(X)	0.91	0.63	0.64	0.77	0.91	0.17	0.85	0.77	0.78	0.91	0.56	0.57
Avail Cap(c_a), veh/h	480	1601	568	538	1402	338	301	559	541	319	576	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	33.3	33.4	54.5	44.6	36.5	53.0	45.4	45.5	49.2	38.2	38.4
Incr Delay (d2), s/veh	9.5	0.9	2.6	2.0	8.9	0.3	5.5	1.3	1.5	26.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	7.5	8.3	2.7	9.4	1.3	4.8	7.5	7.4	9.9	6.4	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	34.2	36.0	56.5	53.5	36.9	58.5	46.7	47.0	76.0	38.6	38.9
LnGrp LOS	E	C	D	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		1559			1502			691			777	
Approach Delay, s/veh		38.7			53.2			49.5			51.6	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.5	30.6	15.7	47.5	18.9	38.2	28.2	34.9				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	21.7	38.1	20.5	43.7	20.5	39.3	35.5	28.7				
Max Q Clear Time (g_c+1/9), s	19.9	19.7	9.0	24.1	12.4	17.7	21.4	27.0				
Green Ext Time (p_c), s	0.1	1.7	0.2	10.6	0.1	1.7	0.3	1.3				

Intersection Summary

HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶ ↷	↑ ↑ ↑		↶ ↷	↑ ↑ ↑	↶	↶ ↷	↑ ↑ ↑	↶	↶ ↷	↑ ↑ ↑	↶
Traffic Volume (veh/h)	310	980	150	350	1140	270	170	1140	440	280	400	190
Future Volume (veh/h)	310	980	150	350	1140	270	170	1140	440	280	400	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	326	1032	137	368	1200	157	179	1200	244	295	421	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	365	1355	178	421	1279	389	236	1261	384	353	1434	437
Arrive On Green	0.12	0.26	0.26	0.13	0.27	0.27	0.07	0.25	0.25	0.10	0.29	0.29
Sat Flow, veh/h	3155	5278	693	3155	4661	1419	3401	5025	1529	3401	5025	1531
Grp Volume(v), veh/h	326	859	310	368	1200	157	179	1200	244	295	421	57
Grp Sat Flow(s),veh/h/ln	1577	1468	1566	1577	1554	1419	1700	1675	1529	1700	1675	1531
Q Serve(g_s), s	12.0	21.2	21.5	13.5	29.6	10.6	6.1	27.6	16.7	10.0	7.7	3.2
Cycle Q Clear(g_c), s	12.0	21.2	21.5	13.5	29.6	10.6	6.1	27.6	16.7	10.0	7.7	3.2
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	1130	402	421	1279	389	236	1261	384	353	1434	437
V/C Ratio(X)	0.89	0.76	0.77	0.87	0.94	0.40	0.76	0.95	0.64	0.84	0.29	0.13
Avail Cap(c_a), veh/h	365	1130	402	470	1285	391	304	1261	384	420	1434	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	40.3	40.5	50.0	41.7	34.8	53.7	43.3	39.2	51.7	32.8	31.2
Incr Delay (d2), s/veh	22.9	3.2	9.1	15.0	13.1	0.8	7.0	15.3	3.5	11.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.5	8.8	5.9	12.2	3.6	2.7	12.6	6.4	4.7	3.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.2	43.5	49.6	65.0	54.8	35.6	60.8	58.6	42.8	63.0	32.9	31.3
LnGrp LOS	E	D	D	E	D	D	E	E	D	E	C	C
Approach Vol, veh/h		1495			1725			1623			773	
Approach Delay, s/veh		51.5			55.2			56.4			44.3	
Approach LOS		D			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.2	37.7	15.6	41.1	21.1	39.7	19.7	37.0				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	37.5	28.5	10.5	33.5	13.6	32.4	14.5	29.5				
Max Q Clear Time (g_c+1/5), s	11.5	23.5	8.1	9.7	14.0	31.6	12.0	29.6				
Green Ext Time (p_c), s	0.2	3.1	0.1	3.2	0.0	0.6	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

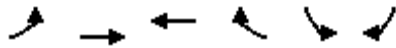
Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



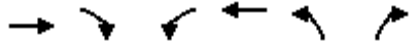
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1280	940	0	220	1120
Future Volume (veh/h)	0	1280	940	0	220	1120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	1347	989	0	232	1139
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	1705	1187	0	703	1250
Arrive On Green	0.00	0.37	0.37	0.00	0.43	0.43
Sat Flow, veh/h	0	4968	3415	0	1626	2894
Grp Volume(v), veh/h	0	1347	989	0	232	1139
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1626	1447
Q Serve(g_s), s	0.0	15.7	16.9	0.0	5.8	22.4
Cycle Q Clear(g_c), s	0.0	15.7	16.9	0.0	5.8	22.4
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1705	1187	0	703	1250
V/C Ratio(X)	0.00	0.79	0.83	0.00	0.33	0.91
Avail Cap(c_a), veh/h	0	1930	1343	0	735	1307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.2	17.6	0.0	11.5	16.2
Incr Delay (d2), s/veh	0.0	2.0	4.2	0.0	0.3	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	5.5	0.0	1.9	8.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	19.3	21.8	0.0	11.7	25.7
LnGrp LOS	A	B	C	A	B	C
Approach Vol, veh/h		1347	989		1371	
Approach Delay, s/veh		19.3	21.8		23.3	
Approach LOS		B	C		C	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		29.1		31.8		29.1
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		25.2		27.5		25.2
Max Q Clear Time (g_c+I1), s		17.7		24.4		18.9
Green Ext Time (p_c), s		4.6		1.9		3.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.4			
HCM 6th LOS			C			

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	600	890	160	360	580	640
Future Volume (veh/h)	600	890	160	360	580	640
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	632	895	168	379	694	350
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1859	990	241	2546	964	429
Arrive On Green	0.40	0.40	0.08	0.55	0.30	0.30
Sat Flow, veh/h	4815	1406	3155	4815	3252	1447
Grp Volume(v), veh/h	632	895	168	379	694	350
Grp Sat Flow(s),veh/h/ln	1554	1406	1577	1554	1626	1447
Q Serve(g_s), s	8.0	33.7	4.4	3.4	16.1	19.0
Cycle Q Clear(g_c), s	8.0	33.7	4.4	3.4	16.1	19.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1859	990	241	2546	964	429
V/C Ratio(X)	0.34	0.90	0.70	0.15	0.72	0.82
Avail Cap(c_a), veh/h	1859	990	411	2796	1578	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	9.1	38.1	9.5	26.6	27.6
Incr Delay (d2), s/veh	0.1	11.5	3.6	0.0	1.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	20.5	1.7	0.9	6.2	6.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.8	20.6	41.7	9.5	27.6	31.4
LnGrp LOS	B	C	D	A	C	C
Approach Vol, veh/h	1527			547	1044	
Approach Delay, s/veh	19.4			19.4	28.9	
Approach LOS	B			B	C	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	22.5	41.0		53.5	31.1	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	33.7			50.7	41.0	
Max Q Clear Time (g_c+I), s	35.7			5.4	21.0	
Green Ext Time (p_c), s	0.2	0.0		2.4	4.1	

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	450	20	40	660	30	20	10	70	30	10	20
Future Volume (veh/h)	30	450	20	40	660	30	20	10	70	30	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.99	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	474	19	42	695	30	21	11	13	32	11	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	1251	50	90	1283	55	258	29	35	314	28	8
Arrive On Green	0.04	0.36	0.36	0.05	0.37	0.37	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1781	3478	139	1781	3466	150	758	397	469	1094	376	103
Grp Volume(v), veh/h	32	242	251	42	356	369	45	0	0	46	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1838	1625	0	0	1572	0	0
Q Serve(g_s), s	0.5	2.6	2.6	0.6	4.1	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	2.6	2.6	0.6	4.1	4.1	0.6	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.08	0.47		0.29	0.70		0.07
Lane Grp Cap(c), veh/h	71	639	662	90	658	680	322	0	0	350	0	0
V/C Ratio(X)	0.45	0.38	0.38	0.47	0.54	0.54	0.14	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	347	1325	1372	347	1325	1370	2075	0	0	2036	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.3	6.2	6.2	12.1	6.5	6.5	11.5	0.0	0.0	11.5	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.4	0.4	3.8	0.7	0.7	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.4	0.2	0.6	0.6	0.2	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	6.6	6.6	15.9	7.2	7.2	11.7	0.0	0.0	11.7	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		525			767			45			46	
Approach Delay, s/veh		7.2			7.7			11.7			11.7	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.4	5.8	13.9		6.4	5.5	14.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		31.9	5.1	19.5		31.9	5.1	19.5				
Max Q Clear Time (g_c+I1), s		2.6	2.6	4.6		2.6	2.5	6.1				
Green Ext Time (p_c), s		0.2	0.0	2.3		0.2	0.0	3.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.7							
HCM 6th LOS					A							

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	100	340	130	40	260	260	340	1570	30	150	930	210
Future Volume (veh/h)	100	340	130	40	260	260	340	1570	30	150	930	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	105	358	100	42	274	134	358	1653	13	158	979	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	244	523	144	173	606	264	439	2045	624	249	1764	538
Arrive On Green	0.07	0.19	0.19	0.05	0.17	0.17	0.13	0.41	0.41	0.07	0.36	0.36
Sat Flow, veh/h	3456	2738	753	3456	3554	1548	3346	4944	1509	3346	4944	1508
Grp Volume(v), veh/h	105	230	228	42	274	134	358	1653	13	158	979	102
Grp Sat Flow(s),veh/h/ln	1728	1777	1715	1728	1777	1548	1673	1648	1509	1673	1648	1508
Q Serve(g_s), s	2.7	11.1	11.4	1.1	6.4	7.3	9.6	27.2	0.5	4.2	14.7	4.3
Cycle Q Clear(g_c), s	2.7	11.1	11.4	1.1	6.4	7.3	9.6	27.2	0.5	4.2	14.7	4.3
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	340	328	173	606	264	439	2045	624	249	1764	538
V/C Ratio(X)	0.43	0.68	0.69	0.24	0.45	0.51	0.82	0.81	0.02	0.63	0.55	0.19
Avail Cap(c_a), veh/h	262	712	687	262	1424	621	580	2357	719	254	1875	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	34.7	34.8	42.2	34.4	34.8	39.0	23.8	16.0	41.5	23.8	20.5
Incr Delay (d2), s/veh	1.2	0.9	1.0	0.7	0.2	0.6	6.7	1.9	0.0	5.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.6	4.6	0.5	2.6	2.6	4.1	9.5	0.2	1.8	5.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	35.6	35.8	42.9	34.6	35.3	45.7	25.8	16.0	46.4	24.1	20.6
LnGrp LOS	D	D	D	D	C	D	D	C	B	D	C	C
Approach Vol, veh/h		563		450		2024		1239				
Approach Delay, s/veh		36.9		35.6		29.2		26.7				
Approach LOS		D		D		C		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.9	45.7	9.6	25.1	17.1	40.4	11.5	23.2				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	44.0	7.0	37.0	16.0	35.0	7.0	37.0					
Max Q Clear Time (g_c+1/3), s	29.2	3.1	13.4	11.6	16.7	4.7	9.3					
Green Ext Time (p_c), s	0.0	9.0	0.0	1.5	0.5	6.1	0.1	1.2				

Intersection Summary

HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC  
18: Park Place & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	480	40	30	510	50	50
Future Vol, veh/h	480	40	30	510	50	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	505	42	32	537	53	53

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	547	0	838 253
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	333 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1018	-	305 746
Stage 1	-	-	-	-	571 -
Stage 2	-	-	-	-	698 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1018	-	296 746
Mov Cap-2 Maneuver	-	-	-	-	296 -
Stage 1	-	-	-	-	571 -
Stage 2	-	-	-	-	676 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	424	-	-	1018	-
HCM Lane V/C Ratio	0.248	-	-	0.031	-
HCM Control Delay (s)	16.3	-	-	8.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	470	50	40	470	10	50	10	110	20	10	20
Future Volume (veh/h)	10	470	50	40	470	10	50	10	110	20	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.99	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	495	46	42	495	10	53	11	29	21	11	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	839	78	162	1185	24	234	61	76	237	109	34
Arrive On Green	0.01	0.26	0.26	0.09	0.33	0.33	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3277	303	1781	3562	72	677	389	483	699	692	217
Grp Volume(v), veh/h	11	268	273	42	247	258	93	0	0	37	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1857	1549	0	0	1608	0	0
Q Serve(g_s), s	0.3	5.9	5.9	1.0	4.8	4.8	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	5.9	5.9	1.0	4.8	4.8	2.2	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.04	0.57		0.31	0.57		0.14
Lane Grp Cap(c), veh/h	25	455	462	162	591	618	371	0	0	380	0	0
V/C Ratio(X)	0.43	0.59	0.59	0.26	0.42	0.42	0.25	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	201	1000	1015	401	1200	1255	1245	0	0	1264	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.7	14.5	14.5	18.8	11.5	11.5	16.7	0.0	0.0	16.1	0.0	0.0
Incr Delay (d2), s/veh	11.1	1.5	1.5	0.8	0.6	0.5	0.4	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.8	1.9	0.3	1.3	1.4	0.8	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	15.9	16.0	19.6	12.0	12.0	17.1	0.0	0.0	16.2	0.0	0.0
LnGrp LOS	C	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		552			547			93				37
Approach Delay, s/veh		16.3			12.6			17.1				16.2
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.0	11.5	18.9		14.0	8.1	22.3				
Change Period (Y+Rc), s		7.0	7.5	7.5		7.0	7.5	7.5				
Max Green Setting (Gmax), s		33.0	10.0	25.0		33.0	5.0	30.0				
Max Q Clear Time (g_c+I1), s		4.2	3.0	7.9		2.8	2.3	6.8				
Green Ext Time (p_c), s		0.6	0.0	3.0		0.2	0.0	3.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.7								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	590	10	10	510	10	40
Future Vol, veh/h	590	10	10	510	10	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	621	11	11	537	11	42

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	632	0	918
Stage 1	-	-	-	-	627
Stage 2	-	-	-	-	291
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	960	-	275
Stage 1	-	-	-	-	500
Stage 2	-	-	-	-	739
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	960	-	272
Mov Cap-2 Maneuver	-	-	-	-	272
Stage 1	-	-	-	-	500
Stage 2	-	-	-	-	731

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	526	-	-	960	-
HCM Lane V/C Ratio	0.1	-	-	0.011	-
HCM Control Delay (s)	12.6	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



HCM 6th Signalized Intersection Summary  
21: Sumner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	470	30	70	340	40	80	600	30	20	450	100
Future Volume (veh/h)	130	470	30	70	340	40	80	600	30	20	450	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	137	495	26	74	358	28	84	632	28	21	474	77
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	175	757	40	120	633	49	128	969	43	46	713	115
Arrive On Green	0.10	0.22	0.22	0.07	0.19	0.19	0.07	0.28	0.28	0.03	0.23	0.23
Sat Flow, veh/h	1781	3435	180	1781	3340	260	1767	3439	152	1781	3032	490
Grp Volume(v), veh/h	137	256	265	74	190	196	84	324	336	21	274	277
Grp Sat Flow(s),veh/h/ln	1781	1777	1838	1781	1777	1824	1767	1763	1828	1781	1763	1759
Q Serve(g_s), s	3.3	5.8	5.9	1.8	4.3	4.4	2.1	7.2	7.2	0.5	6.3	6.3
Cycle Q Clear(g_c), s	3.3	5.8	5.9	1.8	4.3	4.4	2.1	7.2	7.2	0.5	6.3	6.3
Prop In Lane	1.00		0.10	1.00		0.14	1.00		0.08	1.00		0.28
Lane Grp Cap(c), veh/h	175	392	405	120	337	346	128	497	515	46	414	413
V/C Ratio(X)	0.78	0.65	0.65	0.62	0.56	0.57	0.65	0.65	0.65	0.46	0.66	0.67
Avail Cap(c_a), veh/h	240	759	785	200	719	738	199	713	740	200	713	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	15.8	15.8	20.2	16.4	16.4	20.1	14.1	14.1	21.4	15.4	15.4
Incr Delay (d2), s/veh	10.8	1.8	1.8	5.1	1.5	1.5	5.6	1.4	1.4	7.0	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.9	1.9	0.7	1.4	1.5	0.9	2.3	2.4	0.3	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	17.6	17.6	25.3	17.8	17.8	25.6	15.5	15.5	28.4	17.2	17.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		658			460			744			572	
Approach Delay, s/veh		20.3			19.0			16.6			17.7	
Approach LOS		C			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	17.0	7.5	14.3	7.7	15.0	8.9	12.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.0	5.0	19.0	5.0	18.0	6.0	18.0				
Max Q Clear Time (g_c+I1), s	2.5	9.2	3.8	7.9	4.1	8.3	5.3	6.4				
Green Ext Time (p_c), s	0.0	2.4	0.0	2.0	0.0	2.1	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.3								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
 23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	340	10	70	250	50	70	110	30	50	160	40
Future Volume (veh/h)	100	340	10	70	250	50	70	110	30	50	160	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	105	358	10	74	263	35	74	116	9	53	168	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	3	3	2
Cap, veh/h	164	750	21	131	612	81	131	445	34	102	403	21
Arrive On Green	0.09	0.21	0.21	0.07	0.19	0.19	0.07	0.13	0.13	0.06	0.12	0.12
Sat Flow, veh/h	1781	3530	98	1781	3154	415	1781	3311	254	1767	3401	181
Grp Volume(v), veh/h	105	180	188	74	147	151	74	61	64	53	87	90
Grp Sat Flow(s),veh/h/ln	1781	1777	1852	1781	1777	1792	1781	1763	1802	1767	1763	1820
Q Serve(g_s), s	2.0	3.1	3.1	1.4	2.5	2.6	1.4	1.1	1.1	1.0	1.6	1.6
Cycle Q Clear(g_c), s	2.0	3.1	3.1	1.4	2.5	2.6	1.4	1.1	1.1	1.0	1.6	1.6
Prop In Lane	1.00		0.05	1.00		0.23	1.00		0.14	1.00		0.10
Lane Grp Cap(c), veh/h	164	377	393	131	345	348	131	237	242	102	209	215
V/C Ratio(X)	0.64	0.48	0.48	0.56	0.43	0.43	0.56	0.26	0.26	0.52	0.41	0.42
Avail Cap(c_a), veh/h	336	938	977	325	928	935	470	1917	1960	256	1707	1763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	11.9	11.9	15.4	12.2	12.2	15.4	13.4	13.4	15.8	14.1	14.1
Incr Delay (d2), s/veh	4.1	0.9	0.9	3.8	0.8	0.9	3.8	0.6	0.6	4.0	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	1.1	0.5	0.7	0.7	0.5	0.3	0.4	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	12.8	12.8	19.2	13.0	13.1	19.2	14.0	14.0	19.8	15.4	15.4
LnGrp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		473		372		199		230				
Approach Delay, s/veh		14.2		14.3		15.9		16.4				
Approach LOS		B		B		B		B				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.5	9.1	7.0	11.8	7.0	8.6	7.7	11.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	37.5	6.3	18.2	9.1	33.4	6.5	18.0				
Max Q Clear Time (g_c+1), s	13.0	3.1	3.4	5.1	3.4	3.6	4.0	4.6				
Green Ext Time (p_c), s	0.0	0.6	0.0	1.7	0.1	0.9	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔		↔	↔		↔↔↔	↔↔↔		↔↔↔	↔↔↔	
Traffic Volume (veh/h)	260	10	160	20	20	20	280	1270	20	20	600	160
Future Volume (veh/h)	260	10	160	20	20	20	280	1270	20	20	600	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	274	11	28	21	21	2	295	1337	21	21	632	143
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	4	4	4	4	4	4
Cap, veh/h	502	67	169	73	69	7	338	2164	34	58	1083	240
Arrive On Green	0.15	0.15	0.15	0.04	0.04	0.04	0.19	0.42	0.42	0.03	0.27	0.27
Sat Flow, veh/h	3456	458	1167	1810	1708	163	1753	5096	80	1753	4086	906
Grp Volume(v), veh/h	274	0	39	21	0	23	295	879	479	21	516	259
Grp Sat Flow(s),veh/h/ln	1728	0	1625	1810	0	1871	1753	1675	1826	1753	1675	1642
Q Serve(g_s), s	5.4	0.0	1.5	0.8	0.0	0.9	11.9	14.9	14.9	0.9	9.8	10.0
Cycle Q Clear(g_c), s	5.4	0.0	1.5	0.8	0.0	0.9	11.9	14.9	14.9	0.9	9.8	10.0
Prop In Lane	1.00		0.72	1.00		0.09	1.00		0.04	1.00		0.55
Lane Grp Cap(c), veh/h	502	0	236	73	0	76	338	1423	776	58	888	435
V/C Ratio(X)	0.55	0.00	0.17	0.29	0.00	0.30	0.87	0.62	0.62	0.36	0.58	0.59
Avail Cap(c_a), veh/h	2440	0	1147	831	0	859	373	1998	1089	168	1608	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	27.3	34.0	0.0	34.0	28.6	16.4	16.4	34.5	23.3	23.4
Incr Delay (d2), s/veh	1.3	0.0	0.5	3.0	0.0	3.2	19.0	0.6	1.1	4.5	0.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.6	0.4	0.0	0.5	6.2	4.8	5.4	0.4	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	0.0	27.8	37.0	0.0	37.2	47.6	17.0	17.5	39.0	24.1	25.2
LnGrp LOS	C	A	C	D	A	D	D	B	B	D	C	C
Approach Vol, veh/h		313			44			1653			796	
Approach Delay, s/veh		30.0			37.1			22.6			24.9	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	25.8		17.1	8.9	37.5		9.4				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	15.5	35.0		51.5	7.0	43.5		33.5				
Max Q Clear Time (g_c+I), s	11.0	12.0		7.4	2.9	16.9		2.9				
Green Ext Time (p_c), s	0.2	6.6		1.8	0.0	13.2		0.2				

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	120	10	50	40	20	130	30	1690	20	60	950	90
Future Volume (veh/h)	120	10	50	40	20	130	30	1690	20	60	950	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	126	11	11	42	21	26	32	1779	10	63	1000	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	302	151	151	325	134	166	111	2238	676	166	2395	724
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.06	0.45	0.45	0.10	0.48	0.48
Sat Flow, veh/h	1349	847	847	1379	750	928	1725	4944	1493	1725	4944	1494
Grp Volume(v), veh/h	126	0	22	42	0	47	32	1779	10	63	1000	51
Grp Sat Flow(s),veh/h/ln	1349	0	1695	1379	0	1678	1725	1648	1493	1725	1648	1494
Q Serve(g_s), s	6.7	0.0	0.8	2.0	0.0	1.8	1.4	23.7	0.3	2.6	10.1	1.4
Cycle Q Clear(g_c), s	8.5	0.0	0.8	2.8	0.0	1.8	1.4	23.7	0.3	2.6	10.1	1.4
Prop In Lane	1.00		0.50	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	0	303	325	0	300	111	2238	676	166	2395	724
V/C Ratio(X)	0.42	0.00	0.07	0.13	0.00	0.16	0.29	0.79	0.01	0.38	0.42	0.07
Avail Cap(c_a), veh/h	709	0	814	741	0	806	224	2375	717	224	2395	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	26.3	27.5	0.0	26.7	34.3	18.0	11.6	32.7	12.8	10.6
Incr Delay (d2), s/veh	1.1	0.0	0.1	0.2	0.0	0.3	1.7	2.0	0.0	1.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.3	0.7	0.0	0.7	0.6	7.5	0.1	1.1	3.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	26.4	27.7	0.0	27.0	36.0	20.0	11.6	34.4	13.0	10.7
LnGrp LOS	C	A	C	C	A	C	D	C	B	C	B	B
Approach Vol, veh/h		148			89			1821			1114	
Approach Delay, s/veh		30.7			27.4			20.2			14.1	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	42.4		19.8	12.5	44.8		19.8				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	37.0		37.0	10.0	37.0		37.0				
Max Q Clear Time (g_c+1/4), s	14.6	25.7		10.5	3.4	12.1		4.8				
Green Ext Time (p_c), s	0.1	9.2		0.6	0.0	9.5		0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	80	10	20	10	10	20	10	540	10	10	490	30
Future Vol, veh/h	80	10	20	10	10	20	10	540	10	10	490	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	225	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	3	3	2	2	3	3
Mvmt Flow	84	11	21	11	11	21	11	568	11	11	516	32

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	866	1155	274	882	1166	290	548	0	0	579	0	0
Stage 1	554	554	-	596	596	-	-	-	-	-	-	-
Stage 2	312	601	-	286	570	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	247	196	724	241	193	707	1011	-	-	991	-	-
Stage 1	484	512	-	457	490	-	-	-	-	-	-	-
Stage 2	673	488	-	697	504	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	226	192	724	221	189	707	1011	-	-	991	-	-
Mov Cap-2 Maneuver	226	192	-	221	189	-	-	-	-	-	-	-
Stage 1	479	506	-	452	485	-	-	-	-	-	-	-
Stage 2	632	483	-	655	498	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	30.5		18.1		0.2		0.2	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1011	-	-	254	316	991	-	-
HCM Lane V/C Ratio	0.01	-	-	0.456	0.133	0.011	-	-
HCM Control Delay (s)	8.6	-	-	30.5	18.1	8.7	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.2	0.5	0	-	-

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑	↗	↗	↑↑↑	↗	↗	↑↑↑	↗
Traffic Volume (veh/h)	530	490	90	150	430	240	80	700	190	90	440	150
Future Volume (veh/h)	530	490	90	150	430	240	80	700	190	90	440	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	546	505	31	155	443	98	82	722	98	93	454	44
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	626	1134	497	229	725	317	105	1228	374	118	1267	386
Arrive On Green	0.18	0.32	0.32	0.07	0.21	0.21	0.06	0.24	0.24	0.07	0.25	0.25
Sat Flow, veh/h	3428	3526	1544	3428	3526	1539	1753	5025	1529	1753	5025	1529
Grp Volume(v), veh/h	546	505	31	155	443	98	82	722	98	93	454	44
Grp Sat Flow(s),veh/h/ln	1714	1763	1544	1714	1763	1539	1753	1675	1529	1753	1675	1529
Q Serve(g_s), s	13.6	10.0	1.2	3.9	10.1	4.8	4.1	11.2	4.6	4.6	6.5	2.0
Cycle Q Clear(g_c), s	13.6	10.0	1.2	3.9	10.1	4.8	4.1	11.2	4.6	4.6	6.5	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	626	1134	497	229	725	317	105	1228	374	118	1267	386
V/C Ratio(X)	0.87	0.45	0.06	0.68	0.61	0.31	0.78	0.59	0.26	0.79	0.36	0.11
Avail Cap(c_a), veh/h	856	1874	821	701	1714	748	199	1929	587	199	1929	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	23.7	20.7	40.2	31.8	29.7	40.8	29.4	26.9	40.4	27.1	25.4
Incr Delay (d2), s/veh	5.9	0.4	0.1	1.3	1.2	0.8	4.7	0.6	0.5	4.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	3.8	0.4	1.6	4.1	1.7	1.8	4.3	1.6	2.0	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	24.0	20.8	41.5	33.0	30.4	45.6	30.0	27.4	44.7	27.3	25.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1082			696			902			591	
Approach Delay, s/veh		32.5			34.5			31.1			29.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	28.7	11.9	35.5	11.3	29.4	22.1	25.3				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	10.0	33.8	18.0	46.8	10.0	33.8	22.0	42.8				
Max Q Clear Time (g_c+I1), s	6.6	13.2	5.9	12.0	6.1	8.5	15.6	12.1				
Green Ext Time (p_c), s	0.0	6.7	0.1	4.8	0.0	4.1	0.4	4.5				

Intersection Summary

HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	450	20	40	930	80	10	10	10	60	10	50
Future Volume (veh/h)	10	450	20	40	930	80	10	10	10	60	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	11	474	12	42	979	79	11	11	3	63	11	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	3	3	3	2	2	2
Cap, veh/h	33	1366	592	105	1410	114	179	143	29	278	48	26
Arrive On Green	0.02	0.41	0.41	0.06	0.45	0.45	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1668	3328	1443	1668	3112	251	472	979	198	986	326	177
Grp Volume(v), veh/h	11	474	12	42	524	534	25	0	0	84	0	0
Grp Sat Flow(s),veh/h/ln	1668	1664	1443	1668	1664	1698	1650	0	0	1489	0	0
Q Serve(g_s), s	0.3	4.6	0.2	1.1	11.9	11.9	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.6	0.2	1.1	11.9	11.9	0.6	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.15	0.44		0.12	0.75		0.12
Lane Grp Cap(c), veh/h	33	1366	592	105	754	770	351	0	0	351	0	0
V/C Ratio(X)	0.33	0.35	0.02	0.40	0.69	0.69	0.07	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	247	1759	763	247	880	898	1117	0	0	1060	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	9.6	8.3	21.3	10.3	10.3	17.5	0.0	0.0	18.2	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.3	0.0	2.5	3.0	2.9	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.3	0.1	0.5	3.7	3.8	0.2	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	9.9	8.3	23.8	13.3	13.3	17.6	0.0	0.0	18.5	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h		497			1100			25			84	
Approach Delay, s/veh		10.3			13.7			17.6			18.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.9	8.0	26.4		12.9	5.9	28.4				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	25.0		30.0	7.0	25.0				
Max Q Clear Time (g_c+1), s		2.6	3.1	6.6		4.3	2.3	13.9				
Green Ext Time (p_c), s		0.1	0.0	5.1		0.4	0.0	7.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					13.0							
HCM 6th LOS					B							
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												



HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↔	↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	220	150	150	180	420	90	410	1430	70	90	730	220
Future Volume (veh/h)	220	150	150	180	420	90	410	1430	70	90	730	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	232	158	0	189	442	18	432	1505	30	95	768	197
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	2	2	2	6	6	6	6	6	6
Cap, veh/h	291	483		215	625	272	463	1971	602	227	1284	326
Arrive On Green	0.09	0.15	0.00	0.12	0.18	0.18	0.14	0.40	0.40	0.07	0.33	0.33
Sat Flow, veh/h	3237	3328	1485	1781	3554	1549	3346	4944	1509	3346	3914	993
Grp Volume(v), veh/h	232	158	0	189	442	18	432	1505	30	95	645	320
Grp Sat Flow(s),veh/h/ln	1618	1664	1485	1781	1777	1549	1673	1648	1509	1673	1648	1611
Q Serve(g_s), s	7.9	4.8	0.0	11.7	13.1	1.1	14.3	29.5	1.4	3.1	18.3	18.6
Cycle Q Clear(g_c), s	7.9	4.8	0.0	11.7	13.1	1.1	14.3	29.5	1.4	3.1	18.3	18.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	291	483		215	625	272	463	1971	602	227	1081	528
V/C Ratio(X)	0.80	0.33		0.88	0.71	0.07	0.93	0.76	0.05	0.42	0.60	0.60
Avail Cap(c_a), veh/h	367	1337		215	1453	633	463	2141	653	239	1207	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	43.0	0.0	48.5	43.4	38.5	47.7	29.1	20.7	50.1	31.4	31.5
Incr Delay (d2), s/veh	9.3	0.8	0.0	31.2	1.1	0.1	25.8	2.0	0.1	0.9	1.2	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.0	0.0	7.0	5.8	0.4	7.3	11.0	0.5	1.3	7.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	43.8	0.0	79.7	44.6	38.6	73.6	31.1	20.7	51.0	32.7	34.2
LnGrp LOS	E	D		E	D	D	E	C	C	D	C	C
Approach Vol, veh/h		390	A		649			1967			1060	
Approach Delay, s/veh		53.0			54.6			40.3			34.8	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	51.1	52.2	21.0	23.8	23.0	44.2	17.6	27.2				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	48.5	48.5	13.5	45.0	15.5	41.0	12.7	45.8				
Max Q Clear Time (g_c+1/4), s	31.5	31.5	13.7	6.8	16.3	20.6	9.9	15.1				
Green Ext Time (p_c), s	0.0	13.2	0.0	1.9	0.0	10.0	0.2	2.5				

Intersection Summary

HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	260	40	20	610	20	60	10	40	20	10	20
Future Volume (veh/h)	10	260	40	20	610	20	60	10	40	20	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	274	19	21	642	9	63	11	8	21	11	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	1018	440	66	1078	466	400	55	269	288	126	31
Arrive On Green	0.02	0.29	0.29	0.04	0.30	0.30	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1536	1781	3554	1537	1167	315	1551	688	725	177
Grp Volume(v), veh/h	11	274	19	21	642	9	74	0	8	36	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1537	1481	0	1551	1590	0	0
Q Serve(g_s), s	0.2	2.0	0.3	0.4	5.2	0.1	0.8	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	2.0	0.3	0.4	5.2	0.1	1.3	0.0	0.1	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.58		0.11
Lane Grp Cap(c), veh/h	36	1018	440	66	1078	466	454	0	269	445	0	0
V/C Ratio(X)	0.30	0.27	0.04	0.32	0.60	0.02	0.16	0.00	0.03	0.08	0.00	0.00
Avail Cap(c_a), veh/h	369	1682	727	369	1682	727	1484	0	1376	1531	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.3	9.3	8.7	15.9	10.0	8.3	12.1	0.0	11.6	11.8	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.1	0.0	2.7	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.1	0.2	1.4	0.0	0.4	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	9.5	8.8	18.6	10.5	8.3	12.1	0.0	11.6	11.8	0.0	0.0
LnGrp LOS	C	A	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		304			672			82			36	
Approach Delay, s/veh		9.8			10.8			12.1			11.8	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.9	6.3	15.7		11.9	5.7	16.3				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+1), s		3.3	2.4	4.0		3.3	2.2	7.2				
Green Ext Time (p_c), s		0.2	0.0	1.3		0.1	0.0	2.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											10.6	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary  
 32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	240	20	20	520	130	40	30	50	170	30	90
Future Volume (veh/h)	60	240	20	20	520	130	40	30	50	170	30	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	253	7	21	547	41	42	32	15	179	32	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1029	445	65	850	366	342	226	419	364	69	91
Arrive On Green	0.09	0.29	0.29	0.04	0.24	0.24	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1536	1781	3554	1532	771	837	1555	828	254	339
Grp Volume(v), veh/h	63	253	7	21	547	41	74	0	15	277	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1536	1781	1777	1532	1608	0	1555	1421	0	0
Q Serve(g_s), s	1.4	2.3	0.1	0.5	5.8	0.9	0.0	0.0	0.3	6.2	0.0	0.0
Cycle Q Clear(g_c), s	1.4	2.3	0.1	0.5	5.8	0.9	1.3	0.0	0.3	7.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.57		1.00	0.65		0.24
Lane Grp Cap(c), veh/h	155	1029	445	65	850	366	568	0	419	524	0	0
V/C Ratio(X)	0.41	0.25	0.02	0.33	0.64	0.11	0.13	0.00	0.04	0.53	0.00	0.00
Avail Cap(c_a), veh/h	297	1269	548	297	1269	547	1089	0	962	1028	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.2	11.4	10.6	19.7	14.4	12.5	11.7	0.0	11.3	14.0	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.1	0.0	2.9	0.8	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.0	0.2	2.0	0.3	0.5	0.0	0.1	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	11.5	10.7	22.6	15.2	12.6	11.7	0.0	11.3	14.3	0.0	0.0
LnGrp LOS	B	B	B	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		323			609			89			277	
Approach Delay, s/veh		13.1			15.3			11.6			14.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.3	6.5	18.2		17.3	8.6	16.0				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		26.0	7.0	15.0		26.0	7.0	15.0				
Max Q Clear Time (g_c+1), s		3.3	2.5	4.3		9.5	3.4	7.8				
Green Ext Time (p_c), s		0.3	0.0	1.1		1.1	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	340	60	180	340	120	120	370	300	60	370	130
Future Volume (veh/h)	70	340	60	180	340	120	120	370	300	60	370	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	358	49	189	358	95	126	389	187	63	389	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	547	74	235	624	163	176	556	263	132	591	157
Arrive On Green	0.08	0.17	0.17	0.13	0.23	0.23	0.10	0.24	0.24	0.07	0.22	0.22
Sat Flow, veh/h	1781	3134	425	1767	2755	721	1767	2309	1094	1767	2739	730
Grp Volume(v), veh/h	74	202	205	189	227	226	126	296	280	63	249	245
Grp Sat Flow(s),veh/h/ln	1781	1777	1782	1767	1763	1714	1767	1763	1641	1767	1763	1706
Q Serve(g_s), s	2.5	6.6	6.7	6.5	7.1	7.3	4.3	9.5	9.8	2.1	8.0	8.2
Cycle Q Clear(g_c), s	2.5	6.6	6.7	6.5	7.1	7.3	4.3	9.5	9.8	2.1	8.0	8.2
Prop In Lane	1.00		0.24	1.00		0.42	1.00		0.67	1.00		0.43
Lane Grp Cap(c), veh/h	144	310	311	235	399	388	176	425	395	132	380	368
V/C Ratio(X)	0.51	0.65	0.66	0.80	0.57	0.58	0.72	0.70	0.71	0.48	0.65	0.67
Avail Cap(c_a), veh/h	472	798	801	496	820	797	340	848	790	312	820	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	24.0	24.0	26.2	21.4	21.5	27.2	21.6	21.7	27.7	22.3	22.4
Incr Delay (d2), s/veh	1.0	0.9	0.9	2.4	0.5	0.5	2.0	2.1	2.4	1.0	1.9	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	2.6	2.7	2.5	2.6	2.6	1.7	3.6	3.5	0.8	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	24.8	24.9	28.7	21.9	22.0	29.2	23.6	24.0	28.7	24.2	24.5
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		481		642		702		557				
Approach Delay, s/veh		25.4		23.9		24.8		24.8				
Approach LOS		C		C		C		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	22.0	13.3	17.4	11.2	20.4	10.1	20.6				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	30.0	30.0	17.5	28.0	12.0	29.0	16.5	29.0				
Max Q Clear Time (g_c+1/4), s	11.8	11.8	8.5	8.7	6.3	10.2	4.5	9.3				
Green Ext Time (p_c), s	0.0	3.0	0.2	1.4	0.1	2.5	0.1	1.4				

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	850	60	70	480	40	80	130	240	10	130	70
Future Volume (veh/h)	50	850	60	70	480	40	80	130	240	10	130	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	895	60	74	505	17	84	137	66	11	137	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	117	1113	75	140	1218	534	148	494	225	34	273	225
Arrive On Green	0.07	0.33	0.33	0.08	0.35	0.35	0.08	0.21	0.21	0.02	0.15	0.15
Sat Flow, veh/h	1767	3346	224	1767	3526	1545	1767	2337	1063	1767	1856	1533
Grp Volume(v), veh/h	53	472	483	74	505	17	84	101	102	11	137	15
Grp Sat Flow(s),veh/h/ln	1767	1763	1807	1767	1763	1545	1767	1763	1637	1767	1856	1533
Q Serve(g_s), s	1.9	16.0	16.0	2.6	7.2	0.5	3.0	3.2	3.4	0.4	4.5	0.6
Cycle Q Clear(g_c), s	1.9	16.0	16.0	2.6	7.2	0.5	3.0	3.2	3.4	0.4	4.5	0.6
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	117	586	601	140	1218	534	148	372	346	34	273	225
V/C Ratio(X)	0.45	0.80	0.80	0.53	0.41	0.03	0.57	0.27	0.29	0.32	0.50	0.07
Avail Cap(c_a), veh/h	215	752	770	188	1449	635	188	1060	985	188	1116	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	20.0	20.0	29.1	16.4	14.2	29.0	21.7	21.8	31.8	25.8	24.1
Incr Delay (d2), s/veh	2.7	5.0	4.9	3.1	0.2	0.0	1.3	0.1	0.2	2.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.2	6.3	1.1	2.4	0.1	1.2	1.2	1.2	0.2	1.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	24.9	24.8	32.2	16.6	14.2	30.2	21.8	22.0	33.8	26.3	24.2
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1008			596			287			163	
Approach Delay, s/veh		25.3			18.5			24.3			26.6	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	16.2	9.3	29.7	6.3	20.4	10.2	28.8				
Change Period (Y+Rc), s	5.0	6.5	5.0	7.0	5.0	6.5	5.0	7.0				
Max Green Setting (Gmax), s	39.5	39.5	8.0	27.0	7.0	39.5	7.0	28.0				
Max Q Clear Time (g_c+1/4), s	15.0	6.5	3.9	9.2	2.4	5.4	4.6	18.0				
Green Ext Time (p_c), s	0.0	0.4	0.0	2.8	0.0	0.7	0.0	3.8				

### Intersection Summary

HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

### Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	500	100	220	700	370	120	1200	310	380	630	200
Future Volume (veh/h)	220	500	100	220	700	370	120	1200	310	380	630	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	232	526	56	232	737	253	126	1263	271	400	663	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	6	6	6	6	6	6
Cap, veh/h	219	1099	488	289	959	746	180	1707	659	394	2023	626
Arrive On Green	0.13	0.32	0.32	0.09	0.28	0.28	0.05	0.35	0.35	0.12	0.41	0.41
Sat Flow, veh/h	1739	3469	1540	3374	3469	2699	3346	4944	1528	3346	4944	1529
Grp Volume(v), veh/h	232	526	56	232	737	253	126	1263	271	400	663	98
Grp Sat Flow(s),veh/h/ln	1739	1735	1540	1687	1735	1349	1673	1648	1528	1673	1648	1529
Q Serve(g_s), s	15.0	14.5	3.1	8.0	23.2	8.9	4.4	26.7	14.6	14.0	10.9	4.8
Cycle Q Clear(g_c), s	15.0	14.5	3.1	8.0	23.2	8.9	4.4	26.7	14.6	14.0	10.9	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	1099	488	289	959	746	180	1707	659	394	2023	626
V/C Ratio(X)	1.06	0.48	0.11	0.80	0.77	0.34	0.70	0.74	0.41	1.02	0.33	0.16
Avail Cap(c_a), veh/h	219	1312	582	425	1312	1021	281	2078	774	394	2244	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	32.7	28.8	53.4	39.5	34.4	55.3	34.2	23.4	52.5	24.0	22.2
Incr Delay (d2), s/veh	77.0	0.1	0.0	3.9	1.9	0.3	4.9	1.2	0.5	49.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.8	1.1	3.5	9.7	2.8	1.9	10.1	5.0	8.3	4.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	129.0	32.9	28.9	57.3	41.5	34.6	60.2	35.5	23.9	101.9	24.1	22.4
LnGrp LOS	F	C	C	E	D	C	E	D	C	F	C	C
Approach Vol, veh/h		814			1222			1660			1161	
Approach Delay, s/veh		60.0			43.1			35.5			50.8	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	45.1	14.2	41.7	10.4	52.7	19.0	36.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	14.0	50.0	15.0	45.0	10.0	54.0	15.0	45.0				
Max Q Clear Time (g_c+1/3), s	11.0	28.7	10.0	16.5	6.4	12.9	17.0	25.2				
Green Ext Time (p_c), s	0.0	10.9	0.2	2.1	0.1	7.1	0.0	5.4				

Intersection Summary

HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	360	790	50	100	1090	90	90	450	160	130	320	120
Future Volume (veh/h)	360	790	50	100	1090	90	90	450	160	130	320	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	379	832	19	105	1147	31	95	474	64	137	337	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	343	1849	564	172	1595	493	121	771	337	156	839	367
Arrive On Green	0.10	0.37	0.37	0.05	0.32	0.32	0.07	0.22	0.22	0.09	0.24	0.24
Sat Flow, veh/h	3374	4985	1521	3374	4985	1540	1767	3526	1540	1767	3526	1541
Grp Volume(v), veh/h	379	832	19	105	1147	31	95	474	64	137	337	32
Grp Sat Flow(s),veh/h/ln	1687	1662	1521	1687	1662	1540	1767	1763	1540	1767	1763	1541
Q Serve(g_s), s	7.5	9.3	0.6	2.2	15.0	1.0	3.9	8.9	2.5	5.6	5.9	1.2
Cycle Q Clear(g_c), s	7.5	9.3	0.6	2.2	15.0	1.0	3.9	8.9	2.5	5.6	5.9	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	1849	564	172	1595	493	121	771	337	156	839	367
V/C Ratio(X)	1.10	0.45	0.03	0.61	0.72	0.06	0.78	0.61	0.19	0.88	0.40	0.09
Avail Cap(c_a), veh/h	343	2333	712	183	2097	648	204	1913	836	156	1818	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	17.5	14.8	34.3	22.1	17.4	33.8	26.0	23.5	33.2	23.7	21.8
Incr Delay (d2), s/veh	79.5	0.2	0.0	4.6	0.8	0.1	4.1	0.6	0.2	38.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	3.1	0.2	1.0	5.3	0.3	1.7	3.5	0.8	3.9	2.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.6	17.7	14.8	38.8	23.0	17.4	37.9	26.6	23.7	71.5	23.9	21.9
LnGrp LOS	F	B	B	D	C	B	D	C	C	E	C	C
Approach Vol, veh/h		1230			1283			633			506	
Approach Delay, s/veh		46.9			24.1			28.0			36.7	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	32.8	9.6	23.0	12.0	29.1	11.0	21.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	34.5	8.5	38.0	7.5	31.0	6.5	40.0				
Max Q Clear Time (g_c+1/2), s	11.2	11.3	5.9	7.9	9.5	17.0	7.6	10.9				
Green Ext Time (p_c), s	0.0	5.6	0.0	1.7	0.0	6.4	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	40	1140	80	80	1190	60	90	200	170	70	190	30
Future Volume (veh/h)	40	1140	80	80	1190	60	90	200	170	70	190	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1200	78	84	1253	59	95	211	40	74	200	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	73	1767	115	110	1909	90	121	311	257	105	559	243
Arrive On Green	0.04	0.37	0.37	0.06	0.39	0.39	0.07	0.17	0.17	0.06	0.16	0.16
Sat Flow, veh/h	1739	4772	310	1739	4877	230	1767	1856	1536	1767	3526	1535
Grp Volume(v), veh/h	42	835	443	84	854	458	95	211	40	74	200	32
Grp Sat Flow(s),veh/h/ln	1739	1662	1759	1739	1662	1784	1767	1856	1536	1767	1763	1535
Q Serve(g_s), s	1.4	12.5	12.5	2.8	12.4	12.4	3.1	6.3	1.3	2.4	3.0	1.1
Cycle Q Clear(g_c), s	1.4	12.5	12.5	2.8	12.4	12.4	3.1	6.3	1.3	2.4	3.0	1.1
Prop In Lane	1.00		0.18	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	1230	651	110	1301	698	121	311	257	105	559	243
V/C Ratio(X)	0.57	0.68	0.68	0.76	0.66	0.66	0.78	0.68	0.16	0.70	0.36	0.13
Avail Cap(c_a), veh/h	147	1533	812	174	1584	850	177	1168	966	294	2452	1067
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	15.6	15.6	27.2	14.7	14.7	27.0	23.0	21.0	27.2	22.1	21.3
Incr Delay (d2), s/veh	2.6	1.0	1.9	4.0	0.8	1.6	7.4	1.0	0.1	3.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.9	4.3	1.2	3.8	4.2	1.5	2.6	0.4	1.0	1.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	16.6	17.5	31.2	15.5	16.2	34.5	24.0	21.1	30.4	22.3	21.4
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h	1320				1396		346				306	
Approach Delay, s/veh	17.4				16.7		26.5				24.1	
Approach LOS	B				B		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	28.6	8.5	14.9	8.2	27.3	8.0	15.4				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	28.1	5.9	41.0	5.9	27.2	9.8	37.1				
Max Q Clear Time (g_c+1), s	13.4	14.4	5.1	5.0	4.8	14.5	4.4	8.3				
Green Ext Time (p_c), s	0.0	7.7	0.0	0.9	0.0	7.2	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	170	1010	140	300	1110	380	150	440	560	270	300	90
Future Volume (veh/h)	170	1010	140	300	1110	380	150	440	560	270	300	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	179	1063	49	316	1168	195	158	463	384	284	316	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	4	4	4	4	4	4
Cap, veh/h	237	1719	531	372	1336	593	216	1297	400	341	1483	458
Arrive On Green	0.07	0.34	0.34	0.11	0.38	0.38	0.06	0.26	0.26	0.10	0.30	0.30
Sat Flow, veh/h	3374	4985	1541	3374	3469	1541	3401	5025	1551	3401	5025	1552
Grp Volume(v), veh/h	179	1063	49	316	1168	195	158	463	384	284	316	29
Grp Sat Flow(s),veh/h/ln	1687	1662	1541	1687	1735	1541	1700	1675	1551	1700	1675	1552
Q Serve(g_s), s	5.7	19.5	2.4	10.1	34.3	9.8	5.0	8.3	26.9	9.0	5.2	1.5
Cycle Q Clear(g_c), s	5.7	19.5	2.4	10.1	34.3	9.8	5.0	8.3	26.9	9.0	5.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	1719	531	372	1336	593	216	1297	400	341	1483	458
V/C Ratio(X)	0.76	0.62	0.09	0.85	0.87	0.33	0.73	0.36	0.96	0.83	0.21	0.06
Avail Cap(c_a), veh/h	414	1719	531	414	1336	593	417	1297	400	510	1483	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	30.0	24.4	48.0	31.4	23.8	50.6	33.3	40.2	48.6	29.2	27.8
Incr Delay (d2), s/veh	1.8	1.6	0.3	12.1	7.6	1.4	1.8	0.1	34.1	4.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.7	0.9	4.7	14.8	3.6	2.1	3.3	13.5	3.9	2.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	31.6	24.7	60.1	39.0	25.2	52.4	33.4	74.4	53.1	29.2	27.9
LnGrp LOS	D	C	C	E	D	C	D	C	E	D	C	C
Approach Vol, veh/h		1291			1679			1005			629	
Approach Delay, s/veh		34.2			41.4			52.0			39.9	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	43.8	11.5	38.1	12.2	48.2	15.5	34.0				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	13.5	31.1	13.5	31.4	13.5	31.1	16.5	28.4				
Max Q Clear Time (g_c+1/2), s	11.0	21.5	7.0	7.2	7.7	36.3	11.0	28.9				
Green Ext Time (p_c), s	0.0	2.8	0.0	1.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1150	810	0	1250	690	0	0	0	210	0	680
Future Volume (veh/h)	0	1150	810	0	1250	690	0	0	0	210	0	680
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826				1826	1826	1826
Adj Flow Rate, veh/h	0	1198	502	0	1302	719				219	0	628
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	5	5				5	5	5
Cap, veh/h	0	2964	918	0	2964	1203				645	0	574
Arrive On Green	0.00	0.59	0.59	0.00	1.00	1.00				0.19	0.00	0.19
Sat Flow, veh/h	0	5149	1543	0	5149	1541				3478	0	3095
Grp Volume(v), veh/h	0	1198	502	0	1302	719				219	0	628
Grp Sat Flow(s),veh/h/ln	0	1662	1543	0	1662	1541				1739	0	1547
Q Serve(g_s), s	0.0	7.1	10.7	0.0	0.0	0.0				3.0	0.0	10.2
Cycle Q Clear(g_c), s	0.0	7.1	10.7	0.0	0.0	0.0				3.0	0.0	10.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2964	918	0	2964	1203				645	0	574
V/C Ratio(X)	0.00	0.40	0.55	0.00	0.44	0.60				0.34	0.00	1.09
Avail Cap(c_a), veh/h	0	2964	918	0	2964	1203				645	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.77	0.77				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	6.7	0.0	0.0	0.0				19.5	0.0	22.4
Incr Delay (d2), s/veh	0.0	0.4	2.3	0.0	0.4	1.7				0.1	0.0	65.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	2.5	0.0	0.1	0.6				1.1	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.4	9.0	0.0	0.4	1.7				19.6	0.0	88.2
LnGrp LOS	A	A	A	A	A	A				B	A	F
Approach Vol, veh/h		1700			2021						847	
Approach Delay, s/veh		7.2			0.8						70.5	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		39.0		16.0		39.0						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		32.7		10.2		32.7						
Max Q Clear Time (g_c+I1), s		12.7		12.2		2.0						
Green Ext Time (p_c), s		6.4		0.0		8.8						

### Intersection Summary

HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗	↖	↖	↗			
Traffic Volume (veh/h)	0	820	540	0	1160	310	780	10	540	0	0	0
Future Volume (veh/h)	0	820	540	0	1160	310	780	10	540	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	0	854	562	0	1208	157	819	0	434			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	5	5	0	5	5	5	5	5			
Cap, veh/h	0	2521	1203	0	2521	780	954	0	849			
Arrive On Green	0.00	1.00	1.00	0.00	0.51	0.51	0.27	0.00	0.27			
Sat Flow, veh/h	0	5149	1540	0	5149	1543	3478	0	3095			
Grp Volume(v), veh/h	0	854	562	0	1208	157	819	0	434			
Grp Sat Flow(s),veh/h/ln	0	1662	1540	0	1662	1543	1739	0	1547			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.7	3.1	12.3	0.0	6.5			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.7	3.1	12.3	0.0	6.5			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2521	1203	0	2521	780	954	0	849			
V/C Ratio(X)	0.00	0.34	0.47	0.00	0.48	0.20	0.86	0.00	0.51			
Avail Cap(c_a), veh/h	0	2521	1203	0	2521	780	1024	0	912			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.92	0.92	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	8.9	7.5	18.9	0.0	16.8			
Incr Delay (d2), s/veh	0.0	0.3	1.2	0.0	0.7	0.6	6.6	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.4	0.0	2.3	0.8	5.3	0.0	2.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	1.2	0.0	9.5	8.1	25.5	0.0	17.0			
LnGrp LOS	A	A	A	A	A	A	C	A	B			
Approach Vol, veh/h		1416			1365			1253				
Approach Delay, s/veh		0.7			9.4			22.6				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		34.1				34.1		20.9				
Change Period (Y+Rc), s		6.3				6.3		5.8				
Max Green Setting (Gmax), s		26.7				26.7		16.2				
Max Q Clear Time (g_c+I1), s		2.0				10.7		14.3				
Green Ext Time (p_c), s		4.9				5.2		0.8				

Intersection Summary

HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	530	760	130	230	1090	140	350	880	330	70	650	560
Future Volume (veh/h)	530	760	130	230	1090	140	350	880	330	70	650	560
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	558	800	43	242	1147	36	368	926	129	74	684	374
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	3	3	3	6	6	6	6	6	6
Cap, veh/h	583	1622	501	300	1248	380	434	1712	529	170	1323	408
Arrive On Green	0.18	0.34	0.34	0.09	0.25	0.25	0.13	0.35	0.35	0.05	0.27	0.27
Sat Flow, veh/h	3237	4782	1478	3428	5066	1541	3346	4944	1528	3346	4944	1526
Grp Volume(v), veh/h	558	800	43	242	1147	36	368	926	129	74	684	374
Grp Sat Flow(s),veh/h/ln	1618	1594	1478	1714	1689	1541	1673	1648	1528	1673	1648	1526
Q Serve(g_s), s	21.8	16.9	2.5	8.8	28.2	2.3	13.7	19.2	7.7	2.7	15.0	30.4
Cycle Q Clear(g_c), s	21.8	16.9	2.5	8.8	28.2	2.3	13.7	19.2	7.7	2.7	15.0	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1622	501	300	1248	380	434	1712	529	170	1323	408
V/C Ratio(X)	0.96	0.49	0.09	0.81	0.92	0.09	0.85	0.54	0.24	0.43	0.52	0.92
Avail Cap(c_a), veh/h	583	1622	501	457	1270	386	839	2150	664	315	1375	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	33.5	28.7	57.2	46.9	37.1	54.3	33.6	29.8	58.8	39.7	45.4
Incr Delay (d2), s/veh	26.7	0.2	0.1	5.0	10.7	0.1	3.5	0.3	0.2	1.3	0.3	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	6.3	0.9	4.0	12.7	0.9	5.8	7.4	2.8	1.2	5.9	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.6	33.7	28.8	62.2	57.6	37.2	57.8	33.8	30.0	60.1	40.1	69.3
LnGrp LOS	E	C	C	E	E	D	E	C	C	E	D	E
Approach Vol, veh/h		1401			1425			1423			1132	
Approach Delay, s/veh		51.4			57.9			39.7			51.0	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	50.3	11.5	49.7	28.0	38.5	21.6	39.6				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	38.0	12.0	55.5	23.0	32.0	32.0	35.5					
Max Q Clear Time (g_c+fl), s	18.9	4.7	21.2	23.8	30.2	15.7	32.4					
Green Ext Time (p_c), s	0.3	4.9	0.1	7.1	0.0	1.2	0.8	1.7				

Intersection Summary

HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	220	70	210	210	100	50	560	160	60	510	50
Future Volume (veh/h)	140	220	70	210	210	100	50	560	160	60	510	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	147	232	13	221	221	23	53	589	77	63	537	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	175	290	240	250	377	317	68	2314	707	81	2350	710
Arrive On Green	0.10	0.16	0.16	0.14	0.20	0.20	0.04	0.46	0.46	0.05	0.47	0.47
Sat Flow, veh/h	1781	1870	1547	1781	1870	1573	1753	5025	1535	1753	5025	1518
Grp Volume(v), veh/h	147	232	13	221	221	23	53	589	77	63	537	24
Grp Sat Flow(s),veh/h/ln	1781	1870	1547	1781	1870	1573	1753	1675	1535	1753	1675	1518
Q Serve(g_s), s	8.9	13.2	0.8	13.4	11.8	1.3	3.3	7.9	3.1	3.9	7.0	0.9
Cycle Q Clear(g_c), s	8.9	13.2	0.8	13.4	11.8	1.3	3.3	7.9	3.1	3.9	7.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	290	240	250	377	317	68	2314	707	81	2350	710
V/C Ratio(X)	0.84	0.80	0.05	0.88	0.59	0.07	0.78	0.25	0.11	0.78	0.23	0.03
Avail Cap(c_a), veh/h	356	471	389	429	561	472	183	2314	707	151	2350	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	44.8	39.6	46.4	39.8	35.6	52.4	18.1	16.9	51.9	17.4	15.8
Incr Delay (d2), s/veh	4.0	1.9	0.0	5.4	0.5	0.0	7.1	0.3	0.3	6.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.1	0.3	6.1	5.3	0.5	1.5	2.9	1.1	1.8	2.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	46.7	39.6	51.8	40.3	35.6	59.5	18.4	17.2	58.0	17.7	15.9
LnGrp LOS	D	D	D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		392			465			719			624	
Approach Delay, s/veh		48.8			45.5			21.3			21.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	58.1	19.9	22.4	8.8	58.9	14.8	27.5				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	9.5	* 25	26.5	27.7	11.5	22.5	22.0	* 33				
Max Q Clear Time (g_c+1/3), s	11.9	9.9	15.4	15.2	5.3	9.0	10.9	13.8				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.1	0.0	1.9	0.0	0.1				

### Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

### Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	50	250	20	30	20	300	520	10	20	580	470
Future Volume (veh/h)	370	50	250	20	30	20	300	520	10	20	580	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	389	53	92	21	32	2	316	547	6	21	611	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	442	528	445	41	108	89	360	2231	670	41	917	401
Arrive On Green	0.25	0.28	0.28	0.02	0.06	0.06	0.21	0.44	0.44	0.02	0.26	0.26
Sat Flow, veh/h	1767	1856	1564	1767	1856	1535	1753	5025	1509	1753	3497	1530
Grp Volume(v), veh/h	389	53	92	21	32	2	316	547	6	21	611	136
Grp Sat Flow(s),veh/h/ln	1767	1856	1564	1767	1856	1535	1753	1675	1509	1753	1749	1530
Q Serve(g_s), s	17.0	1.7	3.6	0.9	1.3	0.1	14.0	5.4	0.2	0.9	12.5	5.8
Cycle Q Clear(g_c), s	17.0	1.7	3.6	0.9	1.3	0.1	14.0	5.4	0.2	0.9	12.5	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	528	445	41	108	89	360	2231	670	41	917	401
V/C Ratio(X)	0.88	0.10	0.21	0.51	0.30	0.02	0.88	0.25	0.01	0.51	0.67	0.34
Avail Cap(c_a), veh/h	805	1401	1181	342	915	756	470	2979	894	186	1506	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	21.1	21.8	38.7	36.2	35.6	30.9	13.9	12.4	38.7	26.4	23.9
Incr Delay (d2), s/veh	5.9	0.1	0.2	9.4	1.5	0.1	14.0	0.1	0.0	9.6	0.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.7	1.3	0.5	0.6	0.0	6.8	1.8	0.1	0.5	4.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	21.2	22.0	48.1	37.7	35.7	44.9	14.0	12.4	48.3	27.3	24.4
LnGrp LOS	C	C	C	D	D	D	D	B	B	D	C	C
Approach Vol, veh/h		534			55			869			768	
Approach Delay, s/veh		31.2			41.6			25.2			27.3	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	40.1	6.4	27.3	20.9	25.5	24.5	9.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	3.5	47.5	15.5	60.5	21.5	34.5	36.5	39.5				
Max Q Clear Time (g_c+1), s	12.5	7.4	2.9	5.6	16.0	14.5	19.0	3.3				
Green Ext Time (p_c), s	0.0	3.6	0.0	0.6	0.4	4.0	1.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	260	200	300	300	60	240	610	250	50	600	120
Future Volume (veh/h)	270	260	200	300	300	60	240	610	250	50	600	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	284	274	33	316	316	10	253	642	130	53	632	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	321	441	192	353	484	213	287	1944	593	71	778	140
Arrive On Green	0.18	0.13	0.13	0.20	0.14	0.14	0.17	0.39	0.39	0.04	0.27	0.27
Sat Flow, veh/h	1767	3526	1530	1767	3526	1549	1725	4944	1509	1725	2903	523
Grp Volume(v), veh/h	284	274	33	316	316	10	253	642	130	53	374	372
Grp Sat Flow(s),veh/h/ln	1767	1763	1530	1767	1763	1549	1725	1648	1509	1725	1721	1705
Q Serve(g_s), s	13.7	6.4	1.7	15.2	7.4	0.5	12.5	7.9	5.0	2.7	17.8	17.8
Cycle Q Clear(g_c), s	13.7	6.4	1.7	15.2	7.4	0.5	12.5	7.9	5.0	2.7	17.8	17.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	321	441	192	353	484	213	287	1944	593	71	461	457
V/C Ratio(X)	0.88	0.62	0.17	0.90	0.65	0.05	0.88	0.33	0.22	0.74	0.81	0.81
Avail Cap(c_a), veh/h	678	1070	464	688	1070	470	346	2096	640	227	611	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	36.2	34.1	34.0	35.7	32.7	35.5	18.5	17.6	41.4	29.9	29.9
Incr Delay (d2), s/veh	3.2	1.4	0.4	3.3	1.5	0.1	17.6	0.1	0.2	5.5	6.1	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	2.7	0.6	6.4	3.1	0.2	6.3	2.7	1.6	1.2	7.5	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	37.6	34.6	37.3	37.2	32.8	53.1	18.6	17.8	46.9	36.0	36.3
LnGrp LOS	D	D	C	D	D	C	D	B	B	D	D	D
Approach Vol, veh/h		591			642			1025			799	
Approach Delay, s/veh		37.7			37.2			27.0			36.9	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.1	41.3	21.4	16.4	19.0	30.4	20.4	17.5				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	15.5	37.0	34.0	26.5	17.5	31.0	33.5	26.5				
Max Q Clear Time (g_c+1/4), s	14.5	9.9	17.2	8.4	14.5	19.8	15.7	9.4				
Green Ext Time (p_c), s	0.0	4.6	0.2	1.5	0.1	3.1	0.2	1.6				

Intersection Summary

HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	230	60	680	160	340	80	240	300	460	570	70
Future Volume (veh/h)	50	230	60	680	160	340	80	240	300	460	570	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	52	240	6	438	546	118	83	250	62	479	594	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	10	10	2	2	2	4	4	4	4	4	4
Cap, veh/h	163	325	143	632	664	553	107	510	222	584	811	89
Arrive On Green	0.10	0.10	0.10	0.35	0.35	0.35	0.06	0.15	0.15	0.17	0.26	0.26
Sat Flow, veh/h	1668	3328	1460	1781	1870	1557	1753	3497	1521	3401	3168	346
Grp Volume(v), veh/h	52	240	6	438	546	118	83	250	62	479	327	332
Grp Sat Flow(s),veh/h/ln	1668	1664	1460	1781	1870	1557	1753	1749	1521	1700	1749	1765
Q Serve(g_s), s	2.3	5.5	0.3	16.5	20.8	4.1	3.7	5.1	2.8	10.6	13.4	13.5
Cycle Q Clear(g_c), s	2.3	5.5	0.3	16.5	20.8	4.1	3.7	5.1	2.8	10.6	13.4	13.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	163	325	143	632	664	553	107	510	222	584	448	452
V/C Ratio(X)	0.32	0.74	0.04	0.69	0.82	0.21	0.77	0.49	0.28	0.82	0.73	0.73
Avail Cap(c_a), veh/h	181	362	159	820	861	717	280	1341	583	761	782	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	34.3	32.0	21.6	23.0	17.6	36.2	30.7	29.8	31.2	26.6	26.7
Incr Delay (d2), s/veh	1.1	7.0	0.1	1.7	5.0	0.2	11.2	0.7	0.7	5.5	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.4	0.1	6.6	9.3	1.4	1.8	2.0	1.0	4.4	5.3	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	41.3	32.1	23.3	28.0	17.8	47.4	31.5	30.4	36.8	28.9	29.0
LnGrp LOS	C	D	C	C	C	B	D	C	C	D	C	C
Approach Vol, veh/h		298			1102			395			1138	
Approach Delay, s/veh		39.8			25.1			34.7			32.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	15.9		12.1	9.3	24.5		32.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5	30.0		8.5	12.5	35.0		36.0				
Max Q Clear Time (g_c+1/2g), s	12.6	7.1		7.5	5.7	15.5		22.8				
Green Ext Time (p_c), s	0.8	1.5		0.2	0.1	3.4		4.5				

### Intersection Summary

HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↗	↑	↗	↗	↕↕		↗	↕↕	↗
Traffic Volume (veh/h)	250	140	190	40	140	40	230	620	50	90	1090	400
Future Volume (veh/h)	250	140	190	40	140	40	230	620	50	90	1090	400
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	263	147	45	42	147	7	242	653	50	95	1147	220
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	341	369	311	65	253	207	279	1584	121	121	1372	753
Arrive On Green	0.10	0.20	0.20	0.04	0.14	0.14	0.16	0.49	0.49	0.07	0.40	0.40
Sat Flow, veh/h	3456	1870	1573	1781	1870	1527	1725	3232	247	1725	3441	1509
Grp Volume(v), veh/h	263	147	45	42	147	7	242	347	356	95	1147	220
Grp Sat Flow(s),veh/h/ln	1728	1870	1573	1781	1870	1527	1725	1721	1759	1725	1721	1509
Q Serve(g_s), s	6.5	6.0	2.1	2.0	6.5	0.3	12.0	11.3	11.3	4.7	26.3	7.5
Cycle Q Clear(g_c), s	6.5	6.0	2.1	2.0	6.5	0.3	12.0	11.3	11.3	4.7	26.3	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	341	369	311	65	253	207	279	843	862	121	1372	753
V/C Ratio(X)	0.77	0.40	0.14	0.65	0.58	0.03	0.87	0.41	0.41	0.78	0.84	0.29
Avail Cap(c_a), veh/h	395	788	663	144	726	593	337	875	894	266	1608	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	30.6	29.0	41.6	35.5	32.9	35.8	14.3	14.3	40.0	23.7	12.9
Incr Delay (d2), s/veh	7.9	0.7	0.2	10.2	2.1	0.1	18.2	0.3	0.3	10.4	3.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.7	0.8	1.1	3.0	0.1	6.1	3.9	4.0	2.3	10.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	31.3	29.2	51.8	37.6	32.9	54.0	14.6	14.6	50.5	27.2	13.2
LnGrp LOS	D	C	C	D	D	C	D	B	B	D	C	B
Approach Vol, veh/h		455			196			945			1462	
Approach Delay, s/veh		39.8			40.5			24.7			26.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	39.4	7.7	21.8	10.7	47.4	13.1	16.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	40.9	7.1	36.9	13.5	44.5	10.0	34.0					
Max Q Clear Time (g_c+1/4), s	28.3	4.0	8.0	6.7	13.3	8.5	8.5					
Green Ext Time (p_c), s	0.2	6.6	0.0	0.9	0.1	4.2	0.1	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											28.9	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	890	280	50	1560	0	0	0	0	590	0	240
Future Volume (veh/h)	0	890	280	50	1560	0	0	0	0	590	0	240
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1707	1707	1707	0				1707	1707	1707
Adj Flow Rate, veh/h	0	937	200	53	1642	0				621	0	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	13	13	13	13	0				13	13	13
Cap, veh/h	0	2865	878	109	3209	0				701	0	312
Arrive On Green	0.00	0.61	0.61	0.03	0.69	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	4815	1428	3155	4815	0				3252	0	1447
Grp Volume(v), veh/h	0	937	200	53	1642	0				621	0	202
Grp Sat Flow(s),veh/h/ln	0	1554	1428	1577	1554	0				1626	0	1447
Q Serve(g_s), s	0.0	11.6	7.5	2.0	20.3	0.0				22.2	0.0	15.3
Cycle Q Clear(g_c), s	0.0	11.6	7.5	2.0	20.3	0.0				22.2	0.0	15.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2865	878	109	3209	0				701	0	312
V/C Ratio(X)	0.00	0.33	0.23	0.49	0.51	0.00				0.89	0.00	0.65
Avail Cap(c_a), veh/h	0	2865	878	166	3209	0				1341	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.1	10.4	56.9	9.0	0.0				45.6	0.0	42.9
Incr Delay (d2), s/veh	0.0	0.3	0.6	1.2	0.6	0.0				1.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.7	2.3	0.8	5.9	0.0				9.1	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.5	11.0	58.1	9.6	0.0				47.2	0.0	43.7
LnGrp LOS		A	B	B	E	A				D	A	D
Approach Vol, veh/h		1137		1695						823		
Approach Delay, s/veh		11.4		11.1						46.3		
Approach LOS		B		B						D		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	8.8	79.8		31.4		88.6						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	6.3	48.0		49.5		59.0						
Max Q Clear Time (g_c+I), s	14.0	13.6		24.2		22.3						
Green Ext Time (p_c), s	0.0	8.0		1.7		15.5						

Intersection Summary

HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗		↑↑↑		↖	↖	↗	↖		↗
Traffic Volume (veh/h)	220	1100	160	0	1390	40	420	110	50	40	0	650
Future Volume (veh/h)	220	1100	160	0	1390	40	420	110	50	40	0	650
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	0	1707	1707	1707	1707	1707	1856	0	1856
Adj Flow Rate, veh/h	232	1158	0	0	1463	41	279	344	13	42	0	269
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	0	13	13	13	13	13	3	0	3
Cap, veh/h	180	3087		0	3029	85	393	413	348	0	0	0
Arrive On Green	0.11	0.66	0.00	0.00	0.51	0.51	0.24	0.24	0.24	0.00	0.00	0.00
Sat Flow, veh/h	1626	4661	2547	0	6153	166	1626	1707	1438		0	
Grp Volume(v), veh/h	232	1158	0	0	1089	415	279	344	13		0.0	
Grp Sat Flow(s),veh/h/ln	1626	1554	1273	0	1468	1674	1626	1707	1438			
Q Serve(g_s), s	13.3	13.4	0.0	0.0	19.2	19.3	18.8	23.0	0.8			
Cycle Q Clear(g_c), s	13.3	13.4	0.0	0.0	19.2	19.3	18.8	23.0	0.8			
Prop In Lane	1.00		1.00	0.00		0.10	1.00		1.00			
Lane Grp Cap(c), veh/h	180	3087		0	2257	858	393	413	348			
V/C Ratio(X)	1.29	0.38		0.00	0.48	0.48	0.71	0.83	0.04			
Avail Cap(c_a), veh/h	180	3087		0	2257	858	556	583	491			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	53.4	9.1	0.0	0.0	19.0	19.0	41.6	43.2	34.8			
Incr Delay (d2), s/veh	164.5	0.3	0.0	0.0	0.7	1.9	2.4	7.1	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.5	4.0	0.0	0.0	6.5	7.7	7.8	10.5	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	217.8	9.5	0.0	0.0	19.7	20.9	44.0	50.3	34.8			
LnGrp LOS	F	A		A	B	C	D	D	C			
Approach Vol, veh/h		1390	A		1504			636				
Approach Delay, s/veh		44.2			20.0			47.2				
Approach LOS		D			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		85.5			18.0	67.5		34.5				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		52.5			* 13	34.5		41.0				
Max Q Clear Time (g_c+I1), s		15.4			15.3	21.3		25.0				
Green Ext Time (p_c), s		5.8			0.0	6.0		3.0				

Intersection Summary

HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	970	50	60	1180	60	50	340	80	30	370	80
Future Volume (veh/h)	70	970	50	60	1180	60	50	340	80	30	370	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	74	1021	27	63	1242	27	53	358	20	32	389	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	121	1390	1221	112	1373	602	111	652	284	79	592	258
Arrive On Green	0.07	0.43	0.43	0.07	0.42	0.42	0.06	0.19	0.19	0.05	0.17	0.17
Sat Flow, veh/h	1626	3244	2477	1626	3244	1423	1767	3441	1501	1725	3441	1499
Grp Volume(v), veh/h	74	1021	27	63	1242	27	53	358	20	32	389	18
Grp Sat Flow(s),veh/h/ln	1626	1622	1238	1626	1622	1423	1767	1721	1501	1725	1721	1499
Q Serve(g_s), s	3.2	19.3	0.4	2.8	26.3	0.8	2.1	6.9	0.8	1.3	7.8	0.7
Cycle Q Clear(g_c), s	3.2	19.3	0.4	2.8	26.3	0.8	2.1	6.9	0.8	1.3	7.8	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	1390	1221	112	1373	602	111	652	284	79	592	258
V/C Ratio(X)	0.61	0.73	0.02	0.56	0.90	0.04	0.48	0.55	0.07	0.41	0.66	0.07
Avail Cap(c_a), veh/h	199	1512	1314	243	1600	702	408	1449	632	211	1075	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	17.5	9.6	33.2	19.8	12.5	33.3	27.0	24.5	34.2	28.4	25.5
Incr Delay (d2), s/veh	1.9	1.7	0.0	1.6	6.4	0.0	1.2	0.7	0.1	1.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.4	0.1	1.1	9.5	0.2	0.9	2.7	0.3	0.5	3.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	19.3	9.6	34.8	26.2	12.5	34.5	27.7	24.6	35.4	29.6	25.6
LnGrp LOS	C	B	A	C	C	B	C	C	C	D	C	C
Approach Vol, veh/h		1122			1332			431			439	
Approach Delay, s/veh		20.1			26.4			28.4			29.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	19.9	9.1	37.2	8.6	18.7	9.5	36.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	31.0	31.0	11.0	34.3	17.0	23.0	9.0	36.3				
Max Q Clear Time (g_c+1), s	13.3	8.9	4.8	21.3	4.1	9.8	5.2	28.3				
Green Ext Time (p_c), s	0.0	2.0	0.0	5.4	0.0	1.8	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙ ↑↑↑ ↘			↙ ↘ ↑↑↑ ↘			↙ ↑↑↑ ↘		↙	↙	↑↑↑ ↘	
Traffic Volume (veh/h)	90	860	40	260	1260	120	70	730	360	110	760	130
Future Volume (veh/h)	90	860	40	260	1260	120	70	730	360	110	760	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No			
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	95	905	37	274	1326	114	74	768	172	116	800	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	126	1433	58	346	1504	129	125	1197	364	145	1262	384
Arrive On Green	0.08	0.31	0.31	0.11	0.34	0.34	0.07	0.24	0.24	0.08	0.26	0.26
Sat Flow, veh/h	1626	4590	187	3155	4364	375	1767	4944	1504	1725	4944	1505
Grp Volume(v), veh/h	95	612	330	274	944	496	74	768	172	116	800	40
Grp Sat Flow(s),veh/h/ln	1626	1554	1670	1577	1554	1632	1767	1648	1504	1725	1648	1505
Q Serve(g_s), s	4.5	13.4	13.4	6.7	22.7	22.7	3.2	11.1	7.8	5.2	11.4	1.6
Cycle Q Clear(g_c), s	4.5	13.4	13.4	6.7	22.7	22.7	3.2	11.1	7.8	5.2	11.4	1.6
Prop In Lane	1.00		0.11	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	970	521	346	1071	563	125	1197	364	145	1262	384
V/C Ratio(X)	0.76	0.63	0.63	0.79	0.88	0.88	0.59	0.64	0.47	0.80	0.63	0.10
Avail Cap(c_a), veh/h	205	1017	547	477	1095	575	156	1556	474	152	1556	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	23.4	23.4	34.5	24.5	24.5	35.8	27.0	25.8	35.7	26.3	22.6
Incr Delay (d2), s/veh	3.4	1.3	2.5	4.1	8.7	15.0	1.6	0.8	1.3	22.3	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.6	5.1	2.6	8.7	10.1	1.4	4.1	2.7	3.0	4.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	24.7	25.9	38.6	33.2	39.5	37.4	27.8	27.1	58.0	27.0	22.8
LnGrp LOS	D	C	C	D	C	D	D	C	C	E	C	C
Approach Vol, veh/h	1037			1714			1014		956			
Approach Delay, s/veh	26.5			35.8			28.4		30.6			
Approach LOS	C			D			C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	25.2	12.7	30.8	9.6	26.3	10.1	33.4				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	25.0	12.0	26.0	7.0	25.0	10.0	28.0					
Max Q Clear Time (g_c+1/2), s	13.1	8.7	15.4	5.2	13.4	6.5	24.7					
Green Ext Time (p_c), s	0.0	5.5	0.0	5.0	0.0	4.8	0.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	170	1030	30	30	1250	120	50	200	90	120	110	160
Future Volume (veh/h)	170	1030	30	30	1250	120	50	200	90	120	110	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	179	1084	30	32	1316	115	53	211	20	126	116	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	2	2	2
Cap, veh/h	213	2047	57	73	1541	135	109	319	264	158	373	309
Arrive On Green	0.13	0.44	0.44	0.04	0.35	0.35	0.06	0.17	0.17	0.09	0.20	0.20
Sat Flow, veh/h	1626	4658	129	1626	4357	381	1767	1856	1536	1781	1870	1551
Grp Volume(v), veh/h	179	723	391	32	938	493	53	211	20	126	116	42
Grp Sat Flow(s),veh/h/ln	1626	1554	1680	1626	1554	1631	1767	1856	1536	1781	1870	1551
Q Serve(g_s), s	8.3	13.1	13.2	1.5	21.6	21.6	2.2	8.2	0.8	5.4	4.1	1.7
Cycle Q Clear(g_c), s	8.3	13.1	13.2	1.5	21.6	21.6	2.2	8.2	0.8	5.4	4.1	1.7
Prop In Lane	1.00		0.08	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	1366	738	73	1099	577	109	319	264	158	373	309
V/C Ratio(X)	0.84	0.53	0.53	0.44	0.85	0.85	0.49	0.66	0.08	0.80	0.31	0.14
Avail Cap(c_a), veh/h	273	1366	738	210	1165	612	160	631	522	161	636	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	15.8	15.8	36.0	23.1	23.1	35.1	29.9	26.9	34.5	26.4	25.5
Incr Delay (d2), s/veh	13.8	0.4	0.7	1.5	6.1	10.9	1.3	3.7	0.2	21.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	4.1	4.5	0.6	7.9	9.0	1.0	3.8	0.3	3.1	1.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	16.2	16.6	37.5	29.2	34.1	36.4	33.6	27.1	56.0	26.9	25.7
LnGrp LOS	D	B	B	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h	1293				1463		284				284	
Approach Delay, s/veh	20.5				31.0		33.7				39.7	
Approach LOS	C				C		C				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	19.0	7.5	40.0	8.8	21.1	14.1	33.4				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	26.3	10.0	32.0	7.0	26.3	13.0	29.0					
Max Q Clear Time (g_c+17), s	10.2	3.5	15.2	4.2	6.1	10.3	23.6					
Green Ext Time (p_c), s	0.0	1.6	0.0	6.6	0.0	0.6	0.0	3.7				

Intersection Summary

HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	690	210	290	1100	380	250	1260	180	500	1230	170
Future Volume (veh/h)	70	690	210	290	1100	380	250	1260	180	500	1230	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	74	726	182	305	1158	137	263	1326	172	526	1295	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	91	1040	251	211	1368	417	202	1432	185	363	1200	526
Arrive On Green	0.06	0.22	0.22	0.13	0.29	0.29	0.12	0.26	0.26	0.22	0.36	0.36
Sat Flow, veh/h	1626	4734	1144	1626	4661	1420	1668	5427	701	1668	3328	1459
Grp Volume(v), veh/h	74	674	234	305	1158	137	263	1103	395	526	1295	93
Grp Sat Flow(s),veh/h/ln	1626	1468	1473	1626	1554	1420	1668	1507	1609	1668	1664	1459
Q Serve(g_s), s	6.1	19.0	19.9	17.5	31.4	10.2	16.3	32.0	32.2	29.3	48.5	5.9
Cycle Q Clear(g_c), s	6.1	19.0	19.9	17.5	31.4	10.2	16.3	32.0	32.2	29.3	48.5	5.9
Prop In Lane	1.00		0.78	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	91	968	324	211	1368	417	202	1192	425	363	1200	526
V/C Ratio(X)	0.81	0.70	0.72	1.44	0.85	0.33	1.30	0.93	0.93	1.45	1.08	0.18
Avail Cap(c_a), veh/h	121	1309	438	211	1645	501	202	1192	425	363	1200	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	48.4	48.7	58.5	44.7	37.2	59.1	48.2	48.3	52.6	43.0	29.4
Incr Delay (d2), s/veh	25.3	1.0	3.8	223.8	3.7	0.5	166.9	12.2	26.9	216.5	50.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	6.9	7.5	20.2	12.2	3.5	16.0	12.8	15.5	33.6	27.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.1	49.4	52.6	282.3	48.4	37.6	226.0	60.4	75.2	269.2	93.3	29.6
LnGrp LOS	F	D	D	F	D	D	F	E	E	F	F	C
Approach Vol, veh/h		982		1600		1761		1914				
Approach Delay, s/veh		53.0		92.0		88.5		138.6				
Approach LOS		D		F		F		F				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	42.0	22.0	36.6	21.0	55.0	12.1	46.5				
Change Period (Y+Rc), s	4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	29.5	35.5	17.5	40.0	* 16	48.5	10.0	47.5				
Max Q Clear Time (g_c+Bl), s	34.2	34.2	19.5	21.9	18.3	50.5	8.1	33.4				
Green Ext Time (p_c), s	0.0	1.0	0.0	5.5	0.0	0.0	0.0	6.0				

Intersection Summary

HCM 6th Ctrl Delay	99.1
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
54: Grove Ave & Edison Ave/Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑			↖ ↑↑↑			↖ ↑↑			↖ ↑↑		
Traffic Volume (veh/h)	210	1200	140	190	1440	60	160	510	80	130	390	120
Future Volume (veh/h)	210	1200	140	190	1440	60	160	510	80	130	390	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	214	1224	122	194	1469	56	163	520	69	133	398	89
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	251	1758	174	231	1809	69	201	661	87	167	552	122
Arrive On Green	0.15	0.32	0.32	0.14	0.31	0.31	0.11	0.21	0.21	0.09	0.19	0.19
Sat Flow, veh/h	1626	5472	543	1626	5849	223	1767	3130	414	1767	2869	635
Grp Volume(v), veh/h	214	984	362	194	1106	419	163	292	297	133	243	244
Grp Sat Flow(s),veh/h/ln	1626	1468	1610	1626	1468	1667	1767	1763	1781	1767	1763	1741
Q Serve(g_s), s	10.0	15.2	15.3	9.1	18.1	18.1	7.0	12.2	12.3	5.7	10.1	10.3
Cycle Q Clear(g_c), s	10.0	15.2	15.3	9.1	18.1	18.1	7.0	12.2	12.3	5.7	10.1	10.3
Prop In Lane	1.00		0.34	1.00		0.13	1.00		0.23	1.00		0.36
Lane Grp Cap(c), veh/h	251	1415	517	231	1362	516	201	372	376	167	339	335
V/C Ratio(X)	0.85	0.70	0.70	0.84	0.81	0.81	0.81	0.78	0.79	0.80	0.72	0.73
Avail Cap(c_a), veh/h	302	1415	517	317	1440	545	260	495	500	229	463	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	23.1	23.2	32.6	24.9	24.9	33.8	29.1	29.1	34.6	29.5	29.6
Incr Delay (d2), s/veh	17.8	1.5	4.2	13.4	3.5	8.8	13.8	5.9	6.1	12.7	3.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	5.2	6.1	4.3	6.4	8.0	3.7	5.6	5.7	3.0	4.4	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	24.6	27.3	46.0	28.3	33.6	47.6	35.0	35.2	47.3	32.9	33.3
LnGrp LOS	D	C	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1560			1719			752			620	
Approach Delay, s/veh		28.7			31.6			37.8			36.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.9	21.0	15.6	29.6	13.4	19.5	16.5	28.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.0	21.9	15.2	24.8	11.5	20.5	14.5	25.5				
Max Q Clear Time (g_c+1), s	10.0	14.3	11.1	17.3	9.0	12.3	12.0	20.1				
Green Ext Time (p_c), s	0.1	2.2	0.2	4.9	0.1	1.9	0.2	4.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											32.3	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕		↖	↑↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	10	10	10	560	40	350	10	1350	410	300	1210	40
Future Volume (veh/h)	10	10	10	560	40	350	10	1350	410	300	1210	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	11	0	461	221	291	11	1421	397	316	1274	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	37	37	64	501	204	268	41	1581	441	261	1559	677
Arrive On Green	0.04	0.04	0.00	0.30	0.30	0.30	0.02	0.34	0.34	0.16	0.47	0.47
Sat Flow, veh/h	905	905	1572	1668	678	893	1668	4696	1311	1668	3328	1445
Grp Volume(v), veh/h	22	0	0	461	0	512	11	1368	450	316	1274	21
Grp Sat Flow(s),veh/h/ln	1810	0	1572	1668	0	1571	1668	1507	1488	1668	1664	1445
Q Serve(g_s), s	1.7	0.0	0.0	38.1	0.0	42.8	0.9	41.0	41.0	22.3	47.0	1.1
Cycle Q Clear(g_c), s	1.7	0.0	0.0	38.1	0.0	42.8	0.9	41.0	41.0	22.3	47.0	1.1
Prop In Lane	0.50		1.00	1.00		0.57	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	74	0	64	501	0	472	41	1521	501	261	1559	677
V/C Ratio(X)	0.30	0.00	0.00	0.92	0.00	1.08	0.27	0.90	0.90	1.21	0.82	0.03
Avail Cap(c_a), veh/h	150	0	130	501	0	472	132	1570	517	261	1559	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	0.0	0.0	48.2	0.0	49.8	68.2	45.0	45.0	60.1	32.6	20.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	22.3	0.0	66.2	1.3	7.2	18.3	124.6	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	18.5	0.0	25.0	0.4	15.6	16.9	18.1	18.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.2	0.0	0.0	70.4	0.0	116.0	69.5	52.2	63.2	184.7	36.2	20.4
LnGrp LOS	E	A	A	E	A	F	E	D	E	F	D	C
Approach Vol, veh/h		22			973			1829			1611	
Approach Delay, s/veh		67.2			94.4			55.0			65.1	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	54.5		12.0	8.2	73.2		49.0				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	22	49.5		11.8	* 11	60.5		42.8				
Max Q Clear Time (g_c+24), s	24.3	43.0		3.7	2.9	49.0		44.8				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	6.1		0.0				

Intersection Summary

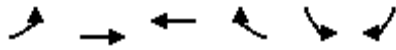
HCM 6th Ctrl Delay	67.4
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗		↖	↘	
Traffic Volume (veh/h)	40	740	730	270	220	300	
Future Volume (veh/h)	40	740	730	270	220	300	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1856	1856	
Adj Flow Rate, veh/h	42	779	768	205	232	75	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	10	10	10	10	3	3	
Cap, veh/h	80	2717	1020	272	312	278	
Arrive On Green	0.05	0.57	0.39	0.39	0.18	0.18	
Sat Flow, veh/h	1668	4940	2685	693	1767	1572	
Grp Volume(v), veh/h	42	779	492	481	232	75	
Grp Sat Flow(s),veh/h/ln	1668	1594	1664	1627	1767	1572	
Q Serve(g_s), s	0.9	3.0	9.0	9.0	4.4	1.5	
Cycle Q Clear(g_c), s	0.9	3.0	9.0	9.0	4.4	1.5	
Prop In Lane	1.00			0.43	1.00	1.00	
Lane Grp Cap(c), veh/h	80	2717	653	639	312	278	
V/C Ratio(X)	0.53	0.29	0.75	0.75	0.74	0.27	
Avail Cap(c_a), veh/h	241	3596	798	780	476	424	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.4	3.9	9.2	9.2	13.8	12.5	
Incr Delay (d2), s/veh	5.3	0.1	3.3	3.3	3.5	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.2	2.3	2.2	1.4	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	21.7	4.0	12.5	12.6	17.3	13.1	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		821	973		307		
Approach Delay, s/veh		4.9	12.5		16.2		
Approach LOS		A	B		B		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			24.5		10.7	6.2	18.3
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			26.5		9.5	5.1	16.9
Max Q Clear Time (g_c+1), s			5.0		6.4	2.9	11.0
Green Ext Time (p_c), s			5.0		0.2	0.0	2.8
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			10.1				
HCM 6th LOS			B				

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	320	40	90	60	10	350	340	1120	270	490	1090	550
Future Volume (veh/h)	320	40	90	60	10	350	340	1120	270	490	1090	550
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1618	1618	1618	1618	1618	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	337	42	17	63	11	75	358	1179	124	516	1147	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	19	19	19	19	19	19	10	10	10	10	10	10
Cap, veh/h	394	513	223	127	361	156	385	1664	630	590	1430	638
Arrive On Green	0.13	0.17	0.17	0.08	0.12	0.12	0.23	0.35	0.35	0.18	0.30	0.30
Sat Flow, veh/h	2990	3075	1339	1541	3075	1333	1668	4782	1459	3237	4782	1477
Grp Volume(v), veh/h	337	42	17	63	11	75	358	1179	124	516	1147	259
Grp Sat Flow(s),veh/h/ln	1495	1537	1339	1541	1537	1333	1668	1594	1459	1618	1594	1477
Q Serve(g_s), s	11.0	1.2	1.1	3.9	0.3	5.3	21.0	21.4	5.3	15.5	22.1	12.1
Cycle Q Clear(g_c), s	11.0	1.2	1.1	3.9	0.3	5.3	21.0	21.4	5.3	15.5	22.1	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	513	223	127	361	156	385	1664	630	590	1430	638
V/C Ratio(X)	0.85	0.08	0.08	0.50	0.03	0.48	0.93	0.71	0.20	0.88	0.80	0.41
Avail Cap(c_a), veh/h	457	1443	629	251	1474	639	405	1829	681	850	1925	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	35.2	35.2	43.9	39.1	41.3	37.7	28.3	17.8	39.8	32.4	19.7
Incr Delay (d2), s/veh	11.7	0.1	0.1	3.0	0.0	0.8	26.4	1.2	0.2	5.4	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.4	0.3	1.5	0.1	1.7	10.7	7.5	1.7	6.2	8.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	35.3	35.4	46.9	39.2	42.2	64.1	29.4	17.9	45.2	34.2	20.1
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	C	C
Approach Vol, veh/h		396			149			1661			1922	
Approach Delay, s/veh		51.4			43.9			36.0			35.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.9	41.3	13.0	22.9	27.8	36.4	17.9	17.9				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	26	38.3	* 16	47.0	* 24	40.3	* 15	48.0				
Max Q Clear Time (g_c+fl), s	26	23.4	5.9	3.2	23.0	24.1	13.0	7.3				
Green Ext Time (p_c), s	0.7	6.0	0.1	0.3	0.1	5.5	0.2	0.2				

Intersection Summary

HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# HCM 6th Signalized Intersection Summary

## 58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑		↘	↑↑↑	↗	↘	↑↑↑	
Traffic Volume (veh/h)	80	450	30	1340	930	200	40	940	680	130	770	40
Future Volume (veh/h)	80	450	30	1340	930	200	40	940	680	130	770	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	82	464	0	1381	959	194	41	969	676	134	794	37
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	111	427		1317	1289	260	93	1019	914	130	1398	65
Arrive On Green	0.07	0.13	0.00	0.41	0.47	0.47	0.06	0.21	0.21	0.08	0.24	0.24
Sat Flow, veh/h	1668	3328	1485	3237	2750	556	1668	4782	1453	1668	5941	275
Grp Volume(v), veh/h	82	464	0	1381	580	573	41	969	676	134	603	228
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1618	1664	1641	1668	1594	1453	1668	1507	1696
Q Serve(g_s), s	7.0	18.6	0.0	59.0	41.2	41.3	3.4	29.0	30.9	11.3	17.1	17.3
Cycle Q Clear(g_c), s	7.0	18.6	0.0	59.0	41.2	41.3	3.4	29.0	30.9	11.3	17.1	17.3
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	111	427		1317	780	769	93	1019	914	130	1063	399
V/C Ratio(X)	0.74	1.09		1.05	0.74	0.74	0.44	0.95	0.74	1.03	0.57	0.57
Avail Cap(c_a), veh/h	150	427		1317	780	769	119	1019	914	130	1063	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	63.2	0.0	43.0	31.4	31.4	66.3	56.3	19.5	66.9	48.9	49.0
Incr Delay (d2), s/veh	15.3	68.9	0.0	38.6	4.2	4.3	1.2	17.4	2.8	87.3	0.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	11.8	0.0	29.6	16.8	16.6	1.5	12.8	15.5	7.8	6.2	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	132.1	0.0	81.6	35.6	35.7	67.5	73.7	22.4	154.2	49.4	50.3
LnGrp LOS	F	F		F	D	D	E	E	C	F	D	D
Approach Vol, veh/h		546	A		2534			1686			965	
Approach Delay, s/veh		124.6			60.7			53.0			64.1	
Approach LOS		F			E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	66.0	37.4	66.0	25.6	12.8	40.6	16.6	75.0				
Change Period (Y+Rc), s	4.7	6.5	7.0	7.0	* 4.7	6.5	7.0	7.0				
Max Green Setting (Gmax), s	30.9	59.0	18.6	* 10	31.9	13.0	64.6					
Max Q Clear Time (g_c+Y+Rc), s	31.0	61.0	20.6	5.4	19.3	9.0	43.3					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.1	10.3				

### Intersection Summary

HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

### Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



# HCM 6th Signalized Intersection Summary

## 59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↷	↶	↶↷		↶	↶↷
Traffic Volume (veh/h)	50	610	900	220	840	1400
Future Volume (veh/h)	50	610	900	220	840	1400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	53	0	947	0	884	1474
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	101		1030		901	2939
Arrive On Green	0.03	0.00	0.31	0.00	0.54	0.88
Sat Flow, veh/h	3237	1485	3504	0	1668	3416
Grp Volume(v), veh/h	53	0	947	0	884	1474
Grp Sat Flow(s),veh/h/ln	1618	1485	1664	0	1668	1664
Q Serve(g_s), s	2.3	0.0	38.4	0.0	72.5	13.0
Cycle Q Clear(g_c), s	2.3	0.0	38.4	0.0	72.5	13.0
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	101		1030		901	2939
V/C Ratio(X)	0.53		0.92		0.98	0.50
Avail Cap(c_a), veh/h	118		1140		958	3162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	0.0	46.6	0.0	31.5	1.7
Incr Delay (d2), s/veh	4.2	0.0	10.9	0.0	23.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	16.7	0.0	32.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.9	0.0	57.5	0.0	55.2	1.8
LnGrp LOS	E		E		E	A
Approach Vol, veh/h	53	A	947	A		2358
Approach Delay, s/veh	70.9		57.5			21.8
Approach LOS	E		E			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	30.2	49.8			130.0	9.9
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30	47.9			132.9	5.1
Max Q Clear Time (g_c+Y), s	14.5	40.4			15.0	4.3
Green Ext Time (p_c), s	1.0	2.9			11.0	0.0

### Intersection Summary





















HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	380	0	220	470	530	0	0	1830	350
Future Volume (veh/h)	0	0	0	380	0	220	470	530	0	0	1830	350
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				400	0	0	495	558	0	0	1926	248
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				506	0	225	570	3688	0	0	3231	775
Arrive On Green				0.14	0.00	0.00	0.33	1.00	0.00	0.00	0.51	0.51
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	6643	1531
Grp Volume(v), veh/h				400	0	0	495	558	0	0	1926	248
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1596	1531
Q Serve(g_s), s				9.8	0.0	0.0	12.2	0.0	0.0	0.0	19.2	8.6
Cycle Q Clear(g_c), s				9.8	0.0	0.0	12.2	0.0	0.0	0.0	19.2	8.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				506	0	225	570	3688	0	0	3231	775
V/C Ratio(X)				0.79	0.00	0.00	0.87	0.15	0.00	0.00	0.60	0.32
Avail Cap(c_a), veh/h				880	0	391	990	3688	0	0	3231	775
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.92	0.92	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.3	0.0	0.0	29.1	0.0	0.0	0.0	15.7	13.1
Incr Delay (d2), s/veh				2.8	0.0	0.0	1.5	0.1	0.0	0.0	0.8	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	0.0	4.0	0.0	0.0	0.0	6.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.1	0.0	0.0	30.6	0.1	0.0	0.0	16.5	14.2
LnGrp LOS				D	A	A	C	A	A	A	B	B
Approach Vol, veh/h					400			1053			2174	
Approach Delay, s/veh					40.1			14.4			16.3	
Approach LOS					D			B			B	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		71.3		18.7	20.0	51.4						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		56.0		22.4	26.0	25.0						
Max Q Clear Time (g_c+I1), s		2.0		11.8	14.2	21.2						
Green Ext Time (p_c), s		3.9		1.0	0.8	3.3						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶↷	↶↷↶			↶↷↶	↶
Traffic Volume (veh/h)	0	0	0	380	0	600	150	1310	0	0	1990	630
Future Volume (veh/h)	0	0	0	380	0	600	150	1310	0	0	1990	630
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				No
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				392	0	567	155	1351	0	0	2052	273
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				1249	0	556	190	2628	0	0	2122	648
Arrive On Green				0.35	0.00	0.35	0.11	1.00	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1546
Grp Volume(v), veh/h				392	0	567	155	1351	0	0	2052	273
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1546
Q Serve(g_s), s				7.3	0.0	31.8	4.0	0.0	0.0	0.0	35.6	11.2
Cycle Q Clear(g_c), s				7.3	0.0	31.8	4.0	0.0	0.0	0.0	35.6	11.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1249	0	556	190	2628	0	0	2122	648
V/C Ratio(X)				0.31	0.00	1.02	0.81	0.51	0.00	0.00	0.97	0.42
Avail Cap(c_a), veh/h				1249	0	556	190	2628	0	0	2122	648
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.65	0.65	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				21.2	0.0	29.1	39.5	0.0	0.0	0.0	25.5	18.5
Incr Delay (d2), s/veh				0.1	0.0	43.5	16.0	0.5	0.0	0.0	13.2	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	17.5	2.0	0.1	0.0	0.0	14.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				21.3	0.0	72.6	55.5	0.5	0.0	0.0	38.7	20.5
LnGrp LOS				C	A	F	E	A	A	A	D	C
Approach Vol, veh/h					959			1506			2325	
Approach Delay, s/veh					51.6			6.1			36.6	
Approach LOS					D			A			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		52.4			9.0	43.4		37.6				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		46.7			5.0	37.7		31.8				
Max Q Clear Time (g_c+I1), s		2.0			6.0	37.6		33.8				
Green Ext Time (p_c), s		7.1			0.0	0.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	420	0	0	0	0	790	410	720	1490	0
Future Volume (veh/h)	210	0	420	0	0	0	0	790	410	720	1490	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	320	0	180				0	832	166	758	1568	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	511	0	227				0	2714	650	842	3680	0
Arrive On Green	0.14	0.00	0.14				0.00	0.43	0.43	0.25	0.73	0.00
Sat Flow, veh/h	3534	0	1572				0	6643	1529	3428	5233	0
Grp Volume(v), veh/h	320	0	180				0	832	166	758	1568	0
Grp Sat Flow(s),veh/h/ln1767		0	1572				0	1596	1529	1714	1689	0
Q Serve(g_s), s	7.7	0.0	10.0				0.0	7.8	6.3	19.3	11.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.0				0.0	7.8	6.3	19.3	11.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	511	0	227				0	2714	650	842	3680	0
V/C Ratio(X)	0.63	0.00	0.79				0.00	0.31	0.26	0.90	0.43	0.00
Avail Cap(c_a), veh/h	754	0	335				0	2714	650	990	3680	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	36.2	0.0	37.2				0.0	17.1	16.7	32.9	4.9	0.0
Incr Delay (d2), s/veh	1.3	0.0	7.6				0.0	0.3	0.9	6.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	4.1				0.0	2.6	2.2	8.2	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	0.0	44.8				0.0	17.4	17.6	39.0	5.1	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		500						998			2326	
Approach Delay, s/veh		40.1						17.4			16.2	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	27.1	44.1				71.2		18.8				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	26.6	28.2				59.2		19.2				
Max Q Clear Time (g_c+Y), s	21.3	9.8				13.0		12.0				
Green Ext Time (p_c), s	0.8	5.6				15.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	290	0	210	0	0	0	0	1170	300	670	1700	0	
Future Volume (veh/h)	290	0	210	0	0	0	0	1170	300	670	1700	0	
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No						No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0	
Adj Flow Rate, veh/h	305	0	152				0	1232	271	705	1789	0	
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0	
Cap, veh/h	442	0	196				0	1965	432	793	3800	0	
Arrive On Green	0.12	0.00	0.12				0.00	0.47	0.47	0.31	1.00	0.00	
Sat Flow, veh/h	3619	0	1610				0	4307	911	3428	5233	0	
Grp Volume(v), veh/h	305	0	152				0	1005	498	705	1789	0	
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1674	1714	1689	0	
Q Serve(g_s), s	7.3	0.0	8.2				0.0	20.0	20.0	17.6	0.1	0.0	
Cycle Q Clear(g_c), s	7.3	0.0	8.2				0.0	20.0	20.0	17.6	0.1	0.0	
Prop In Lane	1.00		1.00				0.00		0.54	1.00		0.00	
Lane Grp Cap(c), veh/h	442	0	196				0	1603	794	793	3800	0	
V/C Ratio(X)	0.69	0.00	0.77				0.00	0.63	0.63	0.89	0.47	0.00	
Avail Cap(c_a), veh/h	611	0	272				0	1603	794	914	3800	0	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00	
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.28	0.28	0.00	
Uniform Delay (d), s/veh	37.9	0.0	38.3				0.0	17.7	17.7	30.1	0.0	0.0	
Incr Delay (d2), s/veh	1.9	0.0	8.9				0.0	1.9	3.7	3.1	0.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.2	0.0	3.6				0.0	7.3	7.6	6.3	0.1	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	39.8	0.0	47.2				0.0	19.6	21.4	33.2	0.1	0.0	
LnGrp LOS	D	A	D				A	B	C	C	A	A	
Approach Vol, veh/h		457						1503			2494		
Approach Delay, s/veh		42.3						20.2			9.5		
Approach LOS		D						C			A		
Timer - Assigned Phs	1	2	4	6									
Phs Duration (G+Y+Rc), s	24.8	48.4	16.8	73.2									
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7									
Max Green Setting (Gmax), s	24.0	35.3	15.2	63.3									
Max Q Clear Time (g_c+1/3), s	19.6	22.0	10.2	2.1									
Green Ext Time (p_c), s	1.2	5.5	0.7	10.9									

### Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	980	390	300	720	120	330	740	230	240	1030	400
Future Volume (veh/h)	200	980	390	300	720	120	330	740	230	240	1030	400
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	208	1021	282	312	750	59	344	771	190	250	1073	353
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	963	421	209	908	397	274	1221	298	285	1155	380
Arrive On Green	0.13	0.27	0.27	0.12	0.26	0.26	0.15	0.30	0.30	0.16	0.31	0.31
Sat Flow, veh/h	1767	3526	1543	1767	3526	1542	1767	4046	987	1767	3750	1234
Grp Volume(v), veh/h	208	1021	282	312	750	59	344	642	319	250	966	460
Grp Sat Flow(s),veh/h/ln	1767	1763	1543	1767	1763	1542	1767	1689	1656	1767	1689	1607
Q Serve(g_s), s	12.7	30.0	17.9	13.0	22.0	3.2	17.0	18.0	18.3	15.2	30.5	30.5
Cycle Q Clear(g_c), s	12.7	30.0	17.9	13.0	22.0	3.2	17.0	18.0	18.3	15.2	30.5	30.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.77
Lane Grp Cap(c), veh/h	237	963	421	209	908	397	274	1019	500	285	1040	495
V/C Ratio(X)	0.88	1.06	0.67	1.49	0.83	0.15	1.26	0.63	0.64	0.88	0.93	0.93
Avail Cap(c_a), veh/h	241	963	421	209	908	397	274	1019	500	338	1045	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	39.9	35.5	48.4	38.4	31.5	46.4	33.1	33.2	45.0	36.8	36.8
Incr Delay (d2), s/veh	30.3	46.4	5.4	244.8	7.0	0.4	142.2	1.8	3.8	23.1	14.3	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	18.4	7.0	19.7	9.9	1.2	17.9	7.2	7.4	8.2	13.8	14.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	86.3	40.9	293.3	45.5	31.8	188.6	34.9	37.0	68.1	51.2	61.5
LnGrp LOS	E	F	D	F	D	C	F	C	D	E	D	E
Approach Vol, veh/h		1511			1121			1305			1676	
Approach Delay, s/veh		76.5			113.7			75.9			56.5	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.7	37.1	17.0	34.0	21.0	37.8	18.7	32.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	21.0	30.0	13.0	30.0	17.0	34.0	15.0	28.0				
Max Q Clear Time (g_c+11), s	17.2	20.3	15.0	32.0	19.0	32.5	14.7	24.0				
Green Ext Time (p_c), s	0.5	6.0	0.0	0.0	0.0	1.4	0.0	2.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											77.8	
HCM 6th LOS											E	

# HCM 6th Signalized Intersection Summary

## 6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	880	40	160	910	160	30	550	100	410	710	430
Future Volume (veh/h)	390	880	40	160	910	160	30	550	100	410	710	430
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	394	889	39	162	919	153	30	556	91	414	717	375
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	273	1179	52	187	887	148	1	644	105	286	915	478
Arrive On Green	0.15	0.34	0.34	0.11	0.29	0.29	0.00	0.21	0.21	0.16	0.41	0.41
Sat Flow, veh/h	1767	3437	151	1767	3015	502	1767	3024	493	1767	2224	1162
Grp Volume(v), veh/h	394	456	472	162	537	535	30	323	324	414	568	524
Grp Sat Flow(s),veh/h/ln	1767	1763	1825	1767	1763	1754	1767	1763	1754	1767	1763	1623
Q Serve(g_s), s	21.0	31.2	31.2	12.3	40.0	40.0	0.1	24.0	24.2	22.0	38.0	38.1
Cycle Q Clear(g_c), s	21.0	31.2	31.2	12.3	40.0	40.0	0.1	24.0	24.2	22.0	38.0	38.1
Prop In Lane	1.00		0.08	1.00		0.29	1.00		0.28	1.00		0.72
Lane Grp Cap(c), veh/h	273	605	626	187	519	516	1	375	374	286	725	668
V/C Ratio(X)	1.44	0.75	0.75	0.87	1.04	1.04	23.08	0.86	0.87	1.45	0.78	0.78
Avail Cap(c_a), veh/h	273	605	626	299	519	516	221	493	490	286	725	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	39.6	39.6	59.9	48.0	48.0	68.0	51.6	51.6	57.0	34.7	34.8
Incr Delay (d2), s/veh	219.0	5.3	5.2	8.7	49.0	49.3	161.4	10.7	11.3	220.1	5.4	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	25.7	13.8	14.3	5.8	23.9	23.8	3.7	11.5	11.6	27.1	16.7	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	276.5	44.9	44.7	68.5	97.0	97.3	229.3	62.3	62.9	277.0	40.1	40.7
LnGrp LOS	F	D	D	E	F	F	F	E	E	F	D	D
Approach Vol, veh/h		1322			1234			677			1506	
Approach Delay, s/veh		113.9			93.4			513.1			105.4	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	33.9	21.4	53.6	0.0	60.9	28.0	47.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	27.0	38.0	23.0	38.0	17.0	43.0	21.0	40.0				
Max Q Clear Time (g_c+Y), s	24.0	26.2	14.3	33.2	0.0	40.1	23.0	42.0				
Green Ext Time (p_c), s	0.0	2.3	0.1	2.2	0.0	1.6	0.0	0.0				

### Intersection Summary

HCM 6th Ctrl Delay	162.9
HCM 6th LOS	F

### Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	270	230	130	240	120	160	910	100	110	1250	300
Future Volume (veh/h)	160	270	230	130	240	120	160	910	100	110	1250	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	284	106	137	253	75	168	958	96	116	1316	285
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	199	417	152	176	411	119	197	1839	184	143	1511	327
Arrive On Green	0.11	0.17	0.17	0.10	0.15	0.15	0.11	0.39	0.39	0.08	0.36	0.36
Sat Flow, veh/h	1767	2514	914	1767	2687	777	1767	4672	467	1767	4157	900
Grp Volume(v), veh/h	168	197	193	137	164	164	168	692	362	116	1069	532
Grp Sat Flow(s),veh/h/ln	1767	1763	1665	1767	1763	1702	1767	1689	1762	1767	1689	1679
Q Serve(g_s), s	10.0	11.3	11.8	8.2	9.4	9.7	10.1	16.8	16.9	7.0	31.8	31.8
Cycle Q Clear(g_c), s	10.0	11.3	11.8	8.2	9.4	9.7	10.1	16.8	16.9	7.0	31.8	31.8
Prop In Lane	1.00		0.55	1.00		0.46	1.00		0.26	1.00		0.54
Lane Grp Cap(c), veh/h	199	293	276	176	270	260	197	1329	694	143	1227	610
V/C Ratio(X)	0.85	0.67	0.70	0.78	0.61	0.63	0.85	0.52	0.52	0.81	0.87	0.87
Avail Cap(c_a), veh/h	343	540	510	176	373	360	212	1329	694	259	1266	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	42.2	42.4	47.4	42.6	42.8	47.0	24.9	24.9	48.7	31.9	31.9
Incr Delay (d2), s/veh	3.8	3.8	4.5	28.3	3.1	3.6	24.2	0.5	1.0	4.1	6.9	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	5.1	5.1	4.9	4.2	4.3	5.6	6.3	6.7	3.1	13.1	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	46.0	46.9	75.7	45.7	46.3	71.2	25.4	25.9	52.8	38.9	44.8
LnGrp LOS	D	D	D	E	D	D	E	C	C	D	D	D
Approach Vol, veh/h		558		465		1222		1717				
Approach Delay, s/veh		47.7		54.8		31.8		41.6				
Approach LOS		D		D		C		D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	62.2	49.9	17.2	24.4	19.5	46.7	18.6	23.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	15.8	37.5	10.7	33.0	12.9	40.4	20.9	22.8				
Max Q Clear Time (g_c+1), s	19.0	18.9	10.2	13.8	12.1	33.8	12.0	11.7				
Green Ext Time (p_c), s	0.1	8.3	0.0	2.9	0.0	5.4	0.1	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				41.0								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	290	70	90	280	30	90	550	100	50	780	100
Future Volume (veh/h)	70	290	70	90	280	30	90	550	100	50	780	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	74	305	42	95	295	23	95	579	90	53	821	94
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	2	3	2	2	2	3	3	2	2	3	3
Cap, veh/h	113	515	70	130	578	45	129	1080	168	93	1059	121
Arrive On Green	0.06	0.16	0.16	0.07	0.17	0.17	0.07	0.35	0.35	0.05	0.33	0.33
Sat Flow, veh/h	1767	3142	428	1781	3342	259	1767	3059	474	1781	3188	365
Grp Volume(v), veh/h	74	171	176	95	156	162	95	333	336	53	454	461
Grp Sat Flow(s),veh/h/ln	1767	1777	1793	1781	1777	1824	1767	1763	1770	1781	1763	1790
Q Serve(g_s), s	2.1	4.5	4.6	2.6	4.0	4.1	2.6	7.6	7.6	1.5	11.7	11.7
Cycle Q Clear(g_c), s	2.1	4.5	4.6	2.6	4.0	4.1	2.6	7.6	7.6	1.5	11.7	11.7
Prop In Lane	1.00		0.24	1.00		0.14	1.00		0.27	1.00		0.20
Lane Grp Cap(c), veh/h	113	291	294	130	307	315	129	623	625	93	586	595
V/C Ratio(X)	0.65	0.59	0.60	0.73	0.51	0.51	0.74	0.53	0.54	0.57	0.78	0.78
Avail Cap(c_a), veh/h	632	922	930	350	636	652	179	732	735	181	732	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	19.5	19.5	22.8	18.9	18.9	22.8	13.0	13.0	23.3	15.1	15.1
Incr Delay (d2), s/veh	6.2	1.9	1.9	7.6	1.3	1.3	9.5	0.7	0.7	5.5	4.1	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.7	1.8	1.3	1.6	1.7	1.3	2.4	2.4	0.7	4.2	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	21.3	21.4	30.5	20.2	20.2	32.3	13.7	13.7	28.8	19.2	19.2
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		421			413			764			968	
Approach Delay, s/veh		22.8			22.5			16.0			19.7	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	22.3	8.2	12.8	8.2	21.2	7.7	13.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	20.9	9.9	26.1	5.1	20.9	18.0	18.0				
Max Q Clear Time (g_c+1), s	13.5	9.6	4.6	6.6	4.6	13.7	4.1	6.1				
Green Ext Time (p_c), s	0.0	2.9	0.1	1.7	0.0	3.1	0.1	1.4				

Intersection Summary

HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕ ↑↑↑			↕ ↑↑↑		
Traffic Volume (veh/h)	10	0	10	130	0	180	10	820	20	180	1290	10
Future Volume (veh/h)	10	0	10	130	0	180	10	820	20	180	1290	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	0	0	137	0	30	11	863	20	189	1358	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	0	2	3	3	3	3	3	3
Cap, veh/h	46	0	0	0	0	0	45	1679	39	306	2474	20
Arrive On Green	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.33	0.33	0.17	0.48	0.48
Sat Flow, veh/h	1781	0	0		0		1767	5091	118	1767	5183	42
Grp Volume(v), veh/h	11	0	0		0.0		11	572	311	189	885	484
Grp Sat Flow(s),veh/h/ln	1781	0	0				1767	1689	1832	1767	1689	1848
Q Serve(g_s), s	0.3	0.0	0.0				0.3	6.5	6.5	4.7	8.9	8.9
Cycle Q Clear(g_c), s	0.3	0.0	0.0				0.3	6.5	6.5	4.7	8.9	8.9
Prop In Lane	1.00		0.00				1.00		0.06	1.00		0.02
Lane Grp Cap(c), veh/h	46	0	0				45	1114	604	306	1612	882
V/C Ratio(X)	0.24	0.00	0.00				0.24	0.51	0.51	0.62	0.55	0.55
Avail Cap(c_a), veh/h	336	0	0				333	2441	1324	426	2618	1433
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	0.0				22.8	12.9	12.9	18.3	8.8	8.8
Incr Delay (d2), s/veh	3.2	0.0	0.0				2.7	0.4	0.8	2.0	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0				0.1	1.8	2.0	1.7	2.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	0.0	0.0				25.5	13.3	13.7	20.3	9.2	9.5
LnGrp LOS	C	A	A				C	B	B	C	A	A
Approach Vol, veh/h		11						894			1558	
Approach Delay, s/veh		26.0						13.6			10.6	
Approach LOS		C						B			B	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	5.8	23.2		8.7	8.7	30.3						
Change Period (Y+Rc), s	7.5	7.5		7.5	7.5	7.5						
Max Green Setting (Gmax), s	1.5	34.5		9.0	9.0	37.0						
Max Q Clear Time (g_c+I), s	1.5	8.5		2.3	2.3	10.9						
Green Ext Time (p_c), s	0.2	6.6		0.0	0.0	11.3						

Intersection Summary

HCM 6th Ctrl Delay		11.8										
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary  
 10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	0	270	0	0	0	350	700	0	0	740	20
Future Volume (veh/h)	150	0	270	0	0	0	350	700	0	0	740	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	158	0	57	0	0	0	368	737	0	0	779	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	361	0	212	0	261	0	355	2190	0	0	1051	27
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.20	0.62	0.00	0.00	0.30	0.30
Sat Flow, veh/h	1781	0	1544	0	1900	0	1767	3618	0	0	3603	90
Grp Volume(v), veh/h	158	0	57	0	0	0	368	737	0	0	391	408
Grp Sat Flow(s),veh/h/ln	1781	0	1544	0	1900	0	1767	1763	0	0	1763	1837
Q Serve(g_s), s	5.2	0.0	2.1	0.0	0.0	0.0	12.5	6.2	0.0	0.0	12.4	12.4
Cycle Q Clear(g_c), s	5.2	0.0	2.1	0.0	0.0	0.0	12.5	6.2	0.0	0.0	12.4	12.4
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h	361	0	212	0	261	0	355	2190	0	0	528	550
V/C Ratio(X)	0.44	0.00	0.27	0.00	0.00	0.00	1.04	0.34	0.00	0.00	0.74	0.74
Avail Cap(c_a), veh/h	832	0	621	0	764	0	355	2553	0	0	709	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	24.0	0.0	0.0	0.0	24.8	5.6	0.0	0.0	19.6	19.6
Incr Delay (d2), s/veh	0.6	0.0	0.5	0.0	0.0	0.0	57.2	0.1	0.0	0.0	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.7	0.0	0.0	0.0	10.2	1.4	0.0	0.0	4.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	0.0	24.5	0.0	0.0	0.0	82.0	5.7	0.0	0.0	22.8	22.7
LnGrp LOS	C	A	C	A	A	A	F	A	A	A	C	C
Approach Vol, veh/h	215		0		1105		799					
Approach Delay, s/veh	25.6		0.0		31.1		22.8					
Approach LOS	C				C		C					
Timer - Assigned Phs	2		4		5		6		8			
Phs Duration (G+Y+Rc), s	46.1		16.0		20.0		26.1		16.0			
Change Period (Y+Rc), s	7.5		7.5		7.5		7.5		7.5			
Max Green Setting (Gmax), s	45.0		25.0		12.5		25.0		25.0			
Max Q Clear Time (g_c+I1), s	8.2		7.2		14.5		14.4		0.0			
Green Ext Time (p_c), s	6.4		0.2		0.0		3.9		0.0			

Intersection Summary

HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑↑↑↑	↖	↖ ↗	↑↑↑↑		↖ ↑↑↑↑	↖	↖	↖ ↑↑↑↑	↖	↖
Traffic Volume (veh/h)	70	1230	760	450	940	120	450	630	510	150	930	220
Future Volume (veh/h)	70	1230	760	450	940	120	450	630	510	150	930	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	73	1281	0	469	979	105	469	656	0	156	969	195
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	134	1344		481	1837	195	404	1931		189	1096	220
Arrive On Green	0.04	0.22	0.00	0.15	0.32	0.32	0.23	0.38	0.00	0.11	0.26	0.26
Sat Flow, veh/h	3291	6128	1510	3291	5657	600	1767	5066	1572	1767	4215	846
Grp Volume(v), veh/h	73	1281	0	469	793	291	469	656	0	156	776	388
Grp Sat Flow(s),veh/h/ln	1646	1532	1510	1646	1532	1661	1767	1689	1572	1767	1689	1684
Q Serve(g_s), s	2.4	22.6	0.0	15.5	15.4	15.7	25.0	10.1	0.0	9.5	24.2	24.3
Cycle Q Clear(g_c), s	2.4	22.6	0.0	15.5	15.4	15.7	25.0	10.1	0.0	9.5	24.2	24.3
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	134	1344		481	1493	539	404	1931		189	878	438
V/C Ratio(X)	0.54	0.95		0.97	0.53	0.54	1.16	0.34		0.82	0.88	0.89
Avail Cap(c_a), veh/h	241	1344		481	1493	539	404	1931		274	895	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	42.2	0.0	46.5	30.2	30.2	42.2	24.1	0.0	47.8	38.9	39.0
Incr Delay (d2), s/veh	7.2	15.1	0.0	34.7	0.7	1.9	96.9	0.2	0.0	19.2	11.0	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.5	0.0	8.4	5.4	6.2	21.0	3.8	0.0	5.0	10.6	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.7	57.3	0.0	81.2	30.8	32.2	139.1	24.3	0.0	67.0	49.9	58.9
LnGrp LOS	E	E		F	C	C	F	C		E	D	E
Approach Vol, veh/h		1354	A		1553			1125	A		1320	
Approach Delay, s/veh		57.4			46.3			72.2			54.6	
Approach LOS		E			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	45.7	20.0	28.0	29.0	32.4	8.5	39.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	37.0	37.0	16.0	24.0	25.0	29.0	8.0	32.0				
Max Q Clear Time (g_c+I1), s	12.1	12.1	17.5	24.6	27.0	26.3	4.4	17.7				
Green Ext Time (p_c), s	0.4	7.5	0.0	0.0	0.0	2.2	0.1	8.8				

Intersection Summary

HCM 6th Ctrl Delay	56.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1230	160	280	1260	360	90	380	130	210	550	340
Future Volume (veh/h)	320	1230	160	280	1260	360	90	380	130	210	550	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	327	1255	149	286	1286	81	92	388	112	214	561	289
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	354	1912	226	343	1460	353	115	546	156	242	613	315
Arrive On Green	0.21	0.34	0.34	0.10	0.24	0.24	0.07	0.20	0.20	0.14	0.27	0.27
Sat Flow, veh/h	1697	5585	660	3291	6128	1479	1767	2693	767	1767	2235	1150
Grp Volume(v), veh/h	327	1032	372	286	1286	81	92	252	248	214	442	408
Grp Sat Flow(s),veh/h/ln	1697	1532	1649	1646	1532	1479	1767	1763	1698	1767	1763	1622
Q Serve(g_s), s	23.0	23.2	23.3	10.4	24.6	5.4	6.2	16.2	16.6	14.5	29.6	29.6
Cycle Q Clear(g_c), s	23.0	23.2	23.3	10.4	24.6	5.4	6.2	16.2	16.6	14.5	29.6	29.6
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.45	1.00		0.71
Lane Grp Cap(c), veh/h	354	1573	564	343	1460	353	115	358	344	242	484	445
V/C Ratio(X)	0.92	0.66	0.66	0.83	0.88	0.23	0.80	0.71	0.72	0.89	0.91	0.92
Avail Cap(c_a), veh/h	509	1719	617	555	1486	359	327	485	467	356	514	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	33.9	34.0	53.4	44.7	37.3	56.1	45.1	45.3	51.6	42.8	42.8
Incr Delay (d2), s/veh	14.9	1.0	2.7	2.7	6.6	0.5	4.7	1.4	1.8	12.4	19.6	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	8.3	9.3	4.2	9.5	1.9	2.9	7.0	6.9	7.1	15.0	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	34.9	36.7	56.2	51.3	37.8	60.7	46.5	47.1	64.0	62.4	63.9
LnGrp LOS	E	C	D	E	D	D	E	D	D	E	E	E
Approach Vol, veh/h		1731			1653			592			1064	
Approach Delay, s/veh		40.4			51.5			48.9			63.3	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.1	31.2	19.2	48.1	14.4	39.9	31.9	35.5				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	24.5	33.5	20.5	45.5	22.5	35.5	36.5	29.5				
Max Q Clear Time (g_c+10), s	10.5	18.6	12.4	25.3	8.2	31.6	25.0	26.6				
Green Ext Time (p_c), s	0.2	1.5	0.3	11.7	0.1	1.3	0.4	2.3				

Intersection Summary

HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶↷	↑↑↑↑		↶↷	↑↑↑↑	↶	↶↷	↑↑↑↑	↶	↶↷	↑↑↑↑	↶
Traffic Volume (veh/h)	380	1270	270	630	1590	300	320	630	430	500	1120	280
Future Volume (veh/h)	380	1270	270	630	1590	300	320	630	430	500	1120	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	396	1323	256	656	1656	187	333	656	159	521	1167	113
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	385	1358	262	696	1736	530	314	938	285	500	1213	369
Arrive On Green	0.12	0.26	0.26	0.21	0.36	0.36	0.09	0.18	0.18	0.14	0.24	0.24
Sat Flow, veh/h	3291	5177	998	3291	4863	1483	3483	5147	1562	3483	5147	1565
Grp Volume(v), veh/h	396	1174	405	656	1656	187	333	656	159	521	1167	113
Grp Sat Flow(s),veh/h/ln	1646	1532	1579	1646	1621	1483	1742	1716	1562	1742	1716	1565
Q Serve(g_s), s	17.5	37.9	38.1	29.4	49.7	13.9	13.5	17.9	13.9	21.5	33.6	8.9
Cycle Q Clear(g_c), s	17.5	37.9	38.1	29.4	49.7	13.9	13.5	17.9	13.9	21.5	33.6	8.9
Prop In Lane	1.00		0.63	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1206	414	696	1736	530	314	938	285	500	1213	369
V/C Ratio(X)	1.03	0.97	0.98	0.94	0.95	0.35	1.06	0.70	0.56	1.04	0.96	0.31
Avail Cap(c_a), veh/h	385	1206	414	714	1744	532	314	938	285	500	1213	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.1	54.7	54.8	58.1	46.9	35.4	68.1	57.4	55.7	64.1	56.6	47.1
Incr Delay (d2), s/veh	53.7	19.9	38.3	20.4	12.4	0.5	67.7	2.4	2.6	51.6	17.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.2	18.9	13.8	21.0	5.0	8.8	7.8	5.6	12.9	16.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.8	74.6	93.1	78.6	59.4	35.9	135.8	59.7	58.3	115.7	74.1	47.7
LnGrp LOS	F	E	F	E	E	D	F	E	E	F	E	D
Approach Vol, veh/h		1975			2499			1148			1801	
Approach Delay, s/veh		87.4			62.7			81.6			84.5	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.2	46.8	21.0	42.8	25.0	61.0	29.0	34.8				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	32.5	38.7	13.5	35.3	17.5	53.7	21.5	27.3				
Max Q Clear Time (g_c+D), s	41.4	40.1	15.5	35.6	19.5	51.7	23.5	19.9				
Green Ext Time (p_c), s	0.3	0.0	0.0	0.0	0.0	1.7	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	77.5
HCM 6th LOS	E

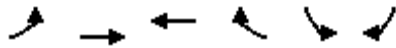
Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1820	1380	0	260	1540
Future Volume (veh/h)	0	1820	1380	0	260	1540
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	1916	1453	0	274	1613
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	2091	1455	0	818	1456
Arrive On Green	0.00	0.43	0.43	0.00	0.48	0.48
Sat Flow, veh/h	0	5184	3563	0	1697	3019
Grp Volume(v), veh/h	0	1916	1453	0	274	1613
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1697	1510
Q Serve(g_s), s	0.0	51.9	60.0	0.0	14.0	67.5
Cycle Q Clear(g_c), s	0.0	51.9	60.0	0.0	14.0	67.5
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2091	1455	0	818	1456
V/C Ratio(X)	0.00	0.92	1.00	0.00	0.33	1.11
Avail Cap(c_a), veh/h	0	2091	1455	0	818	1456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	37.5	39.8	0.0	22.4	36.3
Incr Delay (d2), s/veh	0.0	6.9	23.2	0.0	0.2	59.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.5	27.8	0.0	5.7	36.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	44.4	63.0	0.0	22.6	95.3
LnGrp LOS	A	D	E	A	C	F
Approach Vol, veh/h		1916	1453		1887	
Approach Delay, s/veh		44.4	63.0		84.7	
Approach LOS		D	E		F	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.0		73.0		67.0
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		60.2		67.5		60.2
Max Q Clear Time (g_c+I1), s		53.9		69.5		62.0
Green Ext Time (p_c), s		5.1		0.0		0.0

Intersection Summary

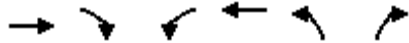
HCM 6th Ctrl Delay	64.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	770	1310	170	590	790	170
Future Volume (veh/h)	770	1310	170	590	790	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	811	1379	179	621	832	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	2517	1184	158	2984	950	423
Arrive On Green	0.52	0.52	0.05	0.61	0.28	0.28
Sat Flow, veh/h	5024	1470	3291	5024	3393	1510
Grp Volume(v), veh/h	811	1379	179	621	832	100
Grp Sat Flow(s),veh/h/ln	1621	1470	1646	1621	1697	1510
Q Serve(g_s), s	12.1	64.7	6.0	7.1	29.2	6.4
Cycle Q Clear(g_c), s	12.1	64.7	6.0	7.1	29.2	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2517	1184	158	2984	950	423
V/C Ratio(X)	0.32	1.16	1.13	0.21	0.88	0.24
Avail Cap(c_a), veh/h	2517	1184	158	2984	1493	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	9.1	59.5	10.7	42.9	34.7
Incr Delay (d2), s/veh	0.1	83.8	111.8	0.0	3.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	63.8	4.9	2.2	12.7	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.5	92.9	171.3	10.7	46.7	35.0
LnGrp LOS	B	F	F	B	D	C
Approach Vol, veh/h	2190			800	932	
Approach Delay, s/veh	65.0			46.7	45.5	
Approach LOS	E			D	D	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	12.0	72.0		84.0	41.0	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	6.0	64.7		76.7	55.0	
Max Q Clear Time (g_c+1/3), s	12.0	66.7		9.1	31.2	
Green Ext Time (p_c), s	0.0	0.0		4.1	3.8	

Intersection Summary

HCM 6th Ctrl Delay	56.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
 User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	730	30	80	330	20	10	10	40	20	10	10
Future Volume (veh/h)	20	730	30	80	330	20	10	10	40	20	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.99	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	768	31	84	347	18	11	11	5	21	11	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	1371	55	151	1552	80	213	40	18	257	30	6
Arrive On Green	0.03	0.39	0.39	0.08	0.45	0.45	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1781	3477	140	1781	3432	177	675	675	307	974	510	93
Grp Volume(v), veh/h	21	392	407	84	179	186	27	0	0	34	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1833	1656	0	0	1577	0	0
Q Serve(g_s), s	0.3	5.0	5.0	1.3	1.8	1.8	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	5.0	5.0	1.3	1.8	1.8	0.4	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.10	0.41		0.19	0.62		0.06
Lane Grp Cap(c), veh/h	48	701	726	151	803	828	272	0	0	293	0	0
V/C Ratio(X)	0.44	0.56	0.56	0.56	0.22	0.22	0.10	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	305	1574	1630	579	1848	1906	1859	0	0	1809	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.0	6.9	6.9	12.9	4.9	4.9	13.1	0.0	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.7	0.7	3.2	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.5	0.2	0.2	0.1	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	7.6	7.6	16.1	5.0	5.0	13.3	0.0	0.0	13.4	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		820			449			27			34	
Approach Delay, s/veh		7.9			7.1			13.3			13.4	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.2	7.0	16.0		6.2	5.3	17.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		31.1	9.5	25.9		31.1	5.0	30.4				
Max Q Clear Time (g_c+I1), s		2.4	3.3	7.0		2.6	2.3	3.8				
Green Ext Time (p_c), s		0.1	0.1	4.3		0.1	0.0	1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.9							
HCM 6th LOS					A							

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕	↖	↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (veh/h)	190	320	260	30	90	160	190	1140	30	240	1690	230
Future Volume (veh/h)	190	320	260	30	90	160	190	1140	30	240	1690	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	337	160	32	95	28	200	1200	12	253	1779	138
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	288	446	207	147	533	232	284	1994	608	341	2077	634
Arrive On Green	0.08	0.19	0.19	0.04	0.15	0.15	0.08	0.39	0.39	0.10	0.41	0.41
Sat Flow, veh/h	3456	2337	1086	3456	3554	1546	3428	5066	1546	3428	5066	1546
Grp Volume(v), veh/h	200	254	243	32	95	28	200	1200	12	253	1779	138
Grp Sat Flow(s),veh/h/ln	1728	1777	1646	1728	1777	1546	1714	1689	1546	1714	1689	1546
Q Serve(g_s), s	5.1	12.4	12.8	0.8	2.1	1.4	5.2	17.2	0.4	6.6	29.2	5.3
Cycle Q Clear(g_c), s	5.1	12.4	12.8	0.8	2.1	1.4	5.2	17.2	0.4	6.6	29.2	5.3
Prop In Lane	1.00		0.66	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	339	314	147	533	232	284	1994	608	341	2077	634
V/C Ratio(X)	0.69	0.75	0.77	0.22	0.18	0.12	0.70	0.60	0.02	0.74	0.86	0.22
Avail Cap(c_a), veh/h	851	515	478	605	778	338	675	2190	668	675	2190	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	34.9	35.1	42.3	33.9	33.6	40.8	22.0	16.9	40.0	24.5	17.5
Incr Delay (d2), s/veh	3.0	1.3	1.8	0.7	0.1	0.1	3.2	0.4	0.0	3.2	3.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.2	5.0	0.3	0.9	0.5	2.2	6.0	0.1	2.7	10.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	36.2	36.9	43.0	34.0	33.7	44.0	22.4	16.9	43.2	28.0	17.6
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		697			155			1412			2170	
Approach Delay, s/veh		38.6			35.8			25.4			29.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	43.5	8.9	24.9	12.6	45.0	12.6	21.2				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	10.0	39.5	16.0	26.5	18.0	39.5	22.5	20.0				
Max Q Clear Time (g_c+1), s	10.6	19.2	2.8	14.8	7.2	31.2	7.1	4.1				
Green Ext Time (p_c), s	0.5	7.6	0.0	1.4	0.4	6.3	0.5	0.3				

Intersection Summary

HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC  
18: Park Place & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	560	30	40	250	30	20
Future Vol, veh/h	560	30	40	250	30	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	589	32	42	263	32	21

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	621	0	805 295
Stage 1	-	-	-	-	589 -
Stage 2	-	-	-	-	216 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	956	-	320 701
Stage 1	-	-	-	-	517 -
Stage 2	-	-	-	-	799 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	956	-	306 701
Mov Cap-2 Maneuver	-	-	-	-	306 -
Stage 1	-	-	-	-	517 -
Stage 2	-	-	-	-	764 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	395	-	-	956	-
HCM Lane V/C Ratio	0.133	-	-	0.044	-
HCM Control Delay (s)	15.5	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	530	30	80	250	20	30	10	50	10	10	10
Future Volume (veh/h)	20	530	30	80	250	20	30	10	50	10	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	558	29	84	263	17	32	11	11	11	11	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	895	46	249	1412	91	224	75	46	177	143	29
Arrive On Green	0.03	0.26	0.26	0.14	0.42	0.42	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3430	178	1781	3390	218	728	520	319	480	989	200
Grp Volume(v), veh/h	21	289	298	84	137	143	54	0	0	25	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1831	1781	1777	1831	1568	0	0	1668	0	0
Q Serve(g_s), s	0.6	6.9	7.0	2.1	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	6.9	7.0	2.1	2.4	2.4	1.3	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.12	0.59		0.20	0.44		0.12
Lane Grp Cap(c), veh/h	45	464	478	249	740	763	345	0	0	348	0	0
V/C Ratio(X)	0.46	0.62	0.62	0.34	0.19	0.19	0.16	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	195	918	946	368	1164	1200	1158	0	0	1205	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.3	15.8	15.8	18.8	8.9	8.9	18.2	0.0	0.0	17.9	0.0	0.0
Incr Delay (d2), s/veh	7.2	1.7	1.6	0.8	0.1	0.1	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.3	2.3	0.7	0.6	0.6	0.5	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	17.4	17.4	19.6	9.1	9.1	18.5	0.0	0.0	18.1	0.0	0.0
LnGrp LOS	C	B	B	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		608			364			54			25	
Approach Delay, s/veh		17.9			11.5			18.5			18.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.0	14.3	20.1		14.0	6.7	27.7				
Change Period (Y+Rc), s		7.0	7.5	7.5		7.0	5.5	7.5				
Max Green Setting (Gmax), s		33.0	10.0	25.0		33.0	5.3	31.7				
Max Q Clear Time (g_c+I1), s		3.3	4.1	9.0		2.6	2.6	4.4				
Green Ext Time (p_c), s		0.3	0.1	3.2		0.1	0.0	1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	580	10	30	340	10	20
Future Vol, veh/h	580	10	30	340	10	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	611	11	32	358	11	21

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	622	0	860 311
Stage 1	-	-	-	-	617 -
Stage 2	-	-	-	-	243 -
Critical Hdwy	-	-	4.1	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	969	-	299 691
Stage 1	-	-	-	-	506 -
Stage 2	-	-	-	-	781 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	969	-	289 691
Mov Cap-2 Maneuver	-	-	-	-	289 -
Stage 1	-	-	-	-	506 -
Stage 2	-	-	-	-	755 -

























Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	472	-	-	969	-
HCM Lane V/C Ratio	0.067	-	-	0.033	-
HCM Control Delay (s)	13.2	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



HCM 6th Signalized Intersection Summary  
21: Sumner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	100	400	100	20	220	20	40	370	20	20	610	110
Future Volume (veh/h)	100	400	100	20	220	20	40	370	20	20	610	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	105	421	73	21	232	10	42	389	17	21	642	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	147	668	115	46	569	24	81	1089	47	46	911	135
Arrive On Green	0.08	0.22	0.22	0.03	0.16	0.16	0.05	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	1781	3028	521	1781	3470	149	1767	3441	150	1781	3073	454
Grp Volume(v), veh/h	105	246	248	21	118	124	42	199	207	21	368	369
Grp Sat Flow(s),veh/h/ln	1781	1777	1772	1781	1777	1842	1767	1763	1828	1781	1763	1764
Q Serve(g_s), s	2.5	5.5	5.6	0.5	2.6	2.6	1.0	3.8	3.8	0.5	8.1	8.1
Cycle Q Clear(g_c), s	2.5	5.5	5.6	0.5	2.6	2.6	1.0	3.8	3.8	0.5	8.1	8.1
Prop In Lane	1.00		0.29	1.00		0.08	1.00		0.08	1.00		0.26
Lane Grp Cap(c), veh/h	147	392	391	46	291	302	81	558	579	46	523	523
V/C Ratio(X)	0.72	0.63	0.63	0.46	0.41	0.41	0.52	0.36	0.36	0.46	0.70	0.71
Avail Cap(c_a), veh/h	224	751	749	203	731	758	202	745	773	203	745	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	15.4	15.5	21.0	16.4	16.4	20.4	11.5	11.5	21.0	13.7	13.7
Incr Delay (d2), s/veh	6.4	1.6	1.7	7.0	0.9	0.9	5.1	0.4	0.4	7.0	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.7	1.8	0.3	0.8	0.9	0.5	1.1	1.2	0.3	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	17.1	17.2	28.0	17.3	17.3	25.5	11.9	11.9	28.0	15.4	15.4
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		599			263			448			758	
Approach Delay, s/veh		18.7			18.1			13.2			15.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	18.4	5.6	14.2	6.5	17.5	8.1	11.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	2.5	5.8	2.5	7.6	3.0	10.1	4.5	4.6				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.9	0.0	2.7	0.0	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.4								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
 23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	40	350	10	30	200	50	10	160	40	30	150	30
Future Volume (veh/h)	40	350	10	30	200	50	10	160	40	30	150	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	42	368	10	32	211	32	11	168	9	32	158	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	3	3	2
Cap, veh/h	87	785	21	69	658	98	26	496	26	68	580	29
Arrive On Green	0.05	0.22	0.22	0.04	0.21	0.21	0.01	0.15	0.15	0.04	0.17	0.17
Sat Flow, veh/h	1781	3533	96	1781	3097	463	1781	3400	181	1767	3411	172
Grp Volume(v), veh/h	42	185	193	32	120	123	11	87	90	32	81	85
Grp Sat Flow(s),veh/h/ln	1781	1777	1852	1781	1777	1783	1781	1763	1818	1767	1763	1820
Q Serve(g_s), s	0.7	2.9	2.9	0.6	1.8	1.9	0.2	1.4	1.5	0.6	1.3	1.3
Cycle Q Clear(g_c), s	0.7	2.9	2.9	0.6	1.8	1.9	0.2	1.4	1.5	0.6	1.3	1.3
Prop In Lane	1.00		0.05	1.00		0.26	1.00		0.10	1.00		0.09
Lane Grp Cap(c), veh/h	87	395	412	69	377	379	26	257	265	68	300	309
V/C Ratio(X)	0.49	0.47	0.47	0.47	0.32	0.33	0.42	0.34	0.34	0.47	0.27	0.27
Avail Cap(c_a), veh/h	302	985	1027	302	985	989	274	2064	2128	299	2091	2159
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	11.0	11.0	15.3	10.8	10.8	15.9	12.4	12.5	15.3	11.7	11.7
Incr Delay (d2), s/veh	4.2	0.9	0.8	4.8	0.5	0.5	10.6	0.8	0.8	4.9	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	1.0	0.2	0.4	0.5	0.1	0.4	0.4	0.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	11.8	11.8	20.1	11.3	11.3	26.5	13.2	13.2	20.2	12.2	12.2
LnGrp LOS	B	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		420			275			188			198	
Approach Delay, s/veh		12.5			12.3			14.0			13.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	9.2	5.8	11.7	5.0	10.0	6.1	11.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	38.0	5.5	18.0	5.0	38.5	5.5	18.0				
Max Q Clear Time (g_c+1), s	12.6	3.5	2.6	4.9	2.2	3.3	2.7	3.9				
Green Ext Time (p_c), s	0.0	0.9	0.0	1.8	0.0	0.8	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

# HCM 6th Signalized Intersection Summary

## 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	140	10	340	20	10	20	170	1360	10	40	1730	100
Future Volume (veh/h)	140	10	340	20	10	20	170	1360	10	40	1730	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	146	10	46	21	10	2	177	1417	10	42	1802	100
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	308	25	116	56	48	10	211	2869	20	90	2376	132
Arrive On Green	0.09	0.09	0.09	0.03	0.03	0.03	0.12	0.54	0.54	0.05	0.48	0.48
Sat Flow, veh/h	3456	283	1301	1810	1537	307	1795	5272	37	1795	4982	276
Grp Volume(v), veh/h	146	0	56	21	0	12	177	922	505	42	1240	662
Grp Sat Flow(s),veh/h/ln	1728	0	1583	1810	0	1845	1795	1716	1878	1795	1716	1827
Q Serve(g_s), s	3.7	0.0	3.0	1.0	0.0	0.6	8.8	15.3	15.3	2.1	27.0	27.1
Cycle Q Clear(g_c), s	3.7	0.0	3.0	1.0	0.0	0.6	8.8	15.3	15.3	2.1	27.0	27.1
Prop In Lane	1.00		0.82	1.00		0.17	1.00		0.02	1.00		0.15
Lane Grp Cap(c), veh/h	308	0	141	56	0	57	211	1867	1022	90	1636	871
V/C Ratio(X)	0.47	0.00	0.40	0.37	0.00	0.21	0.84	0.49	0.49	0.47	0.76	0.76
Avail Cap(c_a), veh/h	967	0	443	346	0	352	227	1867	1022	207	1793	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	39.2	43.3	0.0	43.0	39.3	12.9	12.9	42.1	19.5	19.6
Incr Delay (d2), s/veh	1.6	0.0	2.6	5.8	0.0	2.5	22.8	0.3	0.5	4.4	1.9	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.2	0.6	0.0	0.3	5.0	5.0	5.5	1.0	9.6	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.1	0.0	41.7	49.0	0.0	45.6	62.2	13.2	13.5	46.5	21.5	23.2
LnGrp LOS	D	A	D	D	A	D	E	B	B	D	C	C
Approach Vol, veh/h		202			33			1604			1944	
Approach Delay, s/veh		41.3			47.8			18.7			22.6	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	49.9		14.6	11.1	56.1		9.3				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	1.5	47.6		25.5	10.5	48.6		17.4				
Max Q Clear Time (g_c+fl), s	10.8	29.1		5.7	4.1	17.3		3.0				
Green Ext Time (p_c), s	0.0	14.4		1.0	0.0	15.2		0.1				

### Intersection Summary

HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

### Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	70	10	50	30	10	60	40	1230	40	60	1790	90
Future Volume (veh/h)	70	10	50	30	10	60	40	1230	40	60	1790	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	11	9	32	11	9	42	1295	22	63	1884	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	312	155	127	312	155	127	138	2296	694	173	2397	724
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.08	0.45	0.45	0.10	0.47	0.47
Sat Flow, veh/h	1380	940	769	1380	940	769	1767	5066	1530	1767	5066	1530
Grp Volume(v), veh/h	74	0	20	32	0	20	42	1295	22	63	1884	52
Grp Sat Flow(s),veh/h/ln	1380	0	1710	1380	0	1710	1767	1689	1530	1767	1689	1530
Q Serve(g_s), s	3.5	0.0	0.7	1.5	0.0	0.7	1.7	13.9	0.6	2.5	23.1	1.4
Cycle Q Clear(g_c), s	4.3	0.0	0.7	2.2	0.0	0.7	1.7	13.9	0.6	2.5	23.1	1.4
Prop In Lane	1.00		0.45	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	0	283	312	0	283	138	2296	694	173	2397	724
V/C Ratio(X)	0.24	0.00	0.07	0.10	0.00	0.07	0.30	0.56	0.03	0.36	0.79	0.07
Avail Cap(c_a), veh/h	773	0	854	773	0	854	238	2529	764	238	2529	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	26.1	27.1	0.0	26.1	32.3	14.9	11.2	31.3	16.4	10.6
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.2	0.0	0.1	1.5	0.3	0.0	1.5	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.3	0.5	0.0	0.3	0.7	4.3	0.2	1.0	7.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	26.2	27.2	0.0	26.2	33.7	15.2	11.3	32.8	18.1	10.7
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		94			52			1359			1999	
Approach Delay, s/veh		27.9			26.9			15.7			18.4	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	41.1		18.2	13.3	42.6		18.2				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	37.0		37.0	10.0	37.0		37.0				
Max Q Clear Time (g_c+1/5), s	14.5	15.9		6.3	3.7	25.1		4.2				
Green Ext Time (p_c), s	0.1	11.3		0.4	0.0	10.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	60	10	20	10	10	10	50	390	10	30	600	60
Future Vol, veh/h	60	10	20	10	10	10	50	390	10	30	600	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	225	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	3	3	2	2	3	3
Mvmt Flow	63	11	21	11	11	11	53	411	11	32	632	63

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1045	1256	348	909	1282	211	695	0	0	422	0	0
Stage 1	728	728	-	523	523	-	-	-	-	-	-	-
Stage 2	317	528	-	386	759	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	183	170	648	230	164	794	890	-	-	1134	-	-
Stage 1	381	427	-	505	529	-	-	-	-	-	-	-
Stage 2	669	526	-	609	413	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	160	155	648	197	150	794	890	-	-	1134	-	-
Mov Cap-2 Maneuver	160	155	-	197	150	-	-	-	-	-	-	-
Stage 1	358	415	-	475	497	-	-	-	-	-	-	-
Stage 2	608	494	-	558	401	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	41.1		23		1		0.4			
HCM LOS	E		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	890	-	-	191	231	1134	-	-
HCM Lane V/C Ratio	0.059	-	-	0.496	0.137	0.028	-	-
HCM Control Delay (s)	9.3	-	-	41.1	23	8.3	-	-
HCM Lane LOS	A	-	-	E	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.5	0.5	0.1	-	-

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖↗	↑↑	↖	↖	↑↑↑	↖	↖	↑↑↑	↖
Traffic Volume (veh/h)	510	590	150	270	440	190	110	940	310	310	1080	620
Future Volume (veh/h)	510	590	150	270	440	190	110	940	310	310	1080	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	520	602	39	276	449	61	112	959	188	316	1102	380
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	572	906	396	336	664	289	108	1166	355	343	1840	561
Arrive On Green	0.17	0.26	0.26	0.10	0.19	0.19	0.06	0.23	0.23	0.19	0.36	0.36
Sat Flow, veh/h	3428	3526	1542	3428	3526	1538	1795	5147	1565	1795	5147	1570
Grp Volume(v), veh/h	520	602	39	276	449	61	112	959	188	316	1102	380
Grp Sat Flow(s),veh/h/ln	1714	1763	1542	1714	1763	1538	1795	1716	1565	1795	1716	1570
Q Serve(g_s), s	17.3	17.8	2.2	9.2	13.8	3.9	7.0	20.6	12.3	20.1	20.3	23.8
Cycle Q Clear(g_c), s	17.3	17.8	2.2	9.2	13.8	3.9	7.0	20.6	12.3	20.1	20.3	23.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	572	906	396	336	664	289	108	1166	355	343	1840	561
V/C Ratio(X)	0.91	0.66	0.10	0.82	0.68	0.21	1.04	0.82	0.53	0.92	0.60	0.68
Avail Cap(c_a), veh/h	590	1299	568	620	1329	580	108	1231	374	417	2117	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	38.7	32.9	51.4	43.9	39.9	54.6	42.7	39.5	46.1	30.5	31.6
Incr Delay (d2), s/veh	17.3	1.2	0.2	1.9	1.7	0.5	96.4	4.7	1.8	21.2	0.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	7.5	0.8	3.9	5.9	1.5	6.0	8.9	4.7	10.6	8.0	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.8	39.9	33.1	53.3	45.6	40.4	151.0	47.4	41.3	67.3	31.0	34.5
LnGrp LOS	E	D	C	D	D	D	F	D	D	E	C	C
Approach Vol, veh/h		1161			786			1259			1798	
Approach Delay, s/veh		50.8			47.9			55.7			38.1	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.2	33.5	17.4	37.1	13.0	48.7	25.4	29.1				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	27.0	27.8	21.0	42.8	7.0	47.8	20.0	43.8				
Max Q Clear Time (g_c+I1), s	22.1	22.6	11.2	19.8	9.0	25.8	19.3	15.8				
Green Ext Time (p_c), s	0.1	3.5	0.2	5.3	0.0	12.1	0.1	4.2				

Intersection Summary

HCM 6th Ctrl Delay	47.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1330	10	10	630	90	20	10	40	50	10	30
Future Volume (veh/h)	40	1330	10	10	630	90	20	10	40	50	10	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	42	1400	7	11	663	87	21	11	6	53	11	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	103	1887	820	34	1550	203	185	87	33	239	46	20
Arrive On Green	0.06	0.54	0.54	0.02	0.50	0.50	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1739	3469	1507	1739	3073	403	684	660	252	1006	352	149
Grp Volume(v), veh/h	42	1400	7	11	374	376	38	0	0	71	0	0
Grp Sat Flow(s),veh/h/ln	1739	1735	1507	1739	1735	1741	1596	0	0	1507	0	0
Q Serve(g_s), s	1.4	18.2	0.1	0.4	8.0	8.1	0.0	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	1.4	18.2	0.1	0.4	8.0	8.1	1.1	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.23	0.55		0.16	0.75		0.10
Lane Grp Cap(c), veh/h	103	1887	820	34	875	878	305	0	0	305	0	0
V/C Ratio(X)	0.41	0.74	0.01	0.32	0.43	0.43	0.12	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	206	2057	894	206	1029	1032	873	0	0	853	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.8	10.3	6.2	28.5	9.2	9.2	22.7	0.0	0.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	2.6	1.8	0.0	5.4	0.7	0.7	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.6	0.0	0.2	2.6	2.6	0.5	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	12.1	6.2	33.9	9.9	10.0	22.9	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	C	B	A	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1449			761			38			71	
Approach Delay, s/veh		12.5			10.3			22.9			23.6	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.8	6.2	39.1		13.8	8.5	36.8				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	35.0		30.0	7.0	35.0				
Max Q Clear Time (g_c+1), s		3.1	2.4	20.2		4.3	3.4	10.1				
Green Ext Time (p_c), s		0.1	0.0	11.9		0.3	0.0	9.1				

Intersection Summary

HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↔	↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	340	720	360	90	280	80	190	890	150	80	1530	260
Future Volume (veh/h)	340	720	360	90	280	80	190	890	150	80	1530	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	358	758	0	95	295	16	200	937	64	84	1611	258
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	3	3	3
Cap, veh/h	418	740		119	555	241	258	2117	646	208	1772	282
Arrive On Green	0.12	0.21	0.00	0.07	0.16	0.16	0.08	0.42	0.42	0.06	0.40	0.40
Sat Flow, veh/h	3374	3469	1547	1781	3554	1547	3428	5066	1546	3428	4392	700
Grp Volume(v), veh/h	358	758	0	95	295	16	200	937	64	84	1237	632
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1781	1777	1547	1714	1689	1546	1714	1689	1715
Q Serve(g_s), s	12.9	26.5	0.0	6.5	9.5	1.1	7.1	16.4	3.1	2.9	42.9	43.3
Cycle Q Clear(g_c), s	12.9	26.5	0.0	6.5	9.5	1.1	7.1	16.4	3.1	2.9	42.9	43.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	418	740		119	555	241	258	2117	646	208	1362	692
V/C Ratio(X)	0.86	1.02		0.80	0.53	0.07	0.77	0.44	0.10	0.40	0.91	0.91
Avail Cap(c_a), veh/h	502	740		236	572	249	455	2139	653	400	1372	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	48.9	0.0	57.2	48.3	44.7	56.4	25.8	22.0	56.2	34.9	35.0
Incr Delay (d2), s/veh	12.0	39.6	0.0	8.8	0.7	0.1	3.7	0.3	0.1	0.9	9.5	17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	15.4	0.0	3.2	4.2	0.4	3.1	6.2	1.2	1.2	18.0	19.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	88.5	0.0	66.0	49.0	44.8	60.1	26.1	22.1	57.1	44.4	52.2
LnGrp LOS	E	F		E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		1116	A		406			1201			1953	
Approach Delay, s/veh		81.1			52.8			31.6			47.5	
Approach LOS		F			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	51.1	59.5	15.8	34.0	16.9	57.6	22.9	26.9				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	14.5	52.5	16.5	26.5	16.5	50.5	18.5	20.0				
Max Q Clear Time (g_c+14), s	14.5	18.4	8.5	28.5	9.1	45.3	14.9	11.5				
Green Ext Time (p_c), s	0.1	13.4	0.1	0.0	0.3	4.9	0.5	1.0				

Intersection Summary

HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	860	50	10	390	20	40	10	20	20	10	20
Future Volume (veh/h)	40	860	50	10	390	20	40	10	20	20	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	896	27	10	406	11	42	10	3	21	10	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1366	592	33	1197	518	333	62	229	264	103	21
Arrive On Green	0.07	0.38	0.38	0.02	0.34	0.34	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3554	1540	1781	3554	1538	1086	416	1550	744	700	140
Grp Volume(v), veh/h	42	896	27	10	406	11	52	0	3	34	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1781	1777	1538	1503	0	1550	1583	0	0
Q Serve(g_s), s	0.9	7.9	0.4	0.2	3.2	0.2	0.4	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	7.9	0.4	0.2	3.2	0.2	1.0	0.0	0.1	0.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.81		1.00	0.62		0.09
Lane Grp Cap(c), veh/h	118	1366	592	33	1197	518	394	0	229	388	0	0
V/C Ratio(X)	0.36	0.66	0.05	0.30	0.34	0.02	0.13	0.00	0.01	0.09	0.00	0.00
Avail Cap(c_a), veh/h	329	1972	855	329	1972	853	1336	0	1228	1366	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.9	9.6	7.3	18.3	9.4	8.4	14.2	0.0	13.8	14.0	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.5	0.0	5.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	0.1	0.1	0.9	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	10.1	7.3	23.4	9.6	8.4	14.2	0.0	13.8	14.0	0.0	0.0
LnGrp LOS	B	B	A	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		965			427			55			34	
Approach Delay, s/veh		10.4			9.9			14.2			14.0	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.6	5.7	20.6		11.6	7.5	18.8				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	21.0		30.0	7.0	21.0				
Max Q Clear Time (g_c+I1), s		3.0	2.2	9.9		2.6	2.9	5.2				
Green Ext Time (p_c), s		0.2	0.0	4.6		0.1	0.0	2.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					10.5							
HCM 6th LOS					B							

HCM 6th Signalized Intersection Summary  
 32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	810	30	40	360	80	20	10	30	70	20	40
Future Volume (veh/h)	60	810	30	40	360	80	20	10	30	70	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	827	14	41	367	35	20	10	7	71	20	7
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	1144	495	115	1063	460	306	122	260	321	78	18
Arrive On Green	0.09	0.32	0.32	0.06	0.30	0.30	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1538	1781	3554	1536	886	726	1550	943	465	108
Grp Volume(v), veh/h	61	827	14	41	367	35	30	0	7	98	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1538	1781	1777	1536	1612	0	1550	1517	0	0
Q Serve(g_s), s	1.2	7.9	0.2	0.8	3.1	0.6	0.0	0.0	0.1	1.3	0.0	0.0
Cycle Q Clear(g_c), s	1.2	7.9	0.2	0.8	3.1	0.6	0.5	0.0	0.1	2.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	0.72		0.07
Lane Grp Cap(c), veh/h	156	1144	495	115	1063	460	428	0	260	418	0	0
V/C Ratio(X)	0.39	0.72	0.03	0.36	0.35	0.08	0.07	0.00	0.03	0.23	0.00	0.00
Avail Cap(c_a), veh/h	327	1397	604	327	1397	604	1201	0	1056	1174	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.5	11.4	8.9	17.1	10.5	9.6	13.4	0.0	13.3	14.0	0.0	0.0
Incr Delay (d2), s/veh	1.6	1.5	0.0	1.9	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.4	0.1	0.3	0.9	0.2	0.2	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	12.9	8.9	18.9	10.6	9.7	13.4	0.0	13.3	14.1	0.0	0.0
LnGrp LOS	B	B	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		902			443			37			98	
Approach Delay, s/veh		13.2			11.3			13.4			14.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.4	7.5	18.3		12.4	8.3	17.4				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		26.0	7.0	15.0		26.0	7.0	15.0				
Max Q Clear Time (g_c+I1), s		2.5	2.8	9.9		4.1	3.2	5.1				
Green Ext Time (p_c), s		0.1	0.0	2.4		0.3	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	770	170	500	370	100	90	300	330	150	450	80
Future Volume (veh/h)	50	770	170	500	370	100	90	300	330	150	450	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	52	794	164	515	381	89	93	309	198	155	464	73
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	826	171	457	1408	325	115	376	235	179	664	104
Arrive On Green	0.04	0.28	0.28	0.26	0.50	0.50	0.07	0.18	0.18	0.10	0.22	0.22
Sat Flow, veh/h	1781	2922	603	1767	2836	655	1767	2072	1292	1767	3045	476
Grp Volume(v), veh/h	52	483	475	515	235	235	93	262	245	155	267	270
Grp Sat Flow(s),veh/h/ln	1781	1777	1748	1767	1763	1728	1767	1763	1601	1767	1763	1758
Q Serve(g_s), s	3.8	35.8	35.8	34.6	10.4	10.6	7.0	19.1	19.8	11.6	18.7	19.0
Cycle Q Clear(g_c), s	3.8	35.8	35.8	34.6	10.4	10.6	7.0	19.1	19.8	11.6	18.7	19.0
Prop In Lane	1.00		0.35	1.00		0.38	1.00		0.81	1.00		0.27
Lane Grp Cap(c), veh/h	80	503	495	457	875	858	115	320	291	179	384	383
V/C Ratio(X)	0.65	0.96	0.96	1.13	0.27	0.27	0.81	0.82	0.84	0.86	0.70	0.70
Avail Cap(c_a), veh/h	133	503	495	457	875	858	185	487	442	224	527	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	47.3	47.3	49.6	19.6	19.6	61.8	52.6	52.9	59.2	48.2	48.3
Incr Delay (d2), s/veh	3.3	30.0	30.4	81.8	0.1	0.1	5.4	6.4	9.0	20.6	2.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	19.8	19.5	25.0	4.1	4.1	3.2	8.8	8.5	6.1	8.3	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	77.3	77.6	131.4	19.6	19.7	67.1	59.0	61.9	79.8	50.6	50.9
LnGrp LOS	E	E	E	F	B	B	E	E	E	E	D	D
Approach Vol, veh/h		1010		985		600		692				
Approach Delay, s/veh		76.9		78.1		61.5		57.3				
Approach LOS		E		E		E		E				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	31.3	39.6	44.4	13.7	36.2	11.0	73.0				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	17.0	37.0	34.6	37.9	14.0	40.0	10.0	62.5				
Max Q Clear Time (g_c+I1), s	11.0	21.8	36.6	37.8	9.0	21.0	5.8	12.6				
Green Ext Time (p_c), s	0.1	2.5	0.0	0.0	0.0	2.8	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1060	90	220	970	10	50	120	120	10	120	60
Future Volume (veh/h)	70	1060	90	220	970	10	50	120	120	10	120	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1116	92	232	1021	7	53	126	24	11	126	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	118	1287	106	269	1681	738	102	498	92	33	240	198
Arrive On Green	0.07	0.39	0.39	0.15	0.48	0.48	0.06	0.17	0.17	0.02	0.13	0.13
Sat Flow, veh/h	1767	3289	271	1767	3526	1547	1767	2956	548	1767	1856	1530
Grp Volume(v), veh/h	74	598	610	232	1021	7	53	74	76	11	126	9
Grp Sat Flow(s),veh/h/ln	1767	1763	1798	1767	1763	1547	1767	1763	1741	1767	1856	1530
Q Serve(g_s), s	3.6	27.3	27.3	11.2	18.6	0.2	2.5	3.2	3.3	0.5	5.5	0.4
Cycle Q Clear(g_c), s	3.6	27.3	27.3	11.2	18.6	0.2	2.5	3.2	3.3	0.5	5.5	0.4
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	118	690	703	269	1681	738	102	297	293	33	240	198
V/C Ratio(X)	0.63	0.87	0.87	0.86	0.61	0.01	0.52	0.25	0.26	0.33	0.53	0.05
Avail Cap(c_a), veh/h	162	787	802	324	1897	832	162	797	787	142	818	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	24.5	24.5	36.1	16.8	12.0	40.0	31.5	31.6	42.3	35.5	33.3
Incr Delay (d2), s/veh	5.4	9.1	9.1	17.9	0.5	0.0	1.5	0.2	0.2	2.1	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	11.7	11.9	5.8	6.5	0.1	1.1	1.3	1.3	0.2	2.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	33.6	33.6	54.1	17.3	12.0	41.5	31.7	31.8	44.5	36.2	33.3
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	D	C
Approach Vol, veh/h		1282			1260			203			146	
Approach Delay, s/veh		34.3			24.0			34.3			36.6	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	17.8	10.8	48.7	6.6	21.2	18.3	41.2				
Change Period (Y+Rc), s	5.0	6.5	5.0	7.0	5.0	6.5	5.0	7.0				
Max Green Setting (Gmax), s	38.5	38.5	8.0	47.0	7.0	39.5	16.0	39.0				
Max Q Clear Time (g_c+1/4), s	14.5	7.5	5.6	20.6	2.5	5.3	13.2	29.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	7.2	0.0	0.5	0.2	4.8				

### Intersection Summary

HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

### Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	800	120	240	700	350	180	710	260	340	1340	250
Future Volume (veh/h)	200	800	120	240	700	350	180	710	260	340	1340	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	206	825	47	247	722	221	186	732	247	351	1381	190
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	182	1012	449	320	978	761	257	1886	727	313	1967	608
Arrive On Green	0.10	0.28	0.28	0.09	0.27	0.27	0.08	0.37	0.37	0.09	0.39	0.39
Sat Flow, veh/h	1795	3582	1589	3483	3582	2786	3428	5066	1566	3428	5066	1566
Grp Volume(v), veh/h	206	825	47	247	722	221	186	732	247	351	1381	190
Grp Sat Flow(s),veh/h/ln	1795	1791	1589	1742	1791	1393	1714	1689	1566	1714	1689	1566
Q Serve(g_s), s	10.0	21.2	2.2	6.8	18.1	6.2	5.2	10.5	9.9	9.0	22.6	8.3
Cycle Q Clear(g_c), s	10.0	21.2	2.2	6.8	18.1	6.2	5.2	10.5	9.9	9.0	22.6	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	1012	449	320	978	761	257	1886	727	313	1967	608
V/C Ratio(X)	1.13	0.81	0.10	0.77	0.74	0.29	0.72	0.39	0.34	1.12	0.70	0.31
Avail Cap(c_a), veh/h	182	1452	644	529	1633	1270	417	2566	938	313	2412	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	33.0	26.2	43.8	32.7	28.3	44.6	22.7	16.8	44.8	25.4	21.0
Incr Delay (d2), s/veh	106.8	1.6	0.0	1.5	1.1	0.2	3.8	0.2	0.3	88.2	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	8.7	0.8	2.9	7.5	2.0	2.2	3.8	3.3	7.4	8.2	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.2	34.6	26.2	45.3	33.8	28.5	48.5	22.9	17.2	133.1	26.3	21.4
LnGrp LOS	F	C	C	D	C	C	D	C	B	F	C	C
Approach Vol, veh/h		1078			1190			1165			1922	
Approach Delay, s/veh		56.5			35.2			25.8			45.3	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	40.7	13.1	31.9	11.4	42.3	14.0	31.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	50.0	50.0	15.0	40.0	12.0	47.0	10.0	45.0				
Max Q Clear Time (g_c+I1), s	12.5	12.5	8.8	23.2	7.2	24.6	12.0	20.1				
Green Ext Time (p_c), s	0.0	7.3	0.2	3.1	0.2	13.4	0.0	5.5				

Intersection Summary

HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	260	1190	80	250	1110	100	60	280	160	210	480	360
Future Volume (veh/h)	260	1190	80	250	1110	100	60	280	160	210	480	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	268	1227	27	258	1144	33	62	289	33	216	495	181
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	354	1724	526	344	1709	528	84	569	248	255	909	398
Arrive On Green	0.10	0.34	0.34	0.10	0.33	0.33	0.05	0.16	0.16	0.14	0.26	0.26
Sat Flow, veh/h	3483	5147	1569	3483	5147	1590	1767	3526	1535	1767	3526	1542
Grp Volume(v), veh/h	268	1227	27	258	1144	33	62	289	33	216	495	181
Grp Sat Flow(s),veh/h/ln	1742	1716	1569	1742	1716	1590	1767	1763	1535	1767	1763	1542
Q Serve(g_s), s	5.7	16.0	0.9	5.5	14.6	1.1	2.7	5.7	1.4	9.1	9.3	7.6
Cycle Q Clear(g_c), s	5.7	16.0	0.9	5.5	14.6	1.1	2.7	5.7	1.4	9.1	9.3	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	1724	526	344	1709	528	84	569	248	255	909	398
V/C Ratio(X)	0.76	0.71	0.05	0.75	0.67	0.06	0.73	0.51	0.13	0.85	0.54	0.46
Avail Cap(c_a), veh/h	459	2281	695	386	2173	672	219	1838	800	288	1976	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	22.3	17.3	33.7	22.0	17.5	36.0	29.4	27.6	32.0	24.6	23.9
Incr Delay (d2), s/veh	3.6	0.7	0.0	6.6	0.5	0.0	4.5	0.5	0.2	17.0	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.8	0.3	2.5	5.3	0.4	1.2	2.3	0.5	4.8	3.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	23.0	17.3	40.3	22.6	17.5	40.6	29.9	27.7	49.1	25.0	24.5
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1522			1435			384			892	
Approach Delay, s/veh		25.4			25.6			31.4			30.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	31.2	8.2	25.3	12.3	31.0	15.6	17.9				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	34.0	9.5	43.0	10.1	32.4	12.5	40.0				
Max Q Clear Time (g_c+1), s	17.5	18.0	4.7	11.3	7.7	16.6	11.1	7.7				
Green Ext Time (p_c), s	0.1	7.3	0.0	3.0	0.1	6.8	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘	↖ ↗ ↘		↖ ↗ ↘	↖ ↗ ↘		↖	↖	↖	↖	↖ ↗ ↘	↖
Traffic Volume (veh/h)	30	1480	70	170	1440	70	80	120	150	70	130	40
Future Volume (veh/h)	30	1480	70	170	1440	70	80	120	150	70	130	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1558	72	179	1516	72	84	126	27	74	137	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	59	2209	102	219	2658	126	107	207	170	95	368	159
Arrive On Green	0.03	0.44	0.44	0.12	0.53	0.53	0.06	0.11	0.11	0.05	0.10	0.10
Sat Flow, veh/h	1795	5034	233	1795	5033	239	1767	1856	1527	1767	3526	1525
Grp Volume(v), veh/h	32	1062	568	179	1033	555	84	126	27	74	137	42
Grp Sat Flow(s),veh/h/ln	1795	1716	1836	1795	1716	1841	1767	1856	1527	1767	1763	1525
Q Serve(g_s), s	1.3	18.4	18.4	7.1	14.8	14.8	3.4	4.7	1.2	3.0	2.6	1.9
Cycle Q Clear(g_c), s	1.3	18.4	18.4	7.1	14.8	14.8	3.4	4.7	1.2	3.0	2.6	1.9
Prop In Lane	1.00		0.13	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	1506	805	219	1812	972	107	207	170	95	368	159
V/C Ratio(X)	0.55	0.71	0.71	0.82	0.57	0.57	0.78	0.61	0.16	0.78	0.37	0.26
Avail Cap(c_a), veh/h	125	1834	981	322	2210	1186	167	946	778	259	1981	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	16.6	16.6	31.2	11.6	11.6	33.8	30.9	29.3	34.1	30.5	30.1
Incr Delay (d2), s/veh	2.9	1.1	2.0	6.2	0.3	0.6	4.9	1.1	0.2	5.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.2	6.9	3.2	4.5	4.9	1.5	2.1	0.4	1.4	1.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	17.7	18.6	37.5	12.0	12.3	38.6	32.0	29.5	39.3	30.7	30.4
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1662			1767			237			253	
Approach Delay, s/veh		18.4			14.6			34.1			33.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	44.0	8.9	13.1	13.4	37.5	8.4	13.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.1	47.0	6.9	41.0	13.1	39.0	10.7	37.2				
Max Q Clear Time (g_c+1), s	13.3	16.8	5.4	4.6	9.1	20.4	5.0	6.7				
Green Ext Time (p_c), s	0.0	15.1	0.0	0.6	0.1	11.7	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	320	1270	140	590	1140	380	290	540	330	540	580	240
Future Volume (veh/h)	320	1270	140	590	1140	380	290	540	330	540	580	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	327	1296	44	602	1163	211	296	551	55	551	592	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	385	1645	508	586	1351	600	355	783	241	605	1153	356
Arrive On Green	0.11	0.32	0.32	0.17	0.38	0.38	0.10	0.15	0.15	0.17	0.22	0.22
Sat Flow, veh/h	3483	5147	1590	3483	3582	1591	3483	5147	1582	3483	5147	1587
Grp Volume(v), veh/h	327	1296	44	602	1163	211	296	551	55	551	592	55
Grp Sat Flow(s),veh/h/ln	1742	1716	1590	1742	1791	1591	1742	1716	1582	1742	1716	1587
Q Serve(g_s), s	10.1	25.2	2.1	18.5	32.9	10.5	9.2	11.2	3.4	17.1	11.1	3.1
Cycle Q Clear(g_c), s	10.1	25.2	2.1	18.5	32.9	10.5	9.2	11.2	3.4	17.1	11.1	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1645	508	586	1351	600	355	783	241	605	1153	356
V/C Ratio(X)	0.85	0.79	0.09	1.03	0.86	0.35	0.83	0.70	0.23	0.91	0.51	0.15
Avail Cap(c_a), veh/h	681	1645	508	586	1351	600	744	1329	408	649	1188	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	34.0	26.2	45.8	31.6	24.6	48.5	44.3	41.0	44.6	37.4	34.3
Incr Delay (d2), s/veh	1.9	3.7	0.3	41.3	6.3	1.4	2.0	0.4	0.2	15.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	10.5	0.8	11.1	14.5	4.0	4.0	4.6	1.3	8.4	4.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	37.7	26.5	87.1	37.9	26.0	50.5	44.7	41.1	60.3	37.6	34.4
LnGrp LOS	D	D	C	F	D	C	D	D	D	E	D	C
Approach Vol, veh/h		1667			1976			902			1198	
Approach Delay, s/veh		39.8			51.6			46.4			47.9	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	41.0	15.7	30.2	16.7	47.4	23.6	22.3				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	18.5	22.1	23.5	25.4	21.5	19.1	20.5	28.4				
Max Q Clear Time (g_c+Y), s	20.5	27.2	11.2	13.1	12.1	34.9	19.1	13.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	46.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1420	1010	0	1630	540	0	0	0	350	10	870
Future Volume (veh/h)	0	1420	1010	0	1630	540	0	0	0	350	10	870
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	1885	1885
Adj Flow Rate, veh/h	0	1449	558	0	1663	551				364	0	839
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	1	1				1	1	1
Cap, veh/h	0	2779	860	0	2779	1242				862	0	767
Arrive On Green	0.00	0.54	0.54	0.00	1.00	1.00				0.24	0.00	0.24
Sat Flow, veh/h	0	5316	1593	0	5316	1590				3591	0	3195
Grp Volume(v), veh/h	0	1449	558	0	1663	551				364	0	839
Grp Sat Flow(s),veh/h/ln	0	1716	1593	0	1716	1590				1795	0	1598
Q Serve(g_s), s	0.0	9.9	13.6	0.0	0.0	0.0				4.7	0.0	13.2
Cycle Q Clear(g_c), s	0.0	9.9	13.6	0.0	0.0	0.0				4.7	0.0	13.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2779	860	0	2779	1242				862	0	767
V/C Ratio(X)	0.00	0.52	0.65	0.00	0.60	0.44				0.42	0.00	1.09
Avail Cap(c_a), veh/h	0	2779	860	0	2779	1242				862	0	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.1	9.0	0.0	0.0	0.0				17.7	0.0	20.9
Incr Delay (d2), s/veh	0.0	0.7	3.8	0.0	0.7	0.9				0.1	0.0	61.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	3.9	0.0	0.2	0.3				1.8	0.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.8	12.7	0.0	0.7	0.9				17.8	0.0	82.1
LnGrp LOS	A	A	B	A	A	A				B	A	F
Approach Vol, veh/h		2007			2214						1203	
Approach Delay, s/veh		9.9			0.8						62.7	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		36.0		19.0		36.0						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		29.7		13.2		29.7						
Max Q Clear Time (g_c+I1), s		15.6		15.2		2.0						
Green Ext Time (p_c), s		6.8		0.0		10.7						

### Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗	↖	↖	↗			
Traffic Volume (veh/h)	100	1390	280	0	1540	160	630	0	440	0	0	0
Future Volume (veh/h)	100	1390	280	0	1540	160	630	0	440	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1885	1885	1885	0	1885	1885	1885	1885	1885			
Adj Flow Rate, veh/h	103	1433	289	0	1588	96	649	0	401			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	1	1	1	0	1	1	1	1	1			
Cap, veh/h	178	2082	1242	0	2966	918	731	0	651			
Arrive On Green	1.00	1.00	1.00	0.00	0.58	0.58	0.20	0.00	0.20			
Sat Flow, veh/h	155	3613	1591	0	5316	1593	3591	0	3195			
Grp Volume(v), veh/h	288	1248	289	0	1588	96	649	0	401			
Grp Sat Flow(s),veh/h/ln	646	1561	1591	0	1716	1593	1795	0	1598			
Q Serve(g_s), s	21.3	0.0	0.0	0.0	10.4	1.5	9.7	0.0	6.3			
Cycle Q Clear(g_c), s	31.7	0.0	0.0	0.0	10.4	1.5	9.7	0.0	6.3			
Prop In Lane	0.36		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	461	1800	1242	0	2966	918	731	0	651			
V/C Ratio(X)	0.62	0.69	0.23	0.00	0.54	0.10	0.89	0.00	0.62			
Avail Cap(c_a), veh/h	461	1800	1242	0	2966	918	731	0	651			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.85	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	3.2	0.0	0.0	0.0	7.1	5.3	21.3	0.0	19.9			
Incr Delay (d2), s/veh	5.3	1.9	0.4	0.0	0.7	0.2	12.4	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.7	0.5	0.1	0.0	2.4	0.4	4.9	0.0	2.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	1.9	0.4	0.0	7.8	5.5	33.7	0.0	21.2			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1825			1684			1050				
Approach Delay, s/veh		2.7			7.7			28.9				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		38.0				38.0		17.0				
Change Period (Y+Rc), s		6.3				6.3		5.8				
Max Green Setting (Gmax), s		31.7				31.7		11.2				
Max Q Clear Time (g_c+1), s		33.7				12.4		11.7				
Green Ext Time (p_c), s		0.0				7.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	370	1090	200	190	690	50	270	660	210	150	750	580
Future Volume (veh/h)	370	1090	200	190	690	50	270	660	210	150	750	580
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	385	1135	62	198	719	13	281	688	68	156	781	304
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	3	3	3
Cap, veh/h	481	1407	434	286	1130	343	376	1529	472	266	1366	422
Arrive On Green	0.14	0.28	0.28	0.08	0.22	0.22	0.11	0.30	0.30	0.08	0.27	0.27
Sat Flow, veh/h	3374	4985	1539	3428	5066	1540	3428	5066	1565	3428	5066	1564
Grp Volume(v), veh/h	385	1135	62	198	719	13	281	688	68	156	781	304
Grp Sat Flow(s),veh/h/ln	1687	1662	1539	1714	1689	1540	1714	1689	1565	1714	1689	1564
Q Serve(g_s), s	9.7	18.7	2.7	5.0	11.3	0.6	7.0	9.7	2.8	3.9	11.7	15.5
Cycle Q Clear(g_c), s	9.7	18.7	2.7	5.0	11.3	0.6	7.0	9.7	2.8	3.9	11.7	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	1407	434	286	1130	343	376	1529	472	266	1366	422
V/C Ratio(X)	0.80	0.81	0.14	0.69	0.64	0.04	0.75	0.45	0.14	0.59	0.57	0.72
Avail Cap(c_a), veh/h	994	1582	488	1204	1895	576	1399	2009	621	1399	2009	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	29.4	23.7	39.3	31.0	26.9	38.1	24.9	22.5	39.3	27.8	29.2
Incr Delay (d2), s/veh	2.3	2.9	0.1	2.2	0.6	0.0	2.2	0.2	0.1	1.5	0.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	7.1	0.9	2.1	4.4	0.2	2.9	3.6	1.0	1.6	4.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	32.3	23.8	41.6	31.6	26.9	40.3	25.1	22.6	40.9	28.2	31.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1582			930			1037			1241	
Approach Delay, s/veh		33.6			33.7			29.1			30.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.9	11.8	32.1	17.6	26.7	14.7	29.3				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	31.0	28.0	36.0	35.0	26.0	33.0	36.0	35.0				
Max Q Clear Time (g_c+1), s	17.0	20.7	5.9	11.7	11.7	13.3	9.0	17.5				
Green Ext Time (p_c), s	0.5	4.0	0.4	4.5	0.8	4.4	0.7	5.5				

Intersection Summary

HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	200	40	220	220	120	80	620	240	130	580	90
Future Volume (veh/h)	80	200	40	220	220	120	80	620	240	130	580	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	83	208	8	229	229	32	83	646	129	135	604	43
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	105	280	232	255	446	376	105	2253	688	157	2402	726
Arrive On Green	0.06	0.15	0.15	0.14	0.24	0.24	0.06	0.44	0.44	0.09	0.47	0.47
Sat Flow, veh/h	1781	1870	1546	1781	1870	1575	1795	5147	1571	1795	5147	1555
Grp Volume(v), veh/h	83	208	8	229	229	32	83	646	129	135	604	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1546	1781	1870	1575	1795	1716	1571	1795	1716	1555
Q Serve(g_s), s	5.5	12.8	0.5	15.2	12.7	1.9	5.5	9.7	6.0	8.9	8.5	1.8
Cycle Q Clear(g_c), s	5.5	12.8	0.5	15.2	12.7	1.9	5.5	9.7	6.0	8.9	8.5	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	280	232	255	446	376	105	2253	688	157	2402	726
V/C Ratio(X)	0.79	0.74	0.03	0.90	0.51	0.09	0.79	0.29	0.19	0.86	0.25	0.06
Avail Cap(c_a), veh/h	223	541	447	334	670	564	157	2253	688	157	2402	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	48.8	43.6	50.5	39.6	35.5	55.8	21.7	20.7	54.0	19.3	17.5
Incr Delay (d2), s/veh	5.0	1.5	0.0	18.6	0.3	0.0	7.9	0.3	0.6	33.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.9	0.2	7.9	5.7	0.7	2.6	3.8	2.2	5.4	3.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	50.2	43.6	69.1	40.0	35.5	63.7	22.0	21.3	87.8	19.6	17.7
LnGrp LOS	E	D	D	E	D	D	E	C	C	F	B	B
Approach Vol, veh/h		299			490			858			782	
Approach Delay, s/veh		53.0			53.3			25.9			31.3	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	60.0	21.7	23.3	11.5	63.5	11.1	33.9				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	10.5	* 31	22.5	34.7	10.5	30.5	15.0	* 43				
Max Q Clear Time (g_c+fl), s	11.7	11.7	17.2	14.8	7.5	10.5	7.5	14.7				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.1	0.0	2.4	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	60	150	20	80	10	260	830	10	30	460	210
Future Volume (veh/h)	200	60	150	20	80	10	260	830	10	30	460	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	202	61	47	20	81	2	263	838	6	30	465	54
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	257	391	329	42	165	138	328	2123	637	60	943	412
Arrive On Green	0.15	0.21	0.21	0.02	0.09	0.09	0.18	0.41	0.41	0.03	0.26	0.26
Sat Flow, veh/h	1767	1856	1561	1767	1856	1546	1795	5147	1544	1795	3582	1567
Grp Volume(v), veh/h	202	61	47	20	81	2	263	838	6	30	465	54
Grp Sat Flow(s),veh/h/ln	1767	1856	1561	1767	1856	1546	1795	1716	1544	1795	1791	1567
Q Serve(g_s), s	6.2	1.5	1.4	0.6	2.3	0.1	7.9	6.4	0.1	0.9	6.2	1.5
Cycle Q Clear(g_c), s	6.2	1.5	1.4	0.6	2.3	0.1	7.9	6.4	0.1	0.9	6.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	391	329	42	165	138	328	2123	637	60	943	412
V/C Ratio(X)	0.79	0.16	0.14	0.47	0.49	0.01	0.80	0.39	0.01	0.50	0.49	0.13
Avail Cap(c_a), veh/h	549	1664	1400	188	1285	1071	685	5374	1612	214	2799	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	18.1	18.1	27.1	24.4	23.4	22.0	11.6	9.8	26.8	17.6	15.8
Incr Delay (d2), s/veh	5.2	0.2	0.2	8.1	2.2	0.0	4.6	0.1	0.0	6.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.6	0.5	0.3	1.1	0.0	3.2	1.8	0.0	0.5	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	18.3	18.3	35.2	26.7	23.4	26.6	11.7	9.8	33.2	18.0	16.0
LnGrp LOS	C	B	B	D	C	C	C	B	A	C	B	B
Approach Vol, veh/h		310			103			1107			549	
Approach Delay, s/veh		24.9			28.3			15.3			18.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	27.7	5.8	16.4	14.8	19.3	12.7	9.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	58.8	58.8	6.0	50.5	21.5	44.0	17.5	39.0				
Max Q Clear Time (g_c+1/2g), s	8.4	8.4	2.6	3.5	9.9	8.2	8.2	4.3				
Green Ext Time (p_c), s	0.0	6.0	0.0	0.4	0.5	3.1	0.3	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											18.2	
HCM 6th LOS											B	



HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	190	440	350	200	180	40	190	520	230	60	550	200
Future Volume (veh/h)	190	440	350	200	180	40	190	520	230	60	550	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	463	202	211	189	9	200	547	116	63	579	190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	704	307	248	706	310	236	1894	578	81	742	243
Arrive On Green	0.13	0.20	0.20	0.14	0.20	0.20	0.13	0.37	0.37	0.05	0.29	0.29
Sat Flow, veh/h	1767	3526	1539	1767	3526	1550	1767	5066	1546	1767	2597	850
Grp Volume(v), veh/h	200	463	202	211	189	9	200	547	116	63	393	376
Grp Sat Flow(s),veh/h/ln	1767	1763	1539	1767	1763	1550	1767	1689	1546	1767	1763	1684
Q Serve(g_s), s	9.7	10.6	10.6	10.2	4.0	0.4	9.7	6.6	4.4	3.1	17.9	18.0
Cycle Q Clear(g_c), s	9.7	10.6	10.6	10.2	4.0	0.4	9.7	6.6	4.4	3.1	17.9	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	237	704	307	248	706	310	236	1894	578	81	504	481
V/C Ratio(X)	0.85	0.66	0.66	0.85	0.27	0.03	0.85	0.29	0.20	0.78	0.78	0.78
Avail Cap(c_a), veh/h	559	1534	670	587	1571	691	536	3713	1133	293	1050	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	32.2	32.2	36.6	29.5	28.1	36.9	19.2	18.5	41.2	28.7	28.7
Incr Delay (d2), s/veh	3.2	1.1	2.4	3.2	0.2	0.0	3.2	0.1	0.2	5.9	2.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	4.3	3.9	4.4	1.6	0.1	4.1	2.3	1.5	1.4	7.2	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	33.3	34.6	39.8	29.7	28.1	40.1	19.3	18.7	47.2	31.3	31.5
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		865			409			863			832	
Approach Delay, s/veh		35.2			34.9			24.0			32.6	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	39.6	16.2	22.9	16.2	32.0	16.2	23.0				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	14.5	64.0	29.0	38.0	26.5	52.0	27.6	38.9				
Max Q Clear Time (g_c+1/4), s	11.5	8.6	12.2	12.6	11.7	20.0	11.7	6.0				
Green Ext Time (p_c), s	0.0	4.0	0.1	3.6	0.1	4.7	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	270	60	380	160	470	70	730	650	310	430	30
Future Volume (veh/h)	50	270	60	380	160	470	70	730	650	310	430	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	52	281	6	282	327	271	73	760	361	323	448	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	1	1	1
Cap, veh/h	183	366	160	425	446	370	94	1130	495	381	1275	77
Arrive On Green	0.11	0.11	0.11	0.24	0.24	0.24	0.05	0.32	0.32	0.11	0.37	0.37
Sat Flow, veh/h	1739	3469	1522	1781	1870	1553	1795	3582	1569	3483	3426	206
Grp Volume(v), veh/h	52	281	6	282	327	271	73	760	361	323	233	242
Grp Sat Flow(s),veh/h/ln	1739	1735	1522	1781	1870	1553	1795	1791	1569	1742	1791	1841
Q Serve(g_s), s	2.1	6.1	0.3	11.1	12.6	12.5	3.1	14.3	15.9	7.1	7.3	7.4
Cycle Q Clear(g_c), s	2.1	6.1	0.3	11.1	12.6	12.5	3.1	14.3	15.9	7.1	7.3	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	183	366	160	425	446	370	94	1130	495	381	666	685
V/C Ratio(X)	0.28	0.77	0.04	0.66	0.73	0.73	0.77	0.67	0.73	0.85	0.35	0.35
Avail Cap(c_a), veh/h	190	379	166	676	709	589	196	1635	716	381	817	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	33.9	31.2	26.8	27.3	27.3	36.4	23.1	23.7	34.0	17.6	17.6
Incr Delay (d2), s/veh	0.8	8.9	0.1	1.8	2.4	2.8	12.5	0.7	2.1	16.3	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.9	0.1	4.7	5.6	4.7	1.6	5.4	5.5	3.6	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	42.8	31.3	28.6	29.7	30.1	48.9	23.8	25.8	50.3	17.9	18.0
LnGrp LOS	C	D	C	C	C	C	D	C	C	D	B	B
Approach Vol, veh/h	339			880			1194			798		
Approach Delay, s/veh	41.1			29.5			26.0			31.1		
Approach LOS	D			C			C			C		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	30.0	29.0	12.7		8.6	33.4	23.0					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	30.5	35.5	8.5		8.5	35.5	29.5					
Max Q Clear Time (g_c+1/4), s	17.9	17.9	8.1		5.1	9.4	14.6					
Green Ext Time (p_c), s	0.0	5.6	0.1		0.0	2.5	3.4					

Intersection Summary

HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↔	↔	↑	↔	↔	↑↑		↔	↑↑	↔
Traffic Volume (veh/h)	360	210	110	50	190	50	220	940	50	120	860	270
Future Volume (veh/h)	360	210	110	50	190	50	220	940	50	120	860	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	375	219	33	52	198	11	229	979	49	125	896	123
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	402	451	380	79	317	260	254	1290	65	158	1142	683
Arrive On Green	0.12	0.24	0.24	0.04	0.17	0.17	0.14	0.38	0.38	0.09	0.32	0.32
Sat Flow, veh/h	3456	1870	1575	1781	1870	1535	1767	3411	171	1767	3526	1544
Grp Volume(v), veh/h	375	219	33	52	198	11	229	506	522	125	896	123
Grp Sat Flow(s),veh/h/ln	1728	1870	1575	1781	1870	1535	1767	1763	1819	1767	1763	1544
Q Serve(g_s), s	7.9	7.3	1.2	2.1	7.2	0.4	9.3	18.3	18.3	5.1	16.8	3.5
Cycle Q Clear(g_c), s	7.9	7.3	1.2	2.1	7.2	0.4	9.3	18.3	18.3	5.1	16.8	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	402	451	380	79	317	260	254	667	688	158	1142	683
V/C Ratio(X)	0.93	0.49	0.09	0.65	0.62	0.04	0.90	0.76	0.76	0.79	0.78	0.18
Avail Cap(c_a), veh/h	402	904	761	176	871	714	254	758	782	196	1400	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	23.8	21.5	34.3	28.2	25.4	30.8	19.8	19.8	32.6	22.4	12.4
Incr Delay (d2), s/veh	28.5	0.8	0.1	8.8	2.0	0.1	31.9	3.9	3.8	16.0	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.1	0.4	1.1	3.2	0.2	5.9	7.1	7.4	2.7	6.5	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	24.6	21.6	43.1	30.2	25.4	62.6	23.7	23.6	48.5	24.8	12.6
LnGrp LOS	E	C	C	D	C	C	E	C	C	D	C	B
Approach Vol, veh/h		627			261			1257			1144	
Approach Delay, s/veh		45.9			32.6			30.8			26.1	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	28.2	7.8	22.1	11.0	32.1	13.0	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	29.0	7.2	35.3	8.1	31.4	8.5	34.0				
Max Q Clear Time (g_c+I1), s	11.3	18.8	4.1	9.3	7.1	20.3	9.9	9.2				
Green Ext Time (p_c), s	0.0	4.4	0.0	1.3	0.0	4.6	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											32.2	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1600	520	270	1480	0	0	0	0	690	10	420
Future Volume (veh/h)	0	1600	520	270	1480	0	0	0	0	690	10	420
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1781	1781	1781
Adj Flow Rate, veh/h	0	1616	416	273	1495	0				704	0	372
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	8	8	8	8	0				8	8	8
Cap, veh/h	0	2352	721	308	3015	0				935	0	416
Arrive On Green	0.00	0.48	0.48	0.09	0.62	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	5024	1490	3291	5024	0				3393	0	1510
Grp Volume(v), veh/h	0	1616	416	273	1495	0				704	0	372
Grp Sat Flow(s),veh/h/ln	0	1621	1490	1646	1621	0				1697	0	1510
Q Serve(g_s), s	0.0	28.3	22.0	9.0	18.6	0.0				20.9	0.0	26.1
Cycle Q Clear(g_c), s	0.0	28.3	22.0	9.0	18.6	0.0				20.9	0.0	26.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2352	721	308	3015	0				935	0	416
V/C Ratio(X)	0.00	0.69	0.58	0.89	0.50	0.00				0.75	0.00	0.89
Avail Cap(c_a), veh/h	0	2352	721	308	3015	0				1712	0	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.0	20.3	49.3	11.5	0.0				36.4	0.0	38.3
Incr Delay (d2), s/veh	0.0	1.7	3.3	24.3	0.6	0.0				0.5	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.2	7.7	4.6	5.9	0.0				8.6	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.6	23.7	73.6	12.1	0.0				36.9	0.0	41.1
LnGrp LOS	A	C	C	E	B	A				D	A	D
Approach Vol, veh/h		2032			1768						1076	
Approach Delay, s/veh		23.6			21.5						38.4	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	59.2			35.8		74.2						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	28.0			55.5		43.0						
Max Q Clear Time (g_c+fl), s	30.3			28.1		20.6						
Green Ext Time (p_c), s	0.0	0.0		2.2		10.9						

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗		↑↑↑		↖	↖	↗	↖		↗
Traffic Volume (veh/h)	420	1620	250	0	1670	100	340	130	200	140	0	700
Future Volume (veh/h)	420	1620	250	0	1670	100	340	130	200	140	0	700
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	0	1781	1781	1781	1781	1781	1856	0	1856
Adj Flow Rate, veh/h	424	1636	0	0	1687	95	237	279	106	141	0	75
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	0	8	8	8	8	8	3	0	3
Cap, veh/h	414	3455		0	2552	144	329	345	290	0	0	0
Arrive On Green	0.24	0.71	0.00	0.00	0.43	0.43	0.19	0.19	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1697	4863	2657	0	6223	336	1697	1781	1498		0	
Grp Volume(v), veh/h	424	1636	0	0	1298	484	237	279	106		0.0	
Grp Sat Flow(s),veh/h/ln	1697	1621	1329	0	1532	1714	1697	1781	1498			
Q Serve(g_s), s	29.3	17.6	0.0	0.0	27.1	27.1	15.7	18.0	7.4			
Cycle Q Clear(g_c), s	29.3	17.6	0.0	0.0	27.1	27.1	15.7	18.0	7.4			
Prop In Lane	1.00		1.00	0.00		0.20	1.00		1.00			
Lane Grp Cap(c), veh/h	414	3455		0	1963	732	329	345	290			
V/C Ratio(X)	1.02	0.47		0.00	0.66	0.66	0.72	0.81	0.37			
Avail Cap(c_a), veh/h	414	3455		0	1963	732	459	482	406			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	45.3	7.6	0.0	0.0	27.4	27.4	45.3	46.2	42.0			
Incr Delay (d2), s/veh	50.3	0.5	0.0	0.0	1.8	4.7	3.3	6.9	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.6	5.2	0.0	0.0	10.0	11.7	6.9	8.6	2.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.7	8.0	0.0	0.0	29.2	32.1	48.7	53.2	42.7			
LnGrp LOS	F	A		A	C	C	D	D	D			
Approach Vol, veh/h		2060	A		1782			622				
Approach Delay, s/veh		26.1			30.0			49.7				
Approach LOS		C			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.3			34.0	57.3		28.7				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		57.0			* 29	23.0		32.5				
Max Q Clear Time (g_c+I1), s		19.6			31.3	29.1		20.0				
Green Ext Time (p_c), s		9.5			0.0	0.0		2.5				

Intersection Summary

HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1270	100	80	1100	30	90	400	40	50	360	100
Future Volume (veh/h)	120	1270	100	80	1100	30	90	400	40	50	360	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	1337	60	84	1158	14	95	421	9	53	379	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	155	1553	1377	118	1479	649	128	669	292	102	619	270
Arrive On Green	0.09	0.46	0.46	0.07	0.44	0.44	0.07	0.19	0.19	0.06	0.18	0.18
Sat Flow, veh/h	1697	3385	2585	1697	3385	1485	1781	3526	1538	1767	3526	1537
Grp Volume(v), veh/h	126	1337	60	84	1158	14	95	421	9	53	379	22
Grp Sat Flow(s),veh/h/ln	1697	1692	1293	1697	1692	1485	1781	1763	1538	1767	1763	1537
Q Serve(g_s), s	6.4	31.0	1.0	4.3	25.7	0.5	4.6	9.7	0.4	2.6	8.7	1.1
Cycle Q Clear(g_c), s	6.4	31.0	1.0	4.3	25.7	0.5	4.6	9.7	0.4	2.6	8.7	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	1553	1377	118	1479	649	128	669	292	102	619	270
V/C Ratio(X)	0.81	0.86	0.04	0.71	0.78	0.02	0.74	0.63	0.03	0.52	0.61	0.08
Avail Cap(c_a), veh/h	174	1784	1553	135	1707	749	142	1324	578	181	1404	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	21.3	9.9	40.0	21.2	14.1	40.0	32.8	29.0	40.2	33.4	30.3
Incr Delay (d2), s/veh	20.2	4.1	0.0	10.7	1.8	0.0	14.2	0.9	0.0	1.5	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	11.5	0.2	2.0	9.3	0.1	2.4	4.0	0.1	1.1	3.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	25.3	9.9	50.7	22.9	14.1	54.1	33.7	29.1	41.7	34.3	30.4
LnGrp LOS	E	C	A	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1523			1256			525			454	
Approach Delay, s/veh		27.5			24.7			37.3			35.0	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	22.7	10.1	46.0	10.3	21.4	12.0	44.1				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	33.0	33.0	7.0	46.3	7.0	35.0	9.0	44.3				
Max Q Clear Time (g_c+14), s	11.6	11.7	6.3	33.0	6.6	10.7	8.4	27.7				
Green Ext Time (p_c), s	0.0	2.4	0.0	7.3	0.0	2.1	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑ ↗			↖ ↗ ↑↑↑ ↘			↖ ↑↑↑ ↗		↖	↖	↖ ↑↑↑ ↗	
Traffic Volume (veh/h)	170	1230	80	380	920	60	90	1020	610	110	750	110
Future Volume (veh/h)	170	1230	80	380	920	60	90	1020	610	110	750	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	1295	77	400	968	57	95	1074	427	116	789	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	211	1357	81	366	1296	76	126	1514	461	138	1551	473
Arrive On Green	0.12	0.29	0.29	0.11	0.28	0.28	0.07	0.30	0.30	0.08	0.31	0.31
Sat Flow, veh/h	1697	4688	279	3291	4692	276	1781	5066	1544	1767	5066	1544
Grp Volume(v), veh/h	179	895	477	400	668	357	95	1074	427	116	789	36
Grp Sat Flow(s),veh/h/ln	1697	1621	1725	1646	1621	1726	1781	1689	1544	1767	1689	1544
Q Serve(g_s), s	9.3	24.4	24.4	10.0	16.9	16.9	4.7	17.0	24.1	5.8	11.5	1.5
Cycle Q Clear(g_c), s	9.3	24.4	24.4	10.0	16.9	16.9	4.7	17.0	24.1	5.8	11.5	1.5
Prop In Lane	1.00		0.16	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	938	499	366	896	477	126	1514	461	138	1551	473
V/C Ratio(X)	0.85	0.95	0.95	1.09	0.75	0.75	0.76	0.71	0.93	0.84	0.51	0.08
Avail Cap(c_a), veh/h	302	938	499	366	896	477	198	1522	464	138	1551	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	31.3	31.3	39.9	29.6	29.7	41.0	28.0	30.5	40.9	25.6	22.1
Incr Delay (d2), s/veh	10.4	19.3	29.2	74.0	3.7	6.8	3.4	1.7	24.8	33.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	11.3	13.4	7.6	6.6	7.4	2.1	6.6	11.4	3.7	4.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	50.7	60.5	113.9	33.3	36.5	44.4	29.7	55.3	74.6	26.0	22.2
LnGrp LOS	D	D	E	F	C	D	D	C	E	E	C	C
Approach Vol, veh/h	1551			1425			1596			941		
Approach Delay, s/veh	53.5			56.7			37.4			31.8		
Approach LOS	D			E			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	32.9	14.0	32.0	10.3	33.5	15.2	30.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	27.0	10.0	26.0	10.0	24.0	16.0	20.0					
Max Q Clear Time (g_c+1), s	26.1	12.0	26.4	6.7	13.5	11.3	18.9					
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	4.4	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	270	1580	60	30	1040	80	30	90	30	70	150	210
Future Volume (veh/h)	270	1580	60	30	1040	80	30	90	30	70	150	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	284	1663	60	32	1095	76	32	95	8	74	158	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	235	1897	68	80	1406	97	84	330	273	141	390	324
Arrive On Green	0.14	0.39	0.39	0.05	0.30	0.30	0.05	0.18	0.18	0.08	0.21	0.21
Sat Flow, veh/h	1697	4813	174	1697	4637	322	1781	1870	1549	1781	1870	1552
Grp Volume(v), veh/h	284	1120	603	32	765	406	32	95	8	74	158	55
Grp Sat Flow(s),veh/h/ln	1697	1621	1744	1697	1621	1716	1781	1870	1549	1781	1870	1552
Q Serve(g_s), s	9.0	20.8	20.8	1.2	14.0	14.0	1.1	2.9	0.3	2.6	4.8	1.9
Cycle Q Clear(g_c), s	9.0	20.8	20.8	1.2	14.0	14.0	1.1	2.9	0.3	2.6	4.8	1.9
Prop In Lane	1.00		0.10	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	1278	688	80	983	520	84	330	273	141	390	324
V/C Ratio(X)	1.21	0.88	0.88	0.40	0.78	0.78	0.38	0.29	0.03	0.52	0.41	0.17
Avail Cap(c_a), veh/h	235	1278	688	183	1096	580	192	785	650	192	785	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	18.2	18.2	30.1	20.7	20.7	30.1	23.2	22.2	28.8	22.3	21.1
Incr Delay (d2), s/veh	127.4	7.1	12.3	1.2	3.3	6.2	1.0	0.8	0.1	1.1	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.6	9.2	0.5	5.0	5.7	0.5	1.2	0.1	1.1	1.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.4	25.4	30.6	31.3	24.0	26.8	31.1	24.0	22.2	29.9	22.9	21.4
LnGrp LOS	F	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h	2007				1203		135				287	
Approach Delay, s/veh	45.4				25.2		25.6				24.4	
Approach LOS	D				C		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	17.2	7.1	31.6	7.1	19.3	13.0	25.7				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	27.3	7.0	24.0	7.0	27.3	9.0	22.0					
Max Q Clear Time (g_c+14), s	4.9	3.2	22.8	3.1	6.8	11.0	16.0					
Green Ext Time (p_c), s	0.0	0.7	0.0	1.0	0.0	0.9	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1100	300	210	850	450	180	1270	330	410	1350	120
Future Volume (veh/h)	190	1100	300	210	850	450	180	1270	330	410	1350	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	198	1146	279	219	885	209	188	1323	312	427	1406	63
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	160	1324	319	183	1371	417	169	1300	306	347	1239	543
Arrive On Green	0.09	0.27	0.27	0.11	0.28	0.28	0.10	0.26	0.26	0.20	0.37	0.37
Sat Flow, veh/h	1697	4943	1192	1697	4863	1481	1697	4971	1169	1697	3385	1484
Grp Volume(v), veh/h	198	1065	360	219	885	209	188	1223	412	427	1406	63
Grp Sat Flow(s),veh/h/ln	1697	1532	1539	1697	1621	1481	1697	1532	1544	1697	1692	1484
Q Serve(g_s), s	13.5	31.7	32.1	15.5	22.9	16.9	14.3	37.5	37.5	29.3	52.5	4.0
Cycle Q Clear(g_c), s	13.5	31.7	32.1	15.5	22.9	16.9	14.3	37.5	37.5	29.3	52.5	4.0
Prop In Lane	1.00		0.77	1.00		1.00	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	160	1231	412	183	1371	417	169	1202	404	347	1239	543
V/C Ratio(X)	1.24	0.86	0.87	1.19	0.65	0.50	1.11	1.02	1.02	1.23	1.13	0.12
Avail Cap(c_a), veh/h	160	1282	429	183	1424	434	169	1202	404	347	1239	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	50.0	50.2	64.0	45.2	43.1	64.6	53.0	53.0	57.1	45.5	30.1
Incr Delay (d2), s/veh	149.9	6.2	17.3	128.5	1.0	0.9	102.2	30.4	50.2	127.0	71.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	12.5	14.0	13.1	9.2	6.2	10.8	17.2	19.5	24.3	33.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	214.8	56.3	67.5	192.5	46.2	44.0	166.7	83.4	103.2	184.1	116.5	30.2
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	F	C
Approach Vol, veh/h		1623		1313			1823		1896			
Approach Delay, s/veh		78.1		70.2			96.5		128.9			
Approach LOS		E		E			F		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	44.0	20.0	45.4	19.0	59.0	18.0	47.4				
Change Period (Y+Rc), s	4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	29	37.5	15.5	40.0	* 14	52.5	13.5	42.0				
Max Q Clear Time (g_c+Bl), s	39.5	39.5	17.5	34.1	16.3	54.5	15.5	24.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.4				

### Intersection Summary

HCM 6th Ctrl Delay	96.0
HCM 6th LOS	F

### Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
54: Grove Ave & Edison Ave/Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1550	90	100	1370	90	80	510	180	70	460	140
Future Volume (veh/h)	150	1550	90	100	1370	90	80	510	180	70	460	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	158	1632	84	105	1442	82	84	537	137	74	484	106
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	196	1997	103	132	1761	100	108	689	175	102	703	153
Arrive On Green	0.12	0.33	0.33	0.08	0.29	0.29	0.06	0.25	0.25	0.06	0.24	0.24
Sat Flow, veh/h	1697	6013	309	1697	5977	339	1767	2784	707	1767	2879	627
Grp Volume(v), veh/h	158	1247	469	105	1108	416	84	339	335	74	295	295
Grp Sat Flow(s),veh/h/ln	1697	1532	1726	1697	1532	1720	1767	1763	1728	1767	1763	1743
Q Serve(g_s), s	5.7	15.7	15.7	3.8	14.2	14.2	3.0	11.3	11.4	2.6	9.6	9.7
Cycle Q Clear(g_c), s	5.7	15.7	15.7	3.8	14.2	14.2	3.0	11.3	11.4	2.6	9.6	9.7
Prop In Lane	1.00		0.18	1.00		0.20	1.00		0.41	1.00		0.36
Lane Grp Cap(c), veh/h	196	1527	573	132	1354	507	108	436	428	102	430	425
V/C Ratio(X)	0.81	0.82	0.82	0.80	0.82	0.82	0.78	0.78	0.78	0.73	0.69	0.69
Avail Cap(c_a), veh/h	228	1579	593	148	1361	509	154	550	539	143	539	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	19.3	19.3	28.6	20.7	20.7	29.2	22.1	22.2	29.3	21.7	21.7
Incr Delay (d2), s/veh	16.7	3.4	8.6	23.1	4.1	10.2	14.8	5.5	5.8	10.7	2.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	5.5	7.0	2.3	5.1	6.6	1.6	5.0	5.0	1.4	4.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	22.7	27.9	51.7	24.8	30.9	44.0	27.6	28.0	40.0	24.3	24.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1874			1629			758			664	
Approach Delay, s/veh		25.8			28.1			29.6			26.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	20.1	9.4	25.5	8.4	19.9	11.8	23.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	19.7	5.5	21.7	5.5	19.3	8.5	18.7				
Max Q Clear Time (g_c+14), s	14.6	13.4	5.8	17.7	5.0	11.7	7.7	16.2				
Green Ext Time (p_c), s	0.0	2.2	0.0	3.3	0.0	2.2	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											27.2	
HCM 6th LOS											C	

# HCM 6th Signalized Intersection Summary

## 55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕		↖	↑↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	10	40	10	590	10	280	10	1310	660	360	1660	30
Future Volume (veh/h)	10	40	10	590	10	280	10	1310	660	360	1660	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	11	42	2	441	262	251	11	1379	636	379	1747	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	23	89	92	355	173	166	42	1840	594	294	1858	807
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.02	0.40	0.40	0.17	0.55	0.55
Sat Flow, veh/h	381	1455	1510	1739	847	812	1697	4596	1484	1697	3385	1471
Grp Volume(v), veh/h	53	0	2	441	0	513	11	1379	636	379	1747	17
Grp Sat Flow(s),veh/h/ln	1836	0	1510	1739	0	1659	1697	1532	1484	1697	1692	1471
Q Serve(g_s), s	4.1	0.0	0.2	29.8	0.0	29.8	0.9	37.6	58.5	25.3	70.3	0.8
Cycle Q Clear(g_c), s	4.1	0.0	0.2	29.8	0.0	29.8	0.9	37.6	58.5	25.3	70.3	0.8
Prop In Lane	0.21		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	92	355	0	338	42	1840	594	294	1858	807
V/C Ratio(X)	0.47	0.00	0.02	1.24	0.00	1.52	0.26	0.75	1.07	1.29	0.94	0.02
Avail Cap(c_a), veh/h	161	0	132	355	0	338	178	1840	594	294	1858	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	0.0	64.5	58.2	0.0	58.2	70.0	37.5	43.8	60.4	30.7	15.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	131.2	0.0	247.1	1.2	1.7	57.1	153.7	10.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	25.7	0.0	35.4	0.4	13.7	29.6	23.0	28.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	0.0	64.5	189.4	0.0	305.2	71.2	39.3	101.0	214.2	40.8	15.1
LnGrp LOS	E	A	E	F	A	F	E	D	F	F	D	B
Approach Vol, veh/h		55		954				2026			2143	
Approach Delay, s/veh		67.4		251.7				58.8			71.3	
Approach LOS		E		F				E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	65.0		15.1	8.3	86.7		36.0				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	25	58.5		12.8	* 15	68.5		29.8				
Max Q Clear Time (g_c+R), s	27.3	60.5		6.1	2.9	72.3		31.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

### Intersection Summary

HCM 6th Ctrl Delay	99.6
HCM 6th LOS	F

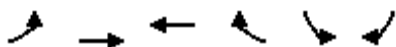
### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# HCM 6th Signalized Intersection Summary

## 56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗		↖	↘	
Traffic Volume (veh/h)	180	1130	810	200	250	130	
Future Volume (veh/h)	180	1130	810	200	250	130	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1856	1856	
Adj Flow Rate, veh/h	189	1189	853	174	263	30	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	5	5	5	5	3	3	
Cap, veh/h	240	3060	1080	220	330	294	
Arrive On Green	0.14	0.61	0.38	0.38	0.19	0.19	
Sat Flow, veh/h	1739	5149	2961	585	1767	1572	
Grp Volume(v), veh/h	189	1189	516	511	263	30	
Grp Sat Flow(s),veh/h/ln	1739	1662	1735	1721	1767	1572	
Q Serve(g_s), s	4.7	5.5	11.9	11.9	6.4	0.7	
Cycle Q Clear(g_c), s	4.7	5.5	11.9	11.9	6.4	0.7	
Prop In Lane	1.00			0.34	1.00	1.00	
Lane Grp Cap(c), veh/h	240	3060	653	648	330	294	
V/C Ratio(X)	0.79	0.39	0.79	0.79	0.80	0.10	
Avail Cap(c_a), veh/h	358	3741	772	766	473	421	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	18.8	4.4	12.5	12.5	17.5	15.2	
Incr Delay (d2), s/veh	6.8	0.1	4.7	4.8	6.1	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.0	0.7	4.0	4.0	2.5	0.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.6	4.5	17.2	17.3	23.6	15.4	
LnGrp LOS	C	A	B	B	C	B	
Approach Vol, veh/h		1378	1027		293		
Approach Delay, s/veh		7.4	17.2		22.8		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			32.2		12.9	10.7	21.5
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			33.9		12.1	9.3	20.1
Max Q Clear Time (g_c+11), s			7.5		8.4	6.7	13.9
Green Ext Time (p_c), s			8.8		0.2	0.1	3.1
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			12.8				
HCM 6th LOS			B				
<b>Notes</b>							
User approved pedestrian interval to be less than phase max green.							

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	570	80	410	70	30	210	210	1070	30	280	1340	510
Future Volume (veh/h)	570	80	410	70	30	210	210	1070	30	280	1340	510
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	961	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	576	81	176	71	30	29	212	1081	12	283	1354	301
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	543	1126	493	132	329	142	190	1504	573	342	1464	914
Arrive On Green	0.31	0.32	0.32	0.08	0.09	0.09	0.11	0.31	0.31	0.10	0.30	0.30
Sat Flow, veh/h	1776	3469	1520	1739	3469	1498	1697	4863	1482	3291	4863	1502
Grp Volume(v), veh/h	576	81	176	71	30	29	212	1081	12	283	1354	301
Grp Sat Flow(s),veh/h/ln	888	1735	1520	1739	1735	1498	1697	1621	1482	1646	1621	1502
Q Serve(g_s), s	36.3	1.9	10.5	4.7	0.9	2.1	13.3	23.4	0.6	10.0	32.0	11.7
Cycle Q Clear(g_c), s	36.3	1.9	10.5	4.7	0.9	2.1	13.3	23.4	0.6	10.0	32.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	543	1126	493	132	329	142	190	1504	573	342	1464	914
V/C Ratio(X)	1.06	0.07	0.36	0.54	0.09	0.20	1.11	0.72	0.02	0.83	0.93	0.33
Avail Cap(c_a), veh/h	543	1778	779	254	1222	528	190	1504	573	563	1496	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	27.7	30.6	52.8	49.0	49.6	52.7	36.4	22.6	52.1	40.2	11.5
Incr Delay (d2), s/veh	55.6	0.0	0.4	3.3	0.0	0.3	99.4	1.7	0.0	2.1	10.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	3.7	2.1	0.4	0.8	10.7	8.9	0.2	4.0	13.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	27.7	31.0	56.1	49.1	49.8	152.1	38.1	22.6	54.2	50.2	11.7
LnGrp LOS	F	C	C	E	D	D	F	D	C	D	D	B
Approach Vol, veh/h		833			130			1305			1938	
Approach Delay, s/veh		76.2			53.1			56.5			44.8	
Approach LOS		E			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	43.2	13.7	44.7	18.0	42.2	41.0	17.4				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	29.5	29.5	* 17	60.8	* 13	36.5	* 36	41.8				
Max Q Clear Time (g_c+1/2g), s	25.4	25.4	6.7	12.5	15.3	34.0	38.3	4.1				
Green Ext Time (p_c), s	0.3	2.3	0.1	1.0	0.0	1.7	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	760	50	830	630	110	30	750	1310	300	1010	120
Future Volume (veh/h)	140	760	50	830	630	110	30	750	1310	300	1010	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	147	800	0	874	663	108	32	789	1327	316	1063	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	171	756		928	1176	191	87	869	679	263	1597	168
Arrive On Green	0.10	0.22	0.00	0.27	0.39	0.39	0.05	0.18	0.18	0.15	0.28	0.28
Sat Flow, veh/h	1739	3469	1547	3374	2979	485	1697	4863	1475	1697	5660	597
Grp Volume(v), veh/h	147	800	0	874	386	385	32	789	1327	316	861	315
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1687	1735	1729	1697	1621	1475	1697	1532	1661
Q Serve(g_s), s	11.5	30.0	0.0	34.9	23.8	23.9	2.5	21.9	24.6	21.3	22.8	23.1
Cycle Q Clear(g_c), s	11.5	30.0	0.0	34.9	23.8	23.9	2.5	21.9	24.6	21.3	22.8	23.1
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	171	756		928	685	682	87	869	679	263	1297	468
V/C Ratio(X)	0.86	1.06		0.94	0.56	0.56	0.37	0.91	1.96	1.20	0.66	0.67
Avail Cap(c_a), veh/h	282	756		1012	685	682	196	1007	721	263	1297	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.1	53.8	0.0	48.8	32.4	32.4	63.1	55.4	37.8	58.2	43.6	43.8
Incr Delay (d2), s/veh	7.0	49.1	0.0	15.0	1.3	1.3	1.0	10.0	435.3	122.0	1.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	17.9	0.0	16.2	10.0	10.0	1.1	9.4	103.6	17.7	8.4	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	102.9	0.0	63.8	33.8	33.8	64.1	65.4	473.1	180.1	44.7	46.8
LnGrp LOS	E	F		E	C	C	E	E	F	F	D	D
Approach Vol, veh/h		947	A		1645			2148			1492	
Approach Delay, s/veh		97.5			49.7			317.2			73.8	
Approach LOS		F			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	31.1	43.5	37.0	11.8	45.3	19.2	61.3				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	28.5	28.5	* 41	30.0	* 16	33.9	* 22	49.0				
Max Q Clear Time (g_c+Y), s	23.9	23.9	36.9	32.0	4.5	25.1	13.5	25.9				
Green Ext Time (p_c), s	0.0	0.3	1.0	0.0	0.0	3.2	0.1	6.5				

Intersection Summary

HCM 6th Ctrl Delay	155.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



# HCM 6th Signalized Intersection Summary

## 59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↗	↕↔		↙	↕↕
Traffic Volume (veh/h)	90	1040	1170	120	470	1290
Future Volume (veh/h)	90	1040	1170	120	470	1290
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	95	0	1232	0	495	1358
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	182		1423		531	2683
Arrive On Green	0.06	0.00	0.42	0.00	0.31	0.79
Sat Flow, veh/h	3291	1510	3563	0	1697	3474
Grp Volume(v), veh/h	95	0	1232	0	495	1358
Grp Sat Flow(s),veh/h/ln	1646	1510	1692	0	1697	1692
Q Serve(g_s), s	2.2	0.0	26.2	0.0	22.4	11.0
Cycle Q Clear(g_c), s	2.2	0.0	26.2	0.0	22.4	11.0
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	182		1423		531	2683
V/C Ratio(X)	0.52		0.87		0.93	0.51
Avail Cap(c_a), veh/h	212		1701		612	3123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	20.9	0.0	26.3	2.8
Incr Delay (d2), s/veh	2.3	0.0	4.1	0.0	18.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.2	0.0	10.5	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.6	0.0	25.0	0.0	45.1	2.9
LnGrp LOS	D		C		D	A
Approach Vol, veh/h	95	A	1232	A		1853
Approach Delay, s/veh	38.6		25.0			14.2
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	29.4	39.7			69.1	9.9
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	29.4	39.7			72.9	5.1
Max Q Clear Time (g_c+Y), s	24.4	28.2			13.0	4.2
Green Ext Time (p_c), s	0.4	5.0			9.3	0.0

### Intersection Summary





















HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	420	0	360	710	1430	0	0	570	200
Future Volume (veh/h)	0	0	0	420	0	360	710	1430	0	0	570	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1811	1811	1811	1811	1811	0	0	1811	1811
Adj Flow Rate, veh/h				512	0	150	747	1505	0	0	600	82
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				6	6	6	6	6	0	0	6	6
Cap, veh/h				593	0	264	819	3458	0	0	2485	595
Arrive On Green				0.17	0.00	0.17	0.16	0.47	0.00	0.00	0.40	0.40
Sat Flow, veh/h				3450	0	1535	3346	5107	0	0	6484	1492
Grp Volume(v), veh/h				512	0	150	747	1505	0	0	600	82
Grp Sat Flow(s),veh/h/ln				1725	0	1535	1673	1648	0	0	1558	1492
Q Serve(g_s), s				13.0	0.0	8.1	19.7	18.3	0.0	0.0	5.8	3.1
Cycle Q Clear(g_c), s				13.0	0.0	8.1	19.7	18.3	0.0	0.0	5.8	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				593	0	264	819	3458	0	0	2485	595
V/C Ratio(X)				0.86	0.00	0.57	0.91	0.44	0.00	0.00	0.24	0.14
Avail Cap(c_a), veh/h				636	0	283	855	3458	0	0	2485	595
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.68	0.68	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.2	0.0	34.2	36.7	12.1	0.0	0.0	18.0	17.2
Incr Delay (d2), s/veh				11.3	0.0	2.3	9.5	0.3	0.0	0.0	0.2	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	7.0	9.2	7.0	0.0	0.0	1.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				47.5	0.0	36.6	46.2	12.3	0.0	0.0	18.2	17.7
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					662			2252			682	
Approach Delay, s/veh					45.1			23.6			18.2	
Approach LOS					D			C			B	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.7		21.3	27.0	41.7						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		61.8		16.6	23.0	33.8						
Max Q Clear Time (g_c+I1), s		20.3		15.0	21.7	7.8						
Green Ext Time (p_c), s		14.0		0.5	0.3	4.2						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.5								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

# HCM 6th Signalized Intersection Summary

## 2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶↷	↶↷↶			↶↷↶	↶
Traffic Volume (veh/h)	0	0	0	201	0	570	419	1928	0	0	1112	420
Future Volume (veh/h)	0	0	0	201	0	570	419	1928	0	0	1112	420
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				203	0	513	423	1947	0	0	1123	137
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				1232	0	548	411	2522	0	0	1644	501
Arrive On Green				0.35	0.00	0.35	0.08	0.33	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1544
Grp Volume(v), veh/h				203	0	513	423	1947	0	0	1123	137
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1544
Q Serve(g_s), s				3.0	0.0	23.7	9.0	25.9	0.0	0.0	14.4	4.9
Cycle Q Clear(g_c), s				3.0	0.0	23.7	9.0	25.9	0.0	0.0	14.4	4.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	548	411	2522	0	0	1644	501
V/C Ratio(X)				0.16	0.00	0.94	1.03	0.77	0.00	0.00	0.68	0.27
Avail Cap(c_a), veh/h				1282	0	570	411	2522	0	0	1644	501
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.32	0.32	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	0.0	23.6	34.5	21.2	0.0	0.0	22.0	18.8
Incr Delay (d2), s/veh				0.1	0.0	22.6	32.6	0.8	0.0	0.0	2.3	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.1	0.0	11.0	5.5	10.2	0.0	0.0	5.3	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				16.9	0.0	46.2	67.1	21.9	0.0	0.0	24.3	20.1
LnGrp LOS				B	A	D	F	C	A	A	C	C
Approach Vol, veh/h					716			2370			1260	
Approach Delay, s/veh					37.9			30.0			23.8	
Approach LOS					D			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		43.0			13.0	30.0		32.0				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		36.3			9.0	23.3		27.2				
Max Q Clear Time (g_c+I1), s		27.9			11.0	16.4		25.7				
Green Ext Time (p_c), s		5.6			0.0	3.0		0.5				

### Intersection Summary

HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	0	510	0	0	0	0	1645	530	220	770	0
Future Volume (veh/h)	490	0	510	0	0	0	0	1645	530	220	770	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811				0	1811	1811	1811	1811	0
Adj Flow Rate, veh/h	629	0	243				0	1732	240	232	811	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6				0	6	6	6	6	0
Cap, veh/h	776	0	345				0	3127	750	297	3195	0
Arrive On Green	0.22	0.00	0.22				0.00	0.50	0.50	0.18	1.00	0.00
Sat Flow, veh/h	3450	0	1535				0	6484	1494	3346	5107	0
Grp Volume(v), veh/h	629	0	243				0	1732	240	232	811	0
Grp Sat Flow(s),veh/h/ln	1725	0	1535				0	1558	1494	1673	1648	0
Q Serve(g_s), s	15.6	0.0	13.1				0.0	17.3	8.6	6.0	0.0	0.0
Cycle Q Clear(g_c), s	15.6	0.0	13.1				0.0	17.3	8.6	6.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	776	0	345				0	3127	750	297	3195	0
V/C Ratio(X)	0.81	0.00	0.70				0.00	0.55	0.32	0.78	0.25	0.00
Avail Cap(c_a), veh/h	1158	0	515				0	3127	750	335	3195	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	33.1	0.0	32.1				0.0	15.5	13.3	36.2	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	2.6				0.0	0.7	1.1	7.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	4.8				0.0	5.5	2.8	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	0.0	34.8				0.0	16.2	14.4	43.8	0.2	0.0
LnGrp LOS	D	A	C				A	B	B	D	A	A
Approach Vol, veh/h		872						1972			1043	
Approach Delay, s/veh		35.5						16.0			9.9	
Approach LOS		D						B			A	
Timer - Assigned Phs	1	2					6	8				
Phs Duration (G+Y+Rc), s	3.0	51.0					64.0	26.0				
Change Period (Y+Rc), s	5.0	5.8					5.8	5.8				
Max Green Setting (Gmax), s	3.0	34.2					48.2	30.2				
Max Q Clear Time (g_c+1/3), s	3.0	19.3					2.0	17.6				
Green Ext Time (p_c), s	0.0	10.4					6.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	630	0	256	0	0	0	0	1717	345	290	1023	0
Future Volume (veh/h)	630	0	256	0	0	0	0	1717	345	290	1023	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	656	0	181				0	1789	319	302	1066	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	765	0	341				0	2111	372	320	3218	0
Arrive On Green	0.21	0.00	0.21				0.00	0.49	0.49	0.03	0.21	0.00
Sat Flow, veh/h	3619	0	1610				0	4487	761	3428	5233	0
Grp Volume(v), veh/h	656	0	181				0	1393	715	302	1066	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1704	1714	1689	0
Q Serve(g_s), s	13.1	0.0	7.5				0.0	26.9	27.7	6.6	13.4	0.0
Cycle Q Clear(g_c), s	13.1	0.0	7.5				0.0	26.9	27.7	6.6	13.4	0.0
Prop In Lane	1.00		1.00				0.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	765	0	341				0	1650	833	320	3218	0
V/C Ratio(X)	0.86	0.00	0.53				0.00	0.84	0.86	0.94	0.33	0.00
Avail Cap(c_a), veh/h	830	0	369				0	1650	833	320	3218	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	28.5	0.0	26.3				0.0	16.7	16.9	36.1	16.1	0.0
Incr Delay (d2), s/veh	8.4	0.0	1.3				0.0	5.5	11.2	28.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	2.7				0.0	9.7	11.3	4.0	5.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.0	27.6				0.0	22.2	28.0	65.1	16.3	0.0
LnGrp LOS	D	A	C				A	C	C	E	B	A
Approach Vol, veh/h		837						2108			1368	
Approach Delay, s/veh		34.8						24.2			27.1	
Approach LOS		C						C			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	1.0	42.3	21.7	53.3								
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7								
Max Green Setting (Gmax), s	35.3		17.2	46.3								
Max Q Clear Time (g_c+I), s	29.7		15.1	15.4								
Green Ext Time (p_c), s	0.0	4.1	0.8	4.8								

### Intersection Summary

HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	729	174	183	780	200	313	1345	274	160	710	190
Future Volume (veh/h)	250	729	174	183	780	200	313	1345	274	160	710	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	263	767	75	193	821	106	329	1416	257	168	747	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	248	915	400	231	882	385	364	1547	280	138	977	198
Arrive On Green	0.14	0.26	0.26	0.13	0.25	0.25	0.21	0.37	0.37	0.08	0.24	0.24
Sat Flow, veh/h	1767	3526	1542	1767	3526	1542	1725	4195	760	1725	4106	832
Grp Volume(v), veh/h	263	767	75	193	821	106	329	1112	561	168	598	302
Grp Sat Flow(s),veh/h/ln	1767	1763	1542	1767	1763	1542	1725	1648	1659	1725	1648	1641
Q Serve(g_s), s	14.0	20.5	3.8	10.6	22.7	5.5	18.5	32.1	32.1	8.0	16.8	17.1
Cycle Q Clear(g_c), s	14.0	20.5	3.8	10.6	22.7	5.5	18.5	32.1	32.1	8.0	16.8	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.51
Lane Grp Cap(c), veh/h	248	915	400	231	882	385	364	1216	612	138	784	391
V/C Ratio(X)	1.06	0.84	0.19	0.83	0.93	0.27	0.90	0.91	0.92	1.21	0.76	0.77
Avail Cap(c_a), veh/h	248	915	400	319	884	386	398	1223	615	138	784	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	34.9	28.7	42.3	36.6	30.1	38.3	30.0	30.0	45.9	35.4	35.5
Incr Delay (d2), s/veh	73.9	7.6	0.5	18.1	16.6	0.8	24.2	11.1	19.3	145.3	5.2	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	9.2	1.4	5.6	11.1	2.0	9.8	13.4	14.9	8.8	6.9	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.7	42.6	29.2	60.4	53.2	30.9	62.5	41.1	49.3	191.1	40.6	46.2
LnGrp LOS	F	D	C	E	D	C	E	D	D	F	D	D
Approach Vol, veh/h		1105			1120			2002			1068	
Approach Delay, s/veh		59.3			52.3			46.9			65.9	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	40.8	17.1	29.9	25.1	27.7	18.0	28.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	37.0	37.0	18.0	21.0	23.0	22.0	14.0	25.0				
Max Q Clear Time (g_c+1/10), s	34.1	34.1	12.6	22.5	20.5	19.1	16.0	24.7				
Green Ext Time (p_c), s	0.0	2.6	0.5	0.0	0.5	2.0	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	1050	32	297	900	260	34	717	135	350	460	370
Future Volume (veh/h)	370	1050	32	297	900	260	34	717	135	350	460	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	389	1105	34	313	947	256	36	755	131	368	484	297
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	235	1058	33	222	808	218	1	509	88	395	899	549
Arrive On Green	0.13	0.30	0.30	0.13	0.30	0.30	0.00	0.17	0.17	0.22	0.43	0.43
Sat Flow, veh/h	1767	3489	107	1767	2733	737	1767	2991	519	1767	2088	1276
Grp Volume(v), veh/h	389	558	581	313	610	593	36	445	441	368	408	373
Grp Sat Flow(s),veh/h/ln	1767	1763	1834	1767	1763	1707	1767	1763	1748	1767	1763	1601
Q Serve(g_s), s	18.0	41.0	41.0	17.0	40.0	40.0	0.1	23.0	23.0	27.6	23.2	23.4
Cycle Q Clear(g_c), s	18.0	41.0	41.0	17.0	40.0	40.0	0.1	23.0	23.0	27.6	23.2	23.4
Prop In Lane	1.00		0.06	1.00		0.43	1.00		0.30	1.00		0.80
Lane Grp Cap(c), veh/h	235	535	556	222	521	505	1	300	297	395	759	689
V/C Ratio(X)	1.65	1.04	1.04	1.41	1.17	1.17	27.54	1.48	1.48	0.93	0.54	0.54
Avail Cap(c_a), veh/h	235	535	556	222	521	505	301	300	297	523	759	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	47.1	47.1	59.1	47.6	47.6	67.6	56.1	56.1	51.5	28.5	28.6
Incr Delay (d2), s/veh	312.3	51.0	50.3	208.6	95.3	97.9	2169.2	234.6	235.1	19.3	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	28.2	24.7	25.6	20.3	30.6	30.0	4.5	29.5	29.3	14.0	9.6	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	370.9	98.1	97.4	267.7	143.0	145.5	2236.8	290.7	291.2	70.8	29.1	29.3
LnGrp LOS	F	F	F	F	F	F	F	F	F	E	C	C
Approach Vol, veh/h		1528			1516			922			1149	
Approach Delay, s/veh		167.3			169.7			757.4			42.5	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.2	28.0	24.0	48.0	0.0	63.2	25.0	47.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	40.0	23.0	17.0	41.0	23.0	40.0	18.0	40.0				
Max Q Clear Time (g_c+Y), s	29.6	25.0	19.0	43.0	0.0	25.4	20.0	42.0				
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.0	3.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	246.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



# HCM 6th Signalized Intersection Summary

## 7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	409	64	93	240	170	293	1404	114	110	807	100
Future Volume (veh/h)	200	409	64	93	240	170	293	1404	114	110	807	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	211	431	55	98	253	70	308	1478	113	116	849	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	245	612	78	123	344	93	338	1734	133	143	1164	126
Arrive On Green	0.14	0.20	0.20	0.07	0.13	0.13	0.20	0.37	0.37	0.08	0.26	0.26
Sat Flow, veh/h	1767	3138	398	1767	2733	739	1725	4678	358	1725	4524	488
Grp Volume(v), veh/h	211	241	245	98	161	162	308	1041	550	116	618	323
Grp Sat Flow(s),veh/h/ln	1767	1763	1773	1767	1763	1709	1725	1648	1739	1725	1648	1715
Q Serve(g_s), s	11.6	12.7	12.8	5.4	8.7	9.1	17.4	28.9	28.9	6.6	17.0	17.2
Cycle Q Clear(g_c), s	11.6	12.7	12.8	5.4	8.7	9.1	17.4	28.9	28.9	6.6	17.0	17.2
Prop In Lane	1.00		0.22	1.00		0.43	1.00		0.21	1.00		0.28
Lane Grp Cap(c), veh/h	245	344	346	123	222	215	338	1222	645	143	848	441
V/C Ratio(X)	0.86	0.70	0.71	0.80	0.73	0.75	0.91	0.85	0.85	0.81	0.73	0.73
Avail Cap(c_a), veh/h	503	585	589	126	222	215	380	1273	672	147	848	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	37.3	37.4	45.5	41.8	41.9	39.1	28.8	28.8	44.8	33.7	33.8
Incr Delay (d2), s/veh	3.4	3.7	3.8	26.0	12.1	14.7	22.6	5.8	10.4	25.5	3.4	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	5.6	5.7	3.2	4.4	4.6	9.0	11.3	12.8	3.7	6.8	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	41.0	41.2	71.6	53.9	56.6	61.7	34.6	39.2	70.3	37.2	40.5
LnGrp LOS	D	D	D	E	D	E	E	C	D	E	D	D
Approach Vol, veh/h		697			421			1899			1057	
Approach Delay, s/veh		42.3			59.1			40.3			41.8	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	44.4	13.4	25.9	27.0	33.1	20.3	19.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	38.4	38.4	7.1	33.0	21.9	25.0	28.3	11.8				
Max Q Clear Time (g_c+1), s	19.6	30.9	7.4	14.8	19.4	19.2	13.6	11.1				
Green Ext Time (p_c), s	0.0	6.0	0.0	3.6	0.1	3.3	0.2	0.2				

### Intersection Summary

HCM 6th Ctrl Delay	43.0
HCM 6th LOS	D

### Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	240	82	60	250	50	164	826	170	30	639	120
Future Volume (veh/h)	80	240	82	60	250	50	164	826	170	30	639	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	82	247	34	62	258	30	169	852	159	31	659	108
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	2	3	2	2	2	3	3	2	2	3	3
Cap, veh/h	123	477	65	105	453	52	215	1117	208	63	881	144
Arrive On Green	0.07	0.15	0.15	0.06	0.14	0.14	0.12	0.38	0.38	0.04	0.29	0.29
Sat Flow, veh/h	1767	3143	428	1781	3211	370	1767	2965	553	1781	3033	496
Grp Volume(v), veh/h	82	138	143	62	142	146	169	506	505	31	383	384
Grp Sat Flow(s),veh/h/ln	1767	1777	1793	1781	1777	1804	1767	1763	1756	1781	1763	1766
Q Serve(g_s), s	2.2	3.4	3.5	1.6	3.5	3.6	4.4	12.0	12.0	0.8	9.4	9.4
Cycle Q Clear(g_c), s	2.2	3.4	3.5	1.6	3.5	3.6	4.4	12.0	12.0	0.8	9.4	9.4
Prop In Lane	1.00		0.24	1.00		0.20	1.00		0.32	1.00		0.28
Lane Grp Cap(c), veh/h	123	270	272	105	250	254	215	664	661	63	512	513
V/C Ratio(X)	0.67	0.51	0.52	0.59	0.57	0.58	0.79	0.76	0.76	0.49	0.75	0.75
Avail Cap(c_a), veh/h	667	1077	1087	265	671	681	289	773	770	191	673	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	18.6	18.6	21.9	19.1	19.1	20.3	13.0	13.0	22.6	15.3	15.3
Incr Delay (d2), s/veh	6.1	1.5	1.6	5.3	2.0	2.1	9.8	3.9	3.9	5.9	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	1.3	1.3	0.8	1.4	1.5	2.1	4.0	4.0	0.4	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	20.1	20.2	27.1	21.1	21.2	30.1	16.9	16.9	28.4	18.6	18.7
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		363			350			1180			798	
Approach Delay, s/veh		21.9			22.2			18.8			19.0	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	22.4	7.3	11.7	10.3	18.3	7.8	11.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	20.9	7.1	28.9	7.8	18.2	18.0	18.0				
Max Q Clear Time (g_c+1), s	12.8	14.0	3.6	5.5	6.4	11.4	4.2	5.6				
Green Ext Time (p_c), s	0.0	3.3	0.0	1.4	0.1	2.4	0.1	1.3				

Intersection Summary

HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕ ↑↑↑	↕ ↑↑↑		↕ ↑↑↑	↕ ↑↑↑	
Traffic Volume (veh/h)	10	0	10	153	0	200	10	1351	34	80	935	10
Future Volume (veh/h)	10	0	10	153	0	200	10	1351	34	80	935	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	11	0	0	161	0	35	11	1422	35	84	984	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	0	2	6	6	6	6	6	6
Cap, veh/h	45	0	0	0	0	0	44	2281	56	201	2779	31
Arrive On Green	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.46	0.46	0.12	0.55	0.55
Sat Flow, veh/h	1781	0	0		0		1725	4961	122	1725	5041	56
Grp Volume(v), veh/h	11	0	0		0.0		11	945	512	84	643	352
Grp Sat Flow(s),veh/h/ln	1781	0	0				1725	1648	1787	1725	1648	1801
Q Serve(g_s), s	0.3	0.0	0.0				0.4	12.3	12.3	2.6	6.1	6.2
Cycle Q Clear(g_c), s	0.3	0.0	0.0				0.4	12.3	12.3	2.6	6.1	6.2
Prop In Lane	1.00		0.00				1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	45	0	0				44	1516	822	201	1817	993
V/C Ratio(X)	0.24	0.00	0.00				0.25	0.62	0.62	0.42	0.35	0.35
Avail Cap(c_a), veh/h	284	0	0				275	2152	1167	278	2158	1179
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	0.0				27.0	11.6	11.6	23.2	7.1	7.1
Incr Delay (d2), s/veh	3.3	0.0	0.0				3.0	0.5	0.9	1.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0				0.2	3.2	3.6	1.0	1.3	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	0.0	0.0				30.0	12.1	12.5	24.6	7.2	7.3
LnGrp LOS	C	A	A				C	B	B	C	A	A
Approach Vol, veh/h		11						1468			1079	
Approach Delay, s/veh		30.4						12.3			8.6	
Approach LOS		C						B			A	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	34.1	33.5		8.9	8.9	38.7						
Change Period (Y+Rc), s	7.5	7.5		7.5	7.5	7.5						
Max Green Setting (Gmax), s	36.9	36.9		9.0	9.0	37.0						
Max Q Clear Time (g_c+I), s	14.6	14.3		2.3	2.4	8.2						
Green Ext Time (p_c), s	0.1	11.4		0.0	0.0	7.9						

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	0	203	0	0	0	344	701	0	0	581	50
Future Volume (veh/h)	50	0	203	0	0	0	344	701	0	0	581	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	53	0	36	0	0	0	362	738	0	0	612	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	337	0	186	0	226	0	385	2183	0	0	897	67
Arrive On Green	0.12	0.00	0.12	0.00	0.00	0.00	0.22	0.62	0.00	0.00	0.27	0.27
Sat Flow, veh/h	1781	0	1568	0	1900	0	1767	3618	0	0	3411	249
Grp Volume(v), veh/h	53	0	36	0	0	0	362	738	0	0	325	333
Grp Sat Flow(s),veh/h/ln	1781	0	1568	0	1900	0	1767	3618	0	0	3411	249
Q Serve(g_s), s	1.5	0.0	1.2	0.0	0.0	0.0	11.5	5.8	0.0	0.0	9.4	9.5
Cycle Q Clear(g_c), s	1.5	0.0	1.2	0.0	0.0	0.0	11.5	5.8	0.0	0.0	9.4	9.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.14
Lane Grp Cap(c), veh/h	337	0	186	0	226	0	385	2183	0	0	476	488
V/C Ratio(X)	0.16	0.00	0.19	0.00	0.00	0.00	0.94	0.34	0.00	0.00	0.68	0.68
Avail Cap(c_a), veh/h	903	0	684	0	829	0	385	2769	0	0	769	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	22.8	0.0	0.0	0.0	22.0	5.3	0.0	0.0	18.7	18.7
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.0	0.0	30.7	0.1	0.0	0.0	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.4	0.0	0.0	0.0	7.3	1.2	0.0	0.0	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	23.1	0.0	0.0	0.0	52.7	5.4	0.0	0.0	20.8	20.8
LnGrp LOS	C	A	C	A	A	A	D	A	A	A	C	C
Approach Vol, veh/h		89			0			1100			658	
Approach Delay, s/veh		23.1			0.0			20.9			20.8	
Approach LOS		C						C			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		43.0		14.3	20.0	23.0		14.3				
Change Period (Y+Rc), s		7.5		7.5	7.5	7.5		7.5				
Max Green Setting (Gmax), s		45.0		25.0	12.5	25.0		25.0				
Max Q Clear Time (g_c+1), s		7.8		3.5	13.5	11.5		0.0				
Green Ext Time (p_c), s		6.4		0.0	0.0	3.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑↑↑↑	↖	↖ ↗	↑↑↑↑		↖ ↑↑↑↑	↖	↖	↖	↑↑↑↑	↖ ↗
Traffic Volume (veh/h)	60	1038	302	453	1165	140	676	1046	474	80	718	200
Future Volume (veh/h)	60	1038	302	453	1165	140	676	1046	474	80	718	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	63	1093	0	477	1226	131	712	1101	0	84	756	173
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	6	6	6	6	6	6
Cap, veh/h	109	1129		461	1647	175	584	2359		106	802	182
Arrive On Green	0.03	0.19	0.00	0.15	0.30	0.30	0.34	0.48	0.00	0.06	0.20	0.20
Sat Flow, veh/h	3155	5873	1447	3155	5420	576	1725	4944	1535	1725	4012	908
Grp Volume(v), veh/h	63	1093	0	477	995	362	712	1101	0	84	620	309
Grp Sat Flow(s),veh/h/ln	1577	1468	1447	1577	1468	1591	1725	1648	1535	1725	1648	1624
Q Serve(g_s), s	2.6	24.0	0.0	19.0	26.4	26.6	44.0	19.5	0.0	6.2	24.1	24.5
Cycle Q Clear(g_c), s	2.6	24.0	0.0	19.0	26.4	26.6	44.0	19.5	0.0	6.2	24.1	24.5
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	109	1129		461	1339	484	584	2359		106	659	325
V/C Ratio(X)	0.58	0.97		1.03	0.74	0.75	1.22	0.47		0.79	0.94	0.95
Avail Cap(c_a), veh/h	218	1129		461	1339	484	584	2359		172	659	325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	52.1	0.0	55.5	40.7	40.8	43.0	22.9	0.0	60.2	51.2	51.4
Incr Delay (d2), s/veh	10.0	19.6	0.0	51.1	2.8	7.6	113.7	0.3	0.0	24.1	22.0	38.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	10.1	0.0	10.6	9.5	11.0	36.0	7.1	0.0	3.3	11.5	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	71.7	0.0	106.6	43.4	48.3	156.7	23.2	0.0	84.3	73.2	89.4
LnGrp LOS	E	E		F	D	D	F	C		F	E	F
Approach Vol, veh/h		1156	A		1834			1813	A		1013	
Approach Delay, s/veh		71.7			60.8			75.6			79.1	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	62.0	66.0	23.0	29.0	48.0	30.0	8.5	43.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	57.0	19.0	25.0	44.0	26.0	9.0	35.0				
Max Q Clear Time (g_c+I), s	19.2	21.5	21.0	26.0	46.0	26.5	4.6	28.6				
Green Ext Time (p_c), s	0.1	15.8	0.0	0.0	0.0	0.0	0.1	5.2				

Intersection Summary

HCM 6th Ctrl Delay	70.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑			↖ ↑↑↑		↖	↖	↑↑		↖	↑↑	
Traffic Volume (veh/h)	260	1105	176	192	1255	250	205	516	190	260	385	190
Future Volume (veh/h)	260	1105	176	192	1255	250	205	516	190	260	385	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	268	1139	161	198	1294	58	211	532	172	268	397	162
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	293	1786	250	251	1413	341	239	607	195	246	578	232
Arrive On Green	0.18	0.34	0.34	0.08	0.24	0.24	0.14	0.23	0.23	0.14	0.24	0.24
Sat Flow, veh/h	1626	5231	734	3155	5873	1418	1767	2608	839	1767	2438	981
Grp Volume(v), veh/h	268	958	342	198	1294	58	211	359	345	268	286	273
Grp Sat Flow(s),veh/h/ln	1626	1468	1560	1577	1468	1418	1767	1763	1684	1767	1763	1655
Q Serve(g_s), s	20.3	23.0	23.3	7.7	26.9	4.1	14.7	24.6	24.8	17.5	18.5	19.0
Cycle Q Clear(g_c), s	20.3	23.0	23.3	7.7	26.9	4.1	14.7	24.6	24.8	17.5	18.5	19.0
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.50	1.00		0.59
Lane Grp Cap(c), veh/h	293	1504	532	251	1413	341	239	410	392	246	418	392
V/C Ratio(X)	0.91	0.64	0.64	0.79	0.92	0.17	0.88	0.87	0.88	1.09	0.68	0.70
Avail Cap(c_a), veh/h	550	1772	627	565	1427	344	471	470	449	246	418	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	34.8	34.9	56.8	46.4	37.8	53.3	46.4	46.5	54.0	43.6	43.8
Incr Delay (d2), s/veh	4.7	0.8	2.2	2.1	9.6	0.3	4.3	13.9	15.2	82.9	3.8	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	7.9	8.7	3.0	10.3	1.4	6.7	12.0	11.7	13.2	8.3	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	35.6	37.1	58.9	56.1	38.1	57.6	60.3	61.7	136.9	47.4	48.3
LnGrp LOS	E	D	D	E	E	D	E	E	E	F	D	D
Approach Vol, veh/h		1568			1550			915			827	
Approach Delay, s/veh		39.3			55.8			60.2			76.7	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.0	35.7	16.5	49.4	23.5	36.3	29.1	36.7				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	17.5	33.5	22.5	50.5	33.5	17.5	42.5	30.5				
Max Q Clear Time (g_c+1/9), s	19.5	26.8	9.7	25.3	16.7	21.0	22.3	28.9				
Green Ext Time (p_c), s	0.0	1.5	0.3	12.4	0.2	0.0	0.3	1.3				

Intersection Summary

HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑↑		↔↔	↑↑↑↑	↔	↔↔	↑↑↑↑	↔	↔↔	↑↑↑↑	↔
Traffic Volume (veh/h)	316	1057	150	373	1156	270	170	1184	508	280	407	191
Future Volume (veh/h)	316	1057	150	373	1156	270	170	1184	508	280	407	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	333	1113	138	393	1217	111	179	1246	230	295	428	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	357	1316	162	457	1300	396	235	1351	411	299	1446	441
Arrive On Green	0.11	0.25	0.25	0.14	0.28	0.28	0.07	0.27	0.27	0.09	0.29	0.29
Sat Flow, veh/h	3155	5324	655	3155	4661	1420	3401	5025	1530	3401	5025	1531
Grp Volume(v), veh/h	333	919	332	393	1217	111	179	1246	230	295	428	56
Grp Sat Flow(s),veh/h/ln	1577	1468	1574	1577	1554	1420	1700	1675	1530	1700	1675	1531
Q Serve(g_s), s	12.5	23.7	24.0	14.5	30.4	5.1	6.2	28.8	9.7	10.3	7.9	3.2
Cycle Q Clear(g_c), s	12.5	23.7	24.0	14.5	30.4	5.1	6.2	28.8	9.7	10.3	7.9	3.2
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	1089	389	457	1300	396	235	1351	411	299	1446	441
V/C Ratio(X)	0.93	0.84	0.85	0.86	0.94	0.28	0.76	0.92	0.56	0.99	0.30	0.13
Avail Cap(c_a), veh/h	357	1089	389	700	1308	398	299	1368	417	299	1446	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	42.8	42.9	49.9	42.0	16.7	54.6	42.4	14.9	54.4	33.1	31.4
Incr Delay (d2), s/veh	31.0	6.3	16.7	5.9	12.7	0.5	7.5	10.5	1.7	48.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	8.8	10.6	5.8	12.5	2.4	2.8	12.6	3.3	6.3	3.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.5	49.1	59.6	55.8	54.7	17.1	62.1	52.9	16.6	102.5	33.2	31.6
LnGrp LOS	F	D	E	E	D	B	E	D	B	F	C	C
Approach Vol, veh/h		1584			1721			1655			779	
Approach Delay, s/veh		58.5			52.5			48.9			59.3	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.8	37.0	15.7	41.9	21.0	40.8	18.0	39.6				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	20.5	20.5	10.5	32.5	13.5	33.5	10.5	32.5				
Max Q Clear Time (g_c+10), s	10.5	26.0	8.2	9.9	14.5	32.4	12.3	30.8				
Green Ext Time (p_c), s	0.7	0.0	0.1	3.2	0.0	0.8	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

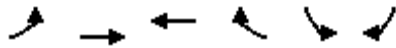
Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1414	943	0	220	1156
Future Volume (veh/h)	0	1414	943	0	220	1156
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	1488	993	0	232	1179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	1753	1220	0	699	1245
Arrive On Green	0.00	0.38	0.38	0.00	0.43	0.43
Sat Flow, veh/h	0	4968	3415	0	1626	2894
Grp Volume(v), veh/h	0	1488	993	0	232	1179
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1626	1447
Q Serve(g_s), s	0.0	18.6	17.5	0.0	6.0	24.9
Cycle Q Clear(g_c), s	0.0	18.6	17.5	0.0	6.0	24.9
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1753	1220	0	699	1245
V/C Ratio(X)	0.00	0.85	0.81	0.00	0.33	0.95
Avail Cap(c_a), veh/h	0	1850	1288	0	704	1254
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.1	17.8	0.0	12.0	17.4
Incr Delay (d2), s/veh	0.0	3.8	4.0	0.0	0.3	14.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	5.7	0.0	2.0	9.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	21.9	21.8	0.0	12.3	32.0
LnGrp LOS	A	C	C	A	B	C
Approach Vol, veh/h		1488	993		1411	
Approach Delay, s/veh		21.9	21.8		28.7	
Approach LOS		C	C		C	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		30.7		32.8		30.7
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		25.2		27.5		25.2
Max Q Clear Time (g_c+I1), s		20.6		26.9		19.5
Green Ext Time (p_c), s		3.3		0.4		2.9

Intersection Summary

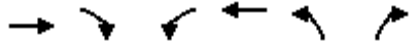
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	599	1025	160	357	585	640
Future Volume (veh/h)	599	1025	160	357	585	640
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	631	1039	168	376	706	356
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1847	992	240	2531	977	435
Arrive On Green	0.40	0.40	0.08	0.54	0.30	0.30
Sat Flow, veh/h	4815	1406	3155	4815	3252	1447
Grp Volume(v), veh/h	631	1039	168	376	706	356
Grp Sat Flow(s),veh/h/ln	1554	1406	1577	1554	1626	1447
Q Serve(g_s), s	8.0	33.7	4.4	3.4	16.5	19.4
Cycle Q Clear(g_c), s	8.0	33.7	4.4	3.4	16.5	19.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1847	992	240	2531	977	435
V/C Ratio(X)	0.34	1.05	0.70	0.15	0.72	0.82
Avail Cap(c_a), veh/h	1847	992	408	2779	1568	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	9.0	38.3	9.7	26.6	27.6
Incr Delay (d2), s/veh	0.1	41.7	3.7	0.0	1.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	30.9	1.7	0.9	6.3	6.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.0	50.7	42.0	9.7	27.6	31.7
LnGrp LOS	B	F	D	A	C	C
Approach Vol, veh/h	1670			544	1062	
Approach Delay, s/veh	38.4			19.7	29.0	
Approach LOS	D			B	C	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	22.5	41.0		53.5	31.6	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	33.7			50.7	41.0	
Max Q Clear Time (g_c+1/4), s	35.7			5.4	21.4	
Green Ext Time (p_c), s	0.2	0.0		2.3	4.1	

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	456	20	43	698	30	20	10	70	30	10	20
Future Volume (veh/h)	30	456	20	43	698	30	20	10	70	30	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.99	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	480	19	45	735	30	21	11	14	32	11	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	1276	50	95	1321	54	252	29	37	307	28	10
Arrive On Green	0.04	0.37	0.37	0.05	0.38	0.38	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1781	3480	137	1781	3475	142	742	389	495	1072	369	134
Grp Volume(v), veh/h	32	245	254	45	376	389	46	0	0	47	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1841	1781	1777	1840	1626	0	0	1575	0	0
Q Serve(g_s), s	0.5	2.7	2.7	0.7	4.4	4.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	2.7	2.7	0.7	4.4	4.4	0.6	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.08	0.46		0.30	0.68		0.09
Lane Grp Cap(c), veh/h	70	652	675	95	676	700	318	0	0	344	0	0
V/C Ratio(X)	0.45	0.38	0.38	0.48	0.56	0.56	0.14	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	340	1297	1344	340	1297	1343	2031	0	0	1993	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.5	6.2	6.2	12.3	6.5	6.5	11.7	0.0	0.0	11.7	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.4	0.3	3.7	0.7	0.7	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.4	0.3	0.6	0.6	0.2	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	6.6	6.6	16.0	7.2	7.2	11.9	0.0	0.0	11.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		531			810			46			47	
Approach Delay, s/veh		7.2			7.7			11.9			11.9	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.5	5.9	14.3		6.5	5.6	14.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		31.9	5.1	19.5		31.9	5.1	19.5				
Max Q Clear Time (g_c+I1), s		2.6	2.7	4.7		2.7	2.5	6.4				
Green Ext Time (p_c), s		0.2	0.0	2.3		0.2	0.0	3.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.8							
HCM 6th LOS					A							

HCM 6th Signalized Intersection Summary  
 17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕		↔↔	↕↕	↔	↔↔	↕↕↕	↔	↔↔	↕↕↕	↔
Traffic Volume (veh/h)	100	347	130	31	294	251	347	1626	27	144	970	210
Future Volume (veh/h)	100	347	130	31	294	251	347	1626	27	144	970	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	105	365	101	33	309	124	365	1712	12	152	1021	103
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	243	529	144	149	589	257	445	2084	636	247	1791	546
Arrive On Green	0.07	0.19	0.19	0.04	0.17	0.17	0.13	0.42	0.42	0.07	0.36	0.36
Sat Flow, veh/h	3456	2744	748	3456	3554	1548	3346	4944	1509	3346	4944	1508
Grp Volume(v), veh/h	105	234	232	33	309	124	365	1712	12	152	1021	103
Grp Sat Flow(s),veh/h/ln	1728	1777	1716	1728	1777	1548	1673	1648	1509	1673	1648	1508
Q Serve(g_s), s	2.7	11.4	11.7	0.9	7.4	6.8	9.9	28.5	0.4	4.1	15.4	4.3
Cycle Q Clear(g_c), s	2.7	11.4	11.7	0.9	7.4	6.8	9.9	28.5	0.4	4.1	15.4	4.3
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	343	331	149	589	257	445	2084	636	247	1791	546
V/C Ratio(X)	0.43	0.68	0.70	0.22	0.52	0.48	0.82	0.82	0.02	0.62	0.57	0.19
Avail Cap(c_a), veh/h	260	707	683	260	1414	616	576	2339	714	252	1861	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	34.9	35.0	43.0	35.5	35.2	39.2	23.8	15.7	41.8	23.8	20.3
Incr Delay (d2), s/veh	1.2	0.9	1.0	0.7	0.3	0.5	7.2	2.2	0.0	4.3	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.7	4.7	0.4	3.1	2.5	4.2	10.0	0.1	1.7	5.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	35.8	36.0	43.7	35.7	35.7	46.5	26.1	15.7	46.1	24.2	20.5
LnGrp LOS	D	D	D	D	D	D	D	C	B	D	C	C
Approach Vol, veh/h		571			466			2089			1276	
Approach Delay, s/veh		37.2			36.3			29.6			26.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.9	46.7	9.0	25.4	17.4	41.2	11.5	22.9				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	44.0	7.0	37.0	16.0	35.0	7.0	37.0					
Max Q Clear Time (g_c+1/3), s	30.5	2.9	13.7	11.9	17.4	4.7	9.4					
Green Ext Time (p_c), s	0.0	8.7	0.0	1.5	0.5	6.2	0.1	1.3				

Intersection Summary

HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC  
18: Park Place & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Vol, veh/h	478	40	34	525	50	51
Future Vol, veh/h	478	40	34	525	50	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	503	42	36	553	53	54

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	545	0	852 252
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	349 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1020	-	299 748
Stage 1	-	-	-	-	573 -
Stage 2	-	-	-	-	685 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1020	-	289 748
Mov Cap-2 Maneuver	-	-	-	-	289 -
Stage 1	-	-	-	-	573 -
Stage 2	-	-	-	-	661 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	419	-	-	1020	-
HCM Lane V/C Ratio	0.254	-	-	0.035	-
HCM Control Delay (s)	16.5	-	-	8.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	469	50	44	489	10	50	10	111	20	10	20
Future Volume (veh/h)	10	469	50	44	489	10	50	10	111	20	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.99	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	494	46	46	515	10	53	11	29	21	11	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	835	77	173	1205	23	232	61	76	235	108	34
Arrive On Green	0.01	0.25	0.25	0.10	0.34	0.34	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3277	304	1781	3566	69	677	389	483	699	692	217
Grp Volume(v), veh/h	11	267	273	46	256	269	93	0	0	37	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1858	1549	0	0	1609	0	0
Q Serve(g_s), s	0.3	5.9	5.9	1.1	5.0	5.0	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	5.9	5.9	1.1	5.0	5.0	2.2	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.04	0.57		0.31	0.57		0.14
Lane Grp Cap(c), veh/h	25	453	460	173	600	628	368	0	0	378	0	0
V/C Ratio(X)	0.43	0.59	0.59	0.27	0.43	0.43	0.25	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	199	992	1007	398	1191	1245	1236	0	0	1254	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.9	14.6	14.6	18.7	11.5	11.5	16.8	0.0	0.0	16.3	0.0	0.0
Incr Delay (d2), s/veh	11.2	1.5	1.5	0.8	0.6	0.6	0.4	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.8	1.9	0.4	1.4	1.4	0.8	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	16.1	16.1	19.5	12.0	12.0	17.3	0.0	0.0	16.4	0.0	0.0
LnGrp LOS	C	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		551			571			93				37
Approach Delay, s/veh		16.5			12.6			17.3				16.4
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.0	11.9	18.9		14.0	8.1	22.6				
Change Period (Y+Rc), s		7.0	7.5	7.5		7.0	7.5	7.5				
Max Green Setting (Gmax), s		33.0	10.0	25.0		33.0	5.0	30.0				
Max Q Clear Time (g_c+I1), s		4.2	3.1	7.9		2.8	2.3	7.0				
Green Ext Time (p_c), s		0.6	0.0	3.0		0.2	0.0	3.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.8								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	589	11	17	529	14	53
Future Vol, veh/h	589	11	17	529	14	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	620	12	18	557	15	56

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	632	0	941
Stage 1	-	-	-	-	626
Stage 2	-	-	-	-	315
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	960	-	265
Stage 1	-	-	-	-	501
Stage 2	-	-	-	-	719
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	960	-	260
Mov Cap-2 Maneuver	-	-	-	-	260
Stage 1	-	-	-	-	501
Stage 2	-	-	-	-	705

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	511	-	-	960	-
HCM Lane V/C Ratio	0.138	-	-	0.019	-
HCM Control Delay (s)	13.2	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-



HCM 6th Signalized Intersection Summary  
21: Sumner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	466	41	7	334	14	108	842	12	6	520	102
Future Volume (veh/h)	135	466	41	7	334	14	108	842	12	6	520	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	142	491	35	7	352	11	114	886	13	6	547	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	181	863	61	17	577	18	148	1181	17	14	784	120
Arrive On Green	0.10	0.26	0.26	0.01	0.16	0.16	0.08	0.33	0.33	0.01	0.26	0.26
Sat Flow, veh/h	1781	3365	239	1781	3518	110	1767	3557	52	1781	3058	468
Grp Volume(v), veh/h	142	259	267	7	177	186	114	439	460	6	314	317
Grp Sat Flow(s),veh/h/ln	1781	1777	1827	1781	1777	1851	1767	1763	1846	1781	1763	1764
Q Serve(g_s), s	3.6	5.8	5.8	0.2	4.2	4.3	2.9	10.1	10.1	0.2	7.4	7.4
Cycle Q Clear(g_c), s	3.6	5.8	5.8	0.2	4.2	4.3	2.9	10.1	10.1	0.2	7.4	7.4
Prop In Lane	1.00		0.13	1.00		0.06	1.00		0.03	1.00		0.27
Lane Grp Cap(c), veh/h	181	456	469	17	292	304	148	585	613	14	452	452
V/C Ratio(X)	0.78	0.57	0.57	0.42	0.61	0.61	0.77	0.75	0.75	0.42	0.70	0.70
Avail Cap(c_a), veh/h	234	739	760	195	700	729	193	694	727	195	694	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	14.8	14.8	22.5	17.7	17.7	20.5	13.6	13.6	22.6	15.4	15.4
Incr Delay (d2), s/veh	12.2	1.1	1.1	16.2	2.0	2.0	13.0	3.8	3.6	18.4	1.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.8	1.8	0.1	1.5	1.5	1.5	3.5	3.6	0.1	2.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	15.9	15.9	38.7	19.8	19.7	33.5	17.4	17.2	40.9	17.3	17.4
LnGrp LOS	C	B	B	D	B	B	C	B	B	D	B	B
Approach Vol, veh/h		668			370			1013			637	
Approach Delay, s/veh		19.4			20.1			19.1			17.6	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	19.7	4.9	16.2	8.3	16.2	9.2	12.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.0	5.0	19.0	5.0	18.0	6.0	18.0				
Max Q Clear Time (g_c+I1), s	2.2	12.1	2.2	7.8	4.9	9.4	5.6	6.3				
Green Ext Time (p_c), s	0.0	2.6	0.0	2.0	0.0	2.3	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.9								
HCM 6th LOS				B								

HCM 6th TWSC  
22: Proposed Driveway B & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	371	23	18	333	75	125
Future Vol, veh/h	371	23	18	333	75	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	391	24	19	351	79	132

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	415	0	617	208
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	214	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1140	-	422	798
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	801	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1140	-	415	798
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	593	-	-	1140	-
HCM Lane V/C Ratio	0.355	-	-	0.017	-
HCM Control Delay (s)	14.4	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.6	-	-	0.1	-

HCM 6th Signalized Intersection Summary  
 23: Mill Creek Ave/Scholar Way & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	427	2	74	254	50	63	173	56	50	170	40
Future Volume (veh/h)	100	427	2	74	254	50	63	173	56	50	170	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	105	449	2	78	267	34	66	182	16	53	179	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	3	3	2
Cap, veh/h	160	849	4	133	696	88	119	463	40	101	443	27
Arrive On Green	0.09	0.23	0.23	0.07	0.22	0.22	0.07	0.14	0.14	0.06	0.13	0.13
Sat Flow, veh/h	1781	3628	16	1781	3172	400	1781	3274	285	1767	3372	206
Grp Volume(v), veh/h	105	220	231	78	148	153	66	97	101	53	93	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	1781	1777	1795	1781	1763	1796	1767	1763	1815
Q Serve(g_s), s	2.1	4.0	4.0	1.5	2.6	2.7	1.3	1.8	1.9	1.1	1.8	1.8
Cycle Q Clear(g_c), s	2.1	4.0	4.0	1.5	2.6	2.7	1.3	1.8	1.9	1.1	1.8	1.8
Prop In Lane	1.00		0.01	1.00		0.22	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	160	416	437	133	390	394	119	249	254	101	232	239
V/C Ratio(X)	0.66	0.53	0.53	0.59	0.38	0.39	0.55	0.39	0.40	0.53	0.40	0.41
Avail Cap(c_a), veh/h	317	885	930	307	876	885	444	1810	1843	242	1612	1659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	12.2	12.2	16.3	12.1	12.2	16.5	14.3	14.3	16.7	14.5	14.6
Incr Delay (d2), s/veh	4.5	1.0	1.0	4.0	0.6	0.6	4.0	1.0	1.0	4.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.3	1.4	0.6	0.7	0.7	0.5	0.6	0.6	0.4	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	13.3	13.2	20.4	12.8	12.8	20.5	15.2	15.3	21.0	15.7	15.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		556			379			264			243	
Approach Delay, s/veh		14.6			14.3			16.6			16.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	9.7	7.2	13.1	6.9	9.3	7.8	12.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	37.5	6.3	18.2	9.1	33.4	6.5	18.0				
Max Q Clear Time (g_c+I1), s	3.1	3.9	3.5	6.0	3.3	3.8	4.1	4.7				
Green Ext Time (p_c), s	0.0	1.0	0.0	2.1	0.0	0.9	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary  
 24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑		↔	↑		↔	↑↑↑		↔	↑↑↑	
Traffic Volume (veh/h)	343	10	191	20	20	20	275	1299	20	20	617	174
Future Volume (veh/h)	343	10	191	20	20	20	275	1299	20	20	617	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	361	11	39	21	21	2	289	1367	21	21	649	156
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	4	4	4	4	4	4
Cap, veh/h	593	61	215	71	67	6	329	2144	33	58	1072	253
Arrive On Green	0.17	0.17	0.17	0.04	0.04	0.04	0.19	0.42	0.42	0.03	0.27	0.27
Sat Flow, veh/h	3456	354	1255	1810	1708	163	1753	5098	78	1753	4032	951
Grp Volume(v), veh/h	361	0	50	21	0	23	289	898	490	21	537	268
Grp Sat Flow(s),veh/h/ln	1728	0	1609	1810	0	1871	1753	1675	1827	1753	1675	1633
Q Serve(g_s), s	7.5	0.0	2.1	0.9	0.0	0.9	12.4	16.4	16.4	0.9	10.9	11.2
Cycle Q Clear(g_c), s	7.5	0.0	2.1	0.9	0.0	0.9	12.4	16.4	16.4	0.9	10.9	11.2
Prop In Lane	1.00		0.78	1.00		0.09	1.00		0.04	1.00		0.58
Lane Grp Cap(c), veh/h	593	0	276	71	0	74	329	1409	768	58	891	434
V/C Ratio(X)	0.61	0.00	0.18	0.29	0.00	0.31	0.88	0.64	0.64	0.36	0.60	0.62
Avail Cap(c_a), veh/h	2297	0	1070	783	0	809	351	1881	1026	158	1514	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	0.0	27.4	36.2	0.0	36.2	30.6	17.8	17.8	36.7	24.9	25.0
Incr Delay (d2), s/veh	1.4	0.0	0.4	3.2	0.0	3.4	21.2	0.7	1.3	4.6	0.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.7	0.4	0.0	0.5	6.7	5.4	6.1	0.4	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	27.9	39.3	0.0	39.5	51.9	18.5	19.0	41.3	25.8	27.0
LnGrp LOS	C	A	C	D	A	D	D	B	B	D	C	C
Approach Vol, veh/h		411			44			1677			826	
Approach Delay, s/veh		30.7			39.4			24.4			26.6	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.0	27.1		19.8	9.0	39.1		9.6				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	15.5	35.0		51.5	7.0	43.5		33.5				
Max Q Clear Time (g_c+1/4), s	14.4	13.2		9.5	2.9	18.4		2.9				
Green Ext Time (p_c), s	0.1	6.7		2.5	0.0	13.1		0.2				

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	119	10	53	40	20	130	39	1750	20	60	986	84
Future Volume (veh/h)	119	10	53	40	20	130	39	1750	20	60	986	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	125	11	12	42	21	28	41	1842	10	63	1038	45
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	300	144	157	323	128	171	130	2252	680	165	2352	710
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.08	0.46	0.46	0.10	0.48	0.48
Sat Flow, veh/h	1346	807	881	1377	717	956	1725	4944	1493	1725	4944	1494
Grp Volume(v), veh/h	125	0	23	42	0	49	41	1842	10	63	1038	45
Grp Sat Flow(s),veh/h/ln	1346	0	1688	1377	0	1672	1725	1648	1493	1725	1648	1494
Q Serve(g_s), s	6.7	0.0	0.9	2.0	0.0	1.9	1.8	25.1	0.3	2.7	10.8	1.3
Cycle Q Clear(g_c), s	8.7	0.0	0.9	2.9	0.0	1.9	1.8	25.1	0.3	2.7	10.8	1.3
Prop In Lane	1.00		0.52	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	0	302	323	0	299	130	2252	680	165	2352	710
V/C Ratio(X)	0.42	0.00	0.08	0.13	0.00	0.16	0.31	0.82	0.01	0.38	0.44	0.06
Avail Cap(c_a), veh/h	700	0	803	732	0	796	222	2353	711	222	2353	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	0.0	26.6	27.8	0.0	27.0	34.0	18.4	11.6	33.0	13.5	11.0
Incr Delay (d2), s/veh	1.1	0.0	0.1	0.2	0.0	0.3	1.6	2.4	0.0	1.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.4	0.7	0.0	0.8	0.7	8.1	0.1	1.1	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	26.7	28.0	0.0	27.3	35.7	20.8	11.6	34.8	13.7	11.1
LnGrp LOS	C	A	C	C	A	C	D	C	B	C	B	B
Approach Vol, veh/h		148			91			1893			1146	
Approach Delay, s/veh		31.0			27.6			21.1			14.8	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	42.9		19.9	13.4	44.5		19.9				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	37.0		37.0	10.0	37.0		37.0				
Max Q Clear Time (g_c+14), s	14.5	27.1		10.7	3.8	12.8		4.9				
Green Ext Time (p_c), s	0.1	8.3		0.6	0.0	9.7		0.5				

Intersection Summary

HCM 6th Ctrl Delay		19.5										
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary  
 26: Sumner Ave & E Parkview St

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	116	10	35	34	10	178	43	623	43	24	502	20
Future Volume (veh/h)	116	10	35	34	10	178	43	623	43	24	502	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	122	11	17	36	11	41	45	656	38	25	528	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	419	17	26	261	55	119	93	1145	66	56	1105	36
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.05	0.34	0.34	0.03	0.32	0.32
Sat Flow, veh/h	1236	111	172	536	360	782	1767	3387	196	1781	3486	112
Grp Volume(v), veh/h	150	0	0	88	0	0	45	341	353	25	267	278
Grp Sat Flow(s),veh/h/ln1520		0	0	1678	0	0	1767	1763	1820	1781	1763	1835
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	0.0	0.7	4.5	4.5	0.4	3.4	3.4
Cycle Q Clear(g_c), s	2.5	0.0	0.0	1.3	0.0	0.0	0.7	4.5	4.5	0.4	3.4	3.4
Prop In Lane	0.81		0.11	0.41		0.47	1.00		0.11	1.00		0.06
Lane Grp Cap(c), veh/h	462	0	0	435	0	0	93	596	615	56	559	582
V/C Ratio(X)	0.32	0.00	0.00	0.20	0.00	0.00	0.48	0.57	0.57	0.45	0.48	0.48
Avail Cap(c_a), veh/h	1144	0	0	1174	0	0	344	1155	1193	316	1124	1170
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	0.0	0.0	10.7	0.0	0.0	13.0	7.7	7.7	13.4	7.8	7.8
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	0.0	0.0	3.8	0.9	0.8	5.4	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.7	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.8	0.9	0.2	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	0.0	0.0	10.9	0.0	0.0	16.8	8.5	8.5	18.9	8.4	8.4
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		150			88			739			570	
Approach Delay, s/veh		11.5			10.9			9.0			8.8	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s5.4	14.0			8.8	6.0	13.4		8.8				
Change Period (Y+Rc), s 4.5	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s 5.0	18.5			18.0	5.5	18.0		18.0				
Max Q Clear Time (g_c+1), s 12.4	6.5			4.5	2.7	5.4		3.3				
Green Ext Time (p_c), s 0.0	3.0			0.6	0.0	2.4		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.3								
HCM 6th LOS				A								

HCM 6th TWSC  
27: Mill Creek Ave & E Amanecer Privado

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	68	10	22	10	10	10	14	213	30	40	185	11
Future Vol, veh/h	68	10	22	10	10	10	14	213	30	40	185	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	3	3	2
Mvmt Flow	72	11	23	11	11	11	15	224	32	42	195	12

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	433	571	104	457	561	128	207	0	0	256	0	0
Stage 1	285	285	-	270	270	-	-	-	-	-	-	-
Stage 2	148	286	-	187	291	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	507	429	931	487	435	898	1361	-	-	1299	-	-
Stage 1	698	674	-	713	685	-	-	-	-	-	-	-
Stage 2	840	674	-	797	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	475	411	931	450	416	898	1361	-	-	1299	-	-
Mov Cap-2 Maneuver	475	411	-	450	416	-	-	-	-	-	-	-
Stage 1	690	652	-	705	677	-	-	-	-	-	-	-
Stage 2	808	667	-	740	649	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	13.6		12.3			0.4		1.3		
HCM LOS	B		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1361	-	-	523	523	1299	-	-
HCM Lane V/C Ratio	0.011	-	-	0.201	0.06	0.032	-	-
HCM Control Delay (s)	7.7	-	-	13.6	12.3	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.2	0.1	-	-



HCM 6th Signalized Intersection Summary  
28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑	↗	↗	↑↑↑	↗	↗	↑↑↑	↗
Traffic Volume (veh/h)	559	544	102	150	461	238	80	697	190	96	464	167
Future Volume (veh/h)	559	544	102	150	461	238	80	697	190	96	464	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	576	561	37	155	475	98	82	719	97	99	478	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	651	1188	521	226	751	328	105	1200	365	125	1258	383
Arrive On Green	0.19	0.34	0.34	0.07	0.21	0.21	0.06	0.24	0.24	0.07	0.25	0.25
Sat Flow, veh/h	3428	3526	1545	3428	3526	1540	1753	5025	1529	1753	5025	1529
Grp Volume(v), veh/h	576	561	37	155	475	98	82	719	97	99	478	47
Grp Sat Flow(s),veh/h/ln	1714	1763	1545	1714	1763	1540	1753	1675	1529	1753	1675	1529
Q Serve(g_s), s	15.0	11.5	1.5	4.1	11.3	4.9	4.2	11.7	4.7	5.1	7.2	2.2
Cycle Q Clear(g_c), s	15.0	11.5	1.5	4.1	11.3	4.9	4.2	11.7	4.7	5.1	7.2	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	651	1188	521	226	751	328	105	1200	365	125	1258	383
V/C Ratio(X)	0.88	0.47	0.07	0.69	0.63	0.30	0.78	0.60	0.27	0.79	0.38	0.12
Avail Cap(c_a), veh/h	820	1794	786	671	1640	716	191	1846	562	191	1846	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	24.0	20.7	42.0	32.9	30.4	42.7	31.1	28.5	42.0	28.6	26.7
Incr Delay (d2), s/veh	8.3	0.4	0.1	1.4	1.3	0.7	4.8	0.7	0.5	6.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	4.5	0.5	1.7	4.6	1.8	1.9	4.5	1.7	2.3	2.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	24.5	20.8	43.4	34.2	31.1	47.4	31.8	29.0	48.0	28.8	26.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1174			728			898			624	
Approach Delay, s/veh		34.2			35.7			32.9			31.7	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.6	29.2	12.1	38.2	11.5	30.2	23.5	26.8				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	10.0	33.8	18.0	46.8	10.0	33.8	22.0	42.8				
Max Q Clear Time (g_c+I1), s	7.1	13.7	6.1	13.5	6.2	9.2	17.0	13.3				
Green Ext Time (p_c), s	0.0	6.6	0.1	5.4	0.0	4.3	0.4	4.8				

Intersection Summary

HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	462	20	40	946	83	10	10	10	61	10	50
Future Volume (veh/h)	10	462	20	40	946	83	10	10	10	61	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	11	486	12	42	996	82	11	11	3	64	11	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	3	3	3	2	2	2
Cap, veh/h	33	1374	596	105	1415	116	178	144	29	275	47	28
Arrive On Green	0.02	0.41	0.41	0.06	0.46	0.46	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1668	3328	1443	1668	3106	256	475	978	198	976	323	191
Grp Volume(v), veh/h	11	486	12	42	534	544	25	0	0	86	0	0
Grp Sat Flow(s),veh/h/ln	1668	1664	1443	1668	1664	1697	1651	0	0	1489	0	0
Q Serve(g_s), s	0.3	4.8	0.2	1.2	12.2	12.3	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.8	0.2	1.2	12.2	12.3	0.6	0.0	0.0	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.15	0.44		0.12	0.74		0.13
Lane Grp Cap(c), veh/h	33	1374	596	105	758	773	351	0	0	350	0	0
V/C Ratio(X)	0.33	0.35	0.02	0.40	0.70	0.70	0.07	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	245	1746	757	245	873	891	1109	0	0	1052	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	9.6	8.3	21.5	10.4	10.4	17.6	0.0	0.0	18.3	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.3	0.0	2.5	3.2	3.1	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	0.1	0.5	3.9	4.0	0.2	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	10.0	8.3	24.0	13.6	13.5	17.7	0.0	0.0	18.7	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h		509			1120			25			86	
Approach Delay, s/veh		10.3			14.0			17.7			18.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.0	8.0	26.7		13.0	5.9	28.7				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	25.0		30.0	7.0	25.0				
Max Q Clear Time (g_c+11), s		2.6	3.2	6.8		4.4	2.3	14.3				
Green Ext Time (p_c), s		0.1	0.0	5.2		0.4	0.0	7.5				

Intersection Summary

HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↔	↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	220	163	150	199	439	162	410	1428	82	133	726	220
Future Volume (veh/h)	220	163	150	199	439	162	410	1428	82	133	726	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	232	172	0	209	462	53	432	1503	34	140	764	196
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	2	2	2	6	6	6	6	6	6
Cap, veh/h	290	507		212	645	281	457	1953	596	233	1284	326
Arrive On Green	0.09	0.15	0.00	0.12	0.18	0.18	0.14	0.39	0.39	0.07	0.33	0.33
Sat Flow, veh/h	3237	3328	1485	1781	3554	1549	3346	4944	1509	3346	3914	993
Grp Volume(v), veh/h	232	172	0	209	462	53	432	1503	34	140	642	318
Grp Sat Flow(s),veh/h/ln	1618	1664	1485	1781	1777	1549	1673	1648	1509	1673	1648	1611
Q Serve(g_s), s	8.0	5.2	0.0	13.3	13.9	3.3	14.5	30.0	1.6	4.6	18.5	18.8
Cycle Q Clear(g_c), s	8.0	5.2	0.0	13.3	13.9	3.3	14.5	30.0	1.6	4.6	18.5	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	290	507		212	645	281	457	1953	596	233	1081	529
V/C Ratio(X)	0.80	0.34		0.99	0.72	0.19	0.95	0.77	0.06	0.60	0.59	0.60
Avail Cap(c_a), veh/h	362	1319		212	1433	625	457	2112	644	236	1190	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	43.0	0.0	49.9	43.7	39.4	48.6	29.9	21.3	51.3	31.8	31.9
Incr Delay (d2), s/veh	9.8	0.8	0.0	57.9	1.1	0.2	28.7	2.1	0.1	3.6	1.2	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	2.2	0.0	9.3	6.1	1.3	7.6	11.2	0.6	2.0	7.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	43.9	0.0	107.8	44.8	39.6	77.3	31.9	21.3	54.9	33.1	34.5
LnGrp LOS	E	D		F	D	D	E	C	C	D	C	C
Approach Vol, veh/h		404	A		724			1969			1100	
Approach Delay, s/veh		53.4			62.6			41.7			36.3	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	52.4	21.0	24.8	23.0	44.8	17.7	28.1				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	3.0	48.5	13.5	45.0	15.5	41.0	12.7	45.8				
Max Q Clear Time (g_c+1), s	10.6	32.0	15.3	7.2	16.5	20.8	10.0	15.9				
Green Ext Time (p_c), s	0.0	12.8	0.0	2.1	0.0	9.9	0.2	2.7				

Intersection Summary

HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	327	40	25	720	24	60	10	42	21	10	20
Future Volume (veh/h)	10	327	40	25	720	24	60	10	42	21	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	344	20	26	758	11	63	11	8	22	11	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	1082	468	79	1169	506	391	54	265	284	120	29
Arrive On Green	0.02	0.30	0.30	0.04	0.33	0.33	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1537	1781	3554	1538	1186	315	1551	713	700	171
Grp Volume(v), veh/h	11	344	20	26	758	11	74	0	8	37	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1538	1501	0	1551	1584	0	0
Q Serve(g_s), s	0.2	2.6	0.3	0.5	6.4	0.2	0.4	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	2.6	0.3	0.5	6.4	0.2	1.3	0.0	0.2	0.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.59		0.11
Lane Grp Cap(c), veh/h	36	1082	468	79	1169	506	445	0	265	433	0	0
V/C Ratio(X)	0.30	0.32	0.04	0.33	0.65	0.02	0.17	0.00	0.03	0.09	0.00	0.00
Avail Cap(c_a), veh/h	352	1605	694	352	1605	695	1420	0	1313	1459	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.1	9.5	8.7	16.4	10.1	8.0	12.7	0.0	12.2	12.4	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.2	0.0	2.4	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.1	0.2	1.8	0.0	0.4	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	9.7	8.7	18.8	10.8	8.1	12.8	0.0	12.3	12.5	0.0	0.0
LnGrp LOS	C	A	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		375			795			82			37	
Approach Delay, s/veh		10.0			11.0			12.7			12.5	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.1	6.6	16.8		12.1	5.7	17.7				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	16.0		30.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s		3.3	2.5	4.6		2.6	2.2	8.4				
Green Ext Time (p_c), s		0.2	0.0	1.6		0.1	0.0	3.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											10.8	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary  
 32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	310	20	25	638	134	40	30	52	171	30	90
Future Volume (veh/h)	60	310	20	25	638	134	40	30	52	171	30	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	326	8	26	672	44	42	32	16	180	32	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	1087	470	77	939	405	333	221	418	355	66	91
Arrive On Green	0.09	0.31	0.31	0.04	0.26	0.26	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1537	1781	3554	1534	768	821	1555	826	247	339
Grp Volume(v), veh/h	63	326	8	26	672	44	74	0	16	279	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1534	1589	0	1555	1412	0	0
Q Serve(g_s), s	1.5	3.1	0.2	0.6	7.6	1.0	0.0	0.0	0.3	6.8	0.0	0.0
Cycle Q Clear(g_c), s	1.5	3.1	0.2	0.6	7.6	1.0	1.3	0.0	0.3	8.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.57		1.00	0.65		0.24
Lane Grp Cap(c), veh/h	152	1087	470	77	939	405	554	0	418	513	0	0
V/C Ratio(X)	0.42	0.30	0.02	0.34	0.72	0.11	0.13	0.00	0.04	0.54	0.00	0.00
Avail Cap(c_a), veh/h	280	1198	518	280	1198	517	1024	0	908	967	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.3	11.8	10.8	20.7	14.9	12.4	12.4	0.0	12.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.2	0.0	2.6	1.5	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.0	0.0	0.3	2.7	0.3	0.5	0.0	0.1	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	12.0	10.8	23.2	16.4	12.5	12.4	0.0	12.0	15.3	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		397			742			90			279	
Approach Delay, s/veh		13.4			16.4			12.4			15.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.0	6.9	19.6		18.0	8.8	17.8				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		26.0	7.0	15.0		26.0	7.0	15.0				
Max Q Clear Time (g_c+I1), s		3.3	2.6	5.1		10.1	3.5	9.6				
Green Ext Time (p_c), s		0.3	0.0	1.4		1.1	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖↗	
Traffic Volume (veh/h)	59	424	60	224	509	293	120	366	330	137	390	94
Future Volume (veh/h)	59	424	60	224	509	293	120	366	330	137	390	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	62	446	54	236	536	239	126	385	195	144	411	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	122	613	74	279	666	296	160	517	258	180	704	136
Arrive On Green	0.07	0.19	0.19	0.16	0.28	0.28	0.09	0.23	0.23	0.10	0.24	0.24
Sat Flow, veh/h	1781	3185	383	1767	2362	1050	1767	2266	1130	1767	2936	566
Grp Volume(v), veh/h	62	248	252	236	399	376	126	298	282	144	245	246
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1767	1763	1650	1767	1763	1633	1767	1763	1740
Q Serve(g_s), s	2.5	9.6	9.7	9.5	15.5	15.6	5.1	11.6	11.8	5.9	9.0	9.2
Cycle Q Clear(g_c), s	2.5	9.6	9.7	9.5	15.5	15.6	5.1	11.6	11.8	5.9	9.0	9.2
Prop In Lane	1.00		0.21	1.00		0.64	1.00		0.69	1.00		0.33
Lane Grp Cap(c), veh/h	122	342	345	279	497	465	160	402	373	180	423	417
V/C Ratio(X)	0.51	0.72	0.73	0.85	0.80	0.81	0.79	0.74	0.76	0.80	0.58	0.59
Avail Cap(c_a), veh/h	400	676	682	420	695	650	288	719	666	264	695	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	27.9	27.9	30.1	24.5	24.5	32.8	26.4	26.5	32.3	24.7	24.8
Incr Delay (d2), s/veh	1.2	1.1	1.1	6.3	3.1	3.5	3.3	2.7	3.1	6.1	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.0	4.0	4.1	6.1	5.7	2.2	4.7	4.5	2.6	3.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	29.0	29.0	36.4	27.6	28.0	36.0	29.1	29.6	38.4	26.0	26.1
LnGrp LOS	C	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		562			1011			706			635	
Approach Delay, s/veh		29.6			29.8			30.5			28.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	2.5	23.8	16.6	20.7	11.6	24.6	10.0	27.2				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	30.0	17.5	28.0	12.0	29.0	16.5	29.0					
Max Q Clear Time (g_c+1), s	13.8	11.5	11.7	7.1	11.2	4.5	17.6					
Green Ext Time (p_c), s	0.0	2.9	0.2	1.7	0.1	2.5	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

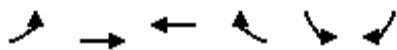
Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 34: Bellegrave Ave & Proposed Driveway B

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	18	1063	697	18	88	35	
Future Volume (veh/h)	18	1063	697	18	88	35	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	19	1119	734	17	93	8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	44	1869	1240	29	272	23	
Arrive On Green	0.02	0.53	0.35	0.35	0.17	0.17	
Sat Flow, veh/h	1781	3647	3644	82	1609	138	
Grp Volume(v), veh/h	19	1119	367	384	102	0	
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1856	1765	0	
Q Serve(g_s), s	0.3	6.4	5.0	5.0	1.5	0.0	
Cycle Q Clear(g_c), s	0.3	6.4	5.0	5.0	1.5	0.0	
Prop In Lane	1.00			0.04	0.91	0.08	
Lane Grp Cap(c), veh/h	44	1869	621	648	299	0	
V/C Ratio(X)	0.44	0.60	0.59	0.59	0.34	0.00	
Avail Cap(c_a), veh/h	302	3320	1089	1137	1099	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	14.2	4.8	7.9	7.9	10.8	0.0	
Incr Delay (d2), s/veh	6.7	0.3	0.9	0.9	0.7	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.9	0.9	0.5	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	21.0	5.2	8.8	8.8	11.5	0.0	
LnGrp LOS	C	A	A	A	B	A	
Approach Vol, veh/h		1138	751		102		
Approach Delay, s/veh		5.4	8.8		11.5		
Approach LOS		A	A		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				20.0	9.5	5.2	14.8
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				27.6	18.4	5.0	18.1
Max Q Clear Time (g_c+1), s				8.4	3.5	2.3	7.0
Green Ext Time (p_c), s				7.1	0.2	0.0	3.1
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			7.0				
HCM 6th LOS			A				
<b>Notes</b>							
User approved volume balancing among the lanes for turning movement.							



HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	945	105	70	527	39	112	127	240	9	130	81
Future Volume (veh/h)	101	945	105	70	527	39	112	127	240	9	130	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	106	995	105	74	555	14	118	134	74	9	137	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	153	1151	121	134	1228	538	158	482	249	28	265	219
Arrive On Green	0.09	0.36	0.36	0.08	0.35	0.35	0.09	0.22	0.22	0.02	0.14	0.14
Sat Flow, veh/h	1767	3207	338	1767	3526	1545	1767	2228	1154	1767	1856	1533
Grp Volume(v), veh/h	106	547	553	74	555	14	118	104	104	9	137	20
Grp Sat Flow(s),veh/h/ln	1767	1763	1783	1767	1763	1545	1767	1763	1619	1767	1856	1533
Q Serve(g_s), s	4.1	20.3	20.4	2.9	8.6	0.4	4.6	3.5	3.8	0.4	4.8	0.8
Cycle Q Clear(g_c), s	4.1	20.3	20.4	2.9	8.6	0.4	4.6	3.5	3.8	0.4	4.8	0.8
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	153	633	640	134	1228	538	158	381	350	28	265	219
V/C Ratio(X)	0.69	0.86	0.86	0.55	0.45	0.03	0.75	0.27	0.30	0.32	0.52	0.09
Avail Cap(c_a), veh/h	200	699	707	175	1348	591	175	986	906	175	1038	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	21.0	21.0	31.5	17.8	15.1	31.4	23.0	23.2	34.3	28.0	26.3
Incr Delay (d2), s/veh	6.6	10.2	10.1	3.5	0.3	0.0	12.2	0.1	0.2	2.4	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	8.8	8.9	1.2	3.0	0.1	2.3	1.3	1.3	0.2	2.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	31.2	31.2	35.0	18.1	15.2	43.5	23.2	23.3	36.7	28.6	26.3
LnGrp LOS	D	C	C	C	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1206			643			326			166	
Approach Delay, s/veh		31.8			19.9			30.6			28.8	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	16.6	11.1	31.6	6.1	21.8	10.4	32.3				
Change Period (Y+Rc), s	5.0	6.5	5.0	7.0	5.0	6.5	5.0	7.0				
Max Green Setting (Gmax), s	39.5	8.0	27.0	7.0	39.5	7.0	28.0					
Max Q Clear Time (g_c+1/3), s	6.8	6.1	10.6	2.4	5.8	4.9	22.4					
Green Ext Time (p_c), s	0.0	0.4	0.0	3.0	0.0	0.7	3.0					

Intersection Summary

HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	500	100	223	700	370	120	1209	312	380	646	200
Future Volume (veh/h)	220	500	100	223	700	370	120	1209	312	380	646	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	232	526	56	235	737	253	126	1273	273	400	680	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	6	6	6	6	6	6
Cap, veh/h	219	1094	486	292	958	745	180	1714	663	393	2028	627
Arrive On Green	0.13	0.32	0.32	0.09	0.28	0.28	0.05	0.35	0.35	0.12	0.41	0.41
Sat Flow, veh/h	1739	3469	1540	3374	3469	2699	3346	4944	1528	3346	4944	1529
Grp Volume(v), veh/h	232	526	56	235	737	253	126	1273	273	400	680	102
Grp Sat Flow(s),veh/h/ln	1739	1735	1540	1687	1735	1349	1673	1648	1528	1673	1648	1529
Q Serve(g_s), s	15.0	14.6	3.1	8.2	23.3	8.9	4.4	27.0	14.7	14.0	11.2	5.0
Cycle Q Clear(g_c), s	15.0	14.6	3.1	8.2	23.3	8.9	4.4	27.0	14.7	14.0	11.2	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	1094	486	292	958	745	180	1714	663	393	2028	627
V/C Ratio(X)	1.06	0.48	0.12	0.80	0.77	0.34	0.70	0.74	0.41	1.02	0.34	0.16
Avail Cap(c_a), veh/h	219	1309	581	424	1309	1018	280	2072	773	393	2238	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	33.0	29.0	53.5	39.7	34.5	55.5	34.3	23.3	52.7	24.1	22.2
Incr Delay (d2), s/veh	77.9	0.1	0.0	4.3	1.9	0.3	4.9	1.3	0.5	50.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	5.9	1.1	3.5	9.7	2.8	1.9	10.3	5.1	8.4	4.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.1	33.1	29.1	57.8	41.6	34.8	60.4	35.6	23.8	102.9	24.2	22.4
LnGrp LOS	F	C	C	E	D	C	E	D	C	F	C	C
Approach Vol, veh/h		814			1225			1672			1182	
Approach Delay, s/veh		60.5			43.3			35.5			50.7	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	45.4	14.3	41.6	10.4	52.9	19.0	36.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	14.0	50.0	15.0	45.0	10.0	54.0	15.0	45.0				
Max Q Clear Time (g_c+1/3), s	11.0	29.0	10.2	16.6	6.4	13.2	17.0	25.3				
Green Ext Time (p_c), s	0.0	10.9	0.2	2.1	0.1	7.3	0.0	5.4				

Intersection Summary

HCM 6th Ctrl Delay	45.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	362	790	50	100	1090	93	90	464	160	143	357	123
Future Volume (veh/h)	362	790	50	100	1090	93	90	464	160	143	357	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	381	832	19	105	1147	32	95	488	67	151	376	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	341	1841	562	172	1591	491	121	784	343	155	851	372
Arrive On Green	0.10	0.37	0.37	0.05	0.32	0.32	0.07	0.22	0.22	0.09	0.24	0.24
Sat Flow, veh/h	3374	4985	1521	3374	4985	1540	1767	3526	1540	1767	3526	1541
Grp Volume(v), veh/h	381	832	19	105	1147	32	95	488	67	151	376	33
Grp Sat Flow(s),veh/h/ln	1687	1662	1521	1687	1662	1540	1767	1763	1540	1767	1763	1541
Q Serve(g_s), s	7.5	9.4	0.6	2.3	15.1	1.1	3.9	9.3	2.6	6.3	6.7	1.2
Cycle Q Clear(g_c), s	7.5	9.4	0.6	2.3	15.1	1.1	3.9	9.3	2.6	6.3	6.7	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	1841	562	172	1591	491	121	784	343	155	851	372
V/C Ratio(X)	1.12	0.45	0.03	0.61	0.72	0.07	0.78	0.62	0.20	0.97	0.44	0.09
Avail Cap(c_a), veh/h	341	2319	707	182	2084	644	203	1901	831	155	1806	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	17.7	14.9	34.5	22.3	17.6	34.0	26.0	23.4	33.8	23.9	21.8
Incr Delay (d2), s/veh	84.1	0.2	0.0	4.7	0.9	0.1	4.1	0.6	0.2	64.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	3.2	0.2	1.0	5.3	0.3	1.7	3.6	0.9	5.3	2.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.4	17.9	15.0	39.2	23.2	17.6	38.1	26.6	23.6	98.1	24.2	21.9
LnGrp LOS	F	B	B	D	C	B	D	C	C	F	C	C
Approach Vol, veh/h		1232			1284			650			560	
Approach Delay, s/veh		48.6			24.4			28.0			44.0	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	32.9	9.6	23.4	12.0	29.2	11.0	22.0				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	34.5	8.5	38.0	7.5	31.0	6.5	40.0				
Max Q Clear Time (g_c+1/3), s	11.3	11.4	5.9	8.7	9.5	17.1	8.3	11.3				
Green Ext Time (p_c), s	0.0	5.6	0.0	1.9	0.0	6.3	0.0	2.6				

Intersection Summary

HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	40	1153	80	80	1193	82	90	207	170	105	200	30
Future Volume (veh/h)	40	1153	80	80	1193	82	90	207	170	105	200	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1214	78	84	1256	80	95	218	40	111	211	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	72	1736	112	108	1838	117	121	315	261	142	640	279
Arrive On Green	0.04	0.36	0.36	0.06	0.38	0.38	0.07	0.17	0.17	0.08	0.18	0.18
Sat Flow, veh/h	1739	4776	307	1739	4788	305	1767	1856	1536	1767	3526	1537
Grp Volume(v), veh/h	42	845	447	84	872	464	95	218	40	111	211	32
Grp Sat Flow(s),veh/h/ln	1739	1662	1760	1739	1662	1770	1767	1856	1536	1767	1763	1537
Q Serve(g_s), s	1.5	13.4	13.4	2.9	13.5	13.5	3.3	6.8	1.4	3.8	3.2	1.1
Cycle Q Clear(g_c), s	1.5	13.4	13.4	2.9	13.5	13.5	3.3	6.8	1.4	3.8	3.2	1.1
Prop In Lane	1.00		0.17	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	1208	640	108	1275	679	121	315	261	142	640	279
V/C Ratio(X)	0.58	0.70	0.70	0.78	0.68	0.68	0.78	0.69	0.15	0.78	0.33	0.11
Avail Cap(c_a), veh/h	141	1466	776	166	1514	806	169	1116	924	281	2344	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	16.7	16.7	28.5	15.9	15.9	28.3	24.1	21.8	27.8	22.0	21.1
Incr Delay (d2), s/veh	2.7	1.3	2.4	5.1	1.1	2.1	9.5	1.0	0.1	3.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.4	4.8	1.3	4.3	4.8	1.6	2.8	0.5	1.6	1.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	18.0	19.2	33.6	17.0	18.0	37.7	25.1	21.9	31.3	22.1	21.2
LnGrp LOS	C	B	B	C	B	B	D	C	C	C	C	C
Approach Vol, veh/h	1334				1420		353				354	
Approach Delay, s/veh	18.8				18.3		28.1				24.9	
Approach LOS	B				B		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	29.2	8.7	16.7	8.3	27.9	9.5	16.0				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	28.1	5.9	41.0	5.9	27.2	9.8	37.1				
Max Q Clear Time (g_c+1), s	13.5	15.5	5.3	5.2	4.9	15.4	5.8	8.8				
Green Ext Time (p_c), s	0.0	7.4	0.0	0.9	0.0	6.9	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	170	1044	155	300	1126	380	160	437	560	274	332	90
Future Volume (veh/h)	170	1044	155	300	1126	380	160	437	560	274	332	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	179	1099	56	316	1185	198	168	460	385	288	349	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	4	4	4	4	4	4
Cap, veh/h	237	1713	530	372	1332	592	226	1297	400	345	1474	455
Arrive On Green	0.07	0.34	0.34	0.11	0.38	0.38	0.07	0.26	0.26	0.10	0.29	0.29
Sat Flow, veh/h	3374	4985	1541	3374	3469	1541	3401	5025	1551	3401	5025	1552
Grp Volume(v), veh/h	179	1099	56	316	1185	198	168	460	385	288	349	29
Grp Sat Flow(s),veh/h/ln	1687	1662	1541	1687	1735	1541	1700	1675	1551	1700	1675	1552
Q Serve(g_s), s	5.7	20.4	2.7	10.1	35.2	10.0	5.3	8.2	26.9	9.1	5.8	1.5
Cycle Q Clear(g_c), s	5.7	20.4	2.7	10.1	35.2	10.0	5.3	8.2	26.9	9.1	5.8	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	1713	530	372	1332	592	226	1297	400	345	1474	455
V/C Ratio(X)	0.76	0.64	0.11	0.85	0.89	0.33	0.74	0.35	0.96	0.83	0.24	0.06
Avail Cap(c_a), veh/h	414	1713	530	414	1332	592	417	1297	400	510	1474	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	30.4	24.6	48.0	31.7	24.0	50.4	33.3	40.3	48.5	29.5	28.0
Incr Delay (d2), s/veh	1.8	1.8	0.4	12.1	8.6	1.4	1.8	0.1	34.7	4.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	8.0	1.0	4.7	15.3	3.7	2.3	3.2	13.6	4.0	2.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	32.2	25.0	60.1	40.3	25.4	52.2	33.4	75.0	53.4	29.5	28.0
LnGrp LOS	D	C	C	E	D	C	D	C	E	D	C	C
Approach Vol, veh/h		1334			1699			1013			666	
Approach Delay, s/veh		34.6			42.2			52.3			39.8	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	43.7	11.8	37.9	12.2	48.1	15.7	34.0				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	13.5	31.1	13.5	31.4	13.5	31.1	16.5	28.4				
Max Q Clear Time (g_c+1/2p_c), s	11.2	22.4	7.3	7.8	7.7	37.2	11.1	28.9				
Green Ext Time (p_c), s	0.0	2.7	0.0	1.1	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1160	838	0	1266	690	0	0	0	210	0	680
Future Volume (veh/h)	0	1160	838	0	1266	690	0	0	0	210	0	680
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826				1826	1826	1826
Adj Flow Rate, veh/h	0	1208	520	0	1319	719				219	0	631
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	5	5				5	5	5
Cap, veh/h	0	2964	918	0	2964	1203				645	0	574
Arrive On Green	0.00	0.59	0.59	0.00	1.00	1.00				0.19	0.00	0.19
Sat Flow, veh/h	0	5149	1543	0	5149	1541				3478	0	3095
Grp Volume(v), veh/h	0	1208	520	0	1319	719				219	0	631
Grp Sat Flow(s),veh/h/ln	0	1662	1543	0	1662	1541				1739	0	1547
Q Serve(g_s), s	0.0	7.1	11.3	0.0	0.0	0.0				3.0	0.0	10.2
Cycle Q Clear(g_c), s	0.0	7.1	11.3	0.0	0.0	0.0				3.0	0.0	10.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2964	918	0	2964	1203				645	0	574
V/C Ratio(X)	0.00	0.41	0.57	0.00	0.45	0.60				0.34	0.00	1.10
Avail Cap(c_a), veh/h	0	2964	918	0	2964	1203				645	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.77	0.77				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	6.8	0.0	0.0	0.0				19.5	0.0	22.4
Incr Delay (d2), s/veh	0.0	0.4	2.5	0.0	0.4	1.7				0.1	0.0	67.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	2.7	0.0	0.1	0.6				1.1	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.4	9.3	0.0	0.4	1.7				19.6	0.0	90.1
LnGrp LOS	A	A	A	A	A	A				B	A	F
Approach Vol, veh/h		1728			2038						850	
Approach Delay, s/veh		7.3			0.8						71.9	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		39.0		16.0		39.0						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		32.7		10.2		32.7						
Max Q Clear Time (g_c+I1), s		13.3		12.2		2.0						
Green Ext Time (p_c), s		6.5		0.0		9.0						

### Intersection Summary

HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑	↑	↑↑			
Traffic Volume (veh/h)	0	830	540	0	1167	310	789	10	540	0	0	0
Future Volume (veh/h)	0	830	540	0	1167	310	789	10	540	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1826	1826	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	0	865	562	0	1216	157	829	0	438			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	5	5	0	5	5	5	5	5			
Cap, veh/h	0	2511	1203	0	2511	777	961	0	855			
Arrive On Green	0.00	1.00	1.00	0.00	0.50	0.50	0.28	0.00	0.28			
Sat Flow, veh/h	0	5149	1540	0	5149	1543	3478	0	3095			
Grp Volume(v), veh/h	0	865	562	0	1216	157	829	0	438			
Grp Sat Flow(s),veh/h/ln	0	1662	1540	0	1662	1543	1739	0	1547			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.8	3.1	12.5	0.0	6.6			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.8	3.1	12.5	0.0	6.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2511	1203	0	2511	777	961	0	855			
V/C Ratio(X)	0.00	0.34	0.47	0.00	0.48	0.20	0.86	0.00	0.51			
Avail Cap(c_a), veh/h	0	2511	1203	0	2511	777	1024	0	912			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.92	0.92	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	9.0	7.5	18.9	0.0	16.8			
Incr Delay (d2), s/veh	0.0	0.3	1.2	0.0	0.7	0.6	6.9	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.4	0.0	2.3	0.8	5.4	0.0	2.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	1.2	0.0	9.6	8.1	25.8	0.0	17.0			
LnGrp LOS	A	A	A	A	A	A	C	A	B			
Approach Vol, veh/h		1427			1373			1267				
Approach Delay, s/veh		0.7			9.5			22.7				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		34.0				34.0		21.0				
Change Period (Y+Rc), s		6.3				6.3		5.8				
Max Green Setting (Gmax), s		26.7				26.7		16.2				
Max Q Clear Time (g_c+I1), s		2.0				10.8		14.5				
Green Ext Time (p_c), s		5.0				5.3		0.7				

Intersection Summary

HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.



HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	530	760	130	230	1090	140	350	884	330	70	659	560
Future Volume (veh/h)	530	760	130	230	1090	140	350	884	330	70	659	560
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1752	1752	1752	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	558	800	43	242	1147	36	368	931	129	74	694	374
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	3	3	3	6	6	6	6	6	6
Cap, veh/h	583	1622	501	300	1248	380	434	1713	529	170	1323	408
Arrive On Green	0.18	0.34	0.34	0.09	0.25	0.25	0.13	0.35	0.35	0.05	0.27	0.27
Sat Flow, veh/h	3237	4782	1478	3428	5066	1541	3346	4944	1528	3346	4944	1526
Grp Volume(v), veh/h	558	800	43	242	1147	36	368	931	129	74	694	374
Grp Sat Flow(s),veh/h/ln	1618	1594	1478	1714	1689	1541	1673	1648	1528	1673	1648	1526
Q Serve(g_s), s	21.8	16.9	2.5	8.8	28.2	2.3	13.7	19.4	7.7	2.7	15.3	30.4
Cycle Q Clear(g_c), s	21.8	16.9	2.5	8.8	28.2	2.3	13.7	19.4	7.7	2.7	15.3	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1622	501	300	1248	380	434	1713	529	170	1323	408
V/C Ratio(X)	0.96	0.49	0.09	0.81	0.92	0.09	0.85	0.54	0.24	0.43	0.52	0.92
Avail Cap(c_a), veh/h	583	1622	501	456	1270	386	839	2149	664	315	1375	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	33.5	28.7	57.2	46.9	37.1	54.3	33.6	29.8	58.8	39.8	45.4
Incr Delay (d2), s/veh	26.8	0.2	0.1	5.0	10.7	0.1	3.5	0.3	0.2	1.3	0.3	23.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	6.3	0.9	4.0	12.7	0.9	5.8	7.5	2.8	1.2	6.0	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.6	33.7	28.8	62.2	57.6	37.2	57.9	33.9	30.0	60.1	40.2	69.3
LnGrp LOS	E	C	C	E	E	D	E	C	C	E	D	E
Approach Vol, veh/h		1401			1425			1428			1142	
Approach Delay, s/veh		51.4			57.9			39.7			51.0	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	50.3	11.5	49.7	28.0	38.5	21.6	39.7				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	38.0	12.0	55.5	23.0	32.0	32.0	35.5					
Max Q Clear Time (g_c+fl), s	18.9	4.7	21.4	23.8	30.2	15.7	32.4					
Green Ext Time (p_c), s	0.3	4.9	0.1	7.2	0.0	1.2	0.8	1.7				

Intersection Summary

HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	220	70	210	210	100	50	560	160	60	547	50
Future Volume (veh/h)	140	220	70	210	210	100	50	560	160	60	547	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	147	232	13	221	221	23	53	589	77	63	576	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	175	290	240	250	377	317	68	2314	707	81	2350	710
Arrive On Green	0.10	0.16	0.16	0.14	0.20	0.20	0.04	0.46	0.46	0.05	0.47	0.47
Sat Flow, veh/h	1781	1870	1547	1781	1870	1573	1753	5025	1535	1753	5025	1518
Grp Volume(v), veh/h	147	232	13	221	221	23	53	589	77	63	576	24
Grp Sat Flow(s),veh/h/ln	1781	1870	1547	1781	1870	1573	1753	1675	1535	1753	1675	1518
Q Serve(g_s), s	8.9	13.2	0.8	13.4	11.8	1.3	3.3	7.9	3.1	3.9	7.6	0.9
Cycle Q Clear(g_c), s	8.9	13.2	0.8	13.4	11.8	1.3	3.3	7.9	3.1	3.9	7.6	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	290	240	250	377	317	68	2314	707	81	2350	710
V/C Ratio(X)	0.84	0.80	0.05	0.88	0.59	0.07	0.78	0.25	0.11	0.78	0.25	0.03
Avail Cap(c_a), veh/h	356	471	389	429	561	472	183	2314	707	151	2350	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	44.8	39.6	46.4	39.8	35.6	52.4	18.1	16.9	51.9	17.6	15.8
Incr Delay (d2), s/veh	4.0	1.9	0.0	5.4	0.5	0.0	7.1	0.3	0.3	6.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.1	0.3	6.1	5.3	0.5	1.5	2.9	1.1	1.8	2.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	46.7	39.6	51.8	40.3	35.6	59.5	18.4	17.2	58.0	17.8	15.9
LnGrp LOS	D	D	D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		392			465			719			663	
Approach Delay, s/veh		48.8			45.5			21.3			21.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	58.1	19.9	22.4	8.8	58.9	14.8	27.5				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	9.5	* 25	26.5	27.7	11.5	22.5	22.0	* 33				
Max Q Clear Time (g_c+I), s	11.9	9.9	15.4	15.2	5.3	9.6	10.9	13.8				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.1	0.0	2.0	0.0	0.1				

### Intersection Summary

HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

### Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	50	269	20	30	20	300	520	10	20	617	470
Future Volume (veh/h)	370	50	269	20	30	20	300	520	10	20	617	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	389	53	99	21	32	2	316	547	6	21	649	139
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	440	526	444	41	107	89	358	2267	681	41	944	413
Arrive On Green	0.25	0.28	0.28	0.02	0.06	0.06	0.20	0.45	0.45	0.02	0.27	0.27
Sat Flow, veh/h	1767	1856	1564	1767	1856	1534	1753	5025	1509	1753	3497	1530
Grp Volume(v), veh/h	389	53	99	21	32	2	316	547	6	21	649	139
Grp Sat Flow(s),veh/h/ln	1767	1856	1564	1767	1856	1534	1753	1675	1509	1753	1749	1530
Q Serve(g_s), s	17.4	1.7	4.0	1.0	1.4	0.1	14.4	5.5	0.2	1.0	13.7	6.0
Cycle Q Clear(g_c), s	17.4	1.7	4.0	1.0	1.4	0.1	14.4	5.5	0.2	1.0	13.7	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	440	526	444	41	107	89	358	2267	681	41	944	413
V/C Ratio(X)	0.88	0.10	0.22	0.51	0.30	0.02	0.88	0.24	0.01	0.52	0.69	0.34
Avail Cap(c_a), veh/h	784	1365	1150	333	891	736	458	2902	872	181	1467	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	21.7	22.5	39.7	37.2	36.6	31.8	13.9	12.4	39.7	26.9	24.1
Incr Delay (d2), s/veh	6.0	0.1	0.3	9.6	1.5	0.1	15.0	0.1	0.0	9.8	0.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.7	1.5	0.5	0.7	0.0	7.0	1.8	0.1	0.5	5.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	21.8	22.8	49.3	38.7	36.7	46.8	14.0	12.4	49.5	27.8	24.6
LnGrp LOS	D	C	C	D	D	D	D	B	B	D	C	C
Approach Vol, veh/h		541			55			869			809	
Approach Delay, s/veh		32.0			42.7			25.9			27.8	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	41.6	6.4	27.8	21.3	26.7	25.0	9.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	3.5	47.5	15.5	60.5	21.5	34.5	36.5	39.5				
Max Q Clear Time (g_c+1), s	13.0	7.5	3.0	6.0	16.4	15.7	19.4	3.4				
Green Ext Time (p_c), s	0.0	3.6	0.0	0.6	0.4	4.2	1.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	260	200	300	300	60	240	614	250	50	609	120
Future Volume (veh/h)	270	260	200	300	300	60	240	614	250	50	609	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	284	274	33	316	316	10	253	646	132	53	641	115
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	321	440	191	353	484	212	287	1954	596	71	785	141
Arrive On Green	0.18	0.12	0.12	0.20	0.14	0.14	0.17	0.40	0.40	0.04	0.27	0.27
Sat Flow, veh/h	1767	3526	1530	1767	3526	1549	1725	4944	1509	1725	2906	520
Grp Volume(v), veh/h	284	274	33	316	316	10	253	646	132	53	379	377
Grp Sat Flow(s),veh/h/ln	1767	1763	1530	1767	1763	1549	1725	1648	1509	1725	1721	1705
Q Serve(g_s), s	13.8	6.5	1.7	15.3	7.5	0.5	12.6	8.0	5.1	2.7	18.1	18.2
Cycle Q Clear(g_c), s	13.8	6.5	1.7	15.3	7.5	0.5	12.6	8.0	5.1	2.7	18.1	18.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	321	440	191	353	484	212	287	1954	596	71	465	461
V/C Ratio(X)	0.88	0.62	0.17	0.90	0.65	0.05	0.88	0.33	0.22	0.74	0.82	0.82
Avail Cap(c_a), veh/h	674	1063	461	684	1063	467	344	2082	635	226	607	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	36.5	34.4	34.3	35.9	32.9	35.8	18.5	17.6	41.7	30.0	30.0
Incr Delay (d2), s/veh	3.2	1.4	0.4	3.3	1.5	0.1	17.9	0.1	0.2	5.6	6.5	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	2.7	0.6	6.5	3.1	0.2	6.3	2.7	1.6	1.2	7.7	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	37.9	34.8	37.6	37.4	33.0	53.7	18.6	17.8	47.3	36.6	36.8
LnGrp LOS	D	D	C	D	D	C	D	B	B	D	D	D
Approach Vol, veh/h		591			642			1031			809	
Approach Delay, s/veh		37.9			37.4			27.1			37.4	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	41.7	21.5	16.5	19.1	30.7	20.5	17.6					
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	37.0	34.0	26.5	17.5	31.0	33.5	26.5					
Max Q Clear Time (g_c+14), s	10.0	17.3	8.5	14.6	20.2	15.8	9.5					
Green Ext Time (p_c), s	0.0	4.6	0.2	1.5	0.1	3.1	0.2	1.6				

Intersection Summary

HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	230	60	680	160	340	80	240	300	499	583	74
Future Volume (veh/h)	50	230	60	680	160	340	80	240	300	499	583	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	52	240	6	438	546	115	83	250	63	520	607	69
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	10	10	2	2	2	4	4	4	4	4	4
Cap, veh/h	162	324	142	630	662	551	107	487	212	620	821	93
Arrive On Green	0.10	0.10	0.10	0.35	0.35	0.35	0.06	0.14	0.14	0.18	0.26	0.26
Sat Flow, veh/h	1668	3328	1460	1781	1870	1557	1753	3497	1520	3401	3153	358
Grp Volume(v), veh/h	52	240	6	438	546	115	83	250	63	520	336	340
Grp Sat Flow(s),veh/h/ln	1668	1664	1460	1781	1870	1557	1753	1749	1520	1700	1749	1762
Q Serve(g_s), s	2.3	5.5	0.3	16.7	21.1	4.1	3.7	5.2	2.9	11.7	13.9	14.0
Cycle Q Clear(g_c), s	2.3	5.5	0.3	16.7	21.1	4.1	3.7	5.2	2.9	11.7	13.9	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	162	324	142	630	662	551	107	487	212	620	455	459
V/C Ratio(X)	0.32	0.74	0.04	0.70	0.83	0.21	0.77	0.51	0.30	0.84	0.74	0.74
Avail Cap(c_a), veh/h	179	358	157	811	851	709	277	1326	576	752	774	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	34.7	32.4	21.9	23.3	17.8	36.6	31.6	30.6	31.2	26.8	26.8
Incr Delay (d2), s/veh	1.1	7.3	0.1	1.8	5.3	0.2	11.2	0.8	0.8	7.1	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.5	0.1	6.8	9.5	1.4	1.8	2.1	1.0	5.0	5.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	42.0	32.5	23.7	28.6	18.0	47.8	32.4	31.3	38.3	29.1	29.2
LnGrp LOS	C	D	C	C	C	B	D	C	C	D	C	C
Approach Vol, veh/h		298			1099			396			1196	
Approach Delay, s/veh		40.5			25.5			35.5			33.2	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.9	15.5		12.2	9.3	25.1		32.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	17.5	30.0		8.5	12.5	35.0		36.0				
Max Q Clear Time (g_c+I1), s	11.3	7.2		7.5	5.7	16.0		23.1				
Green Ext Time (p_c), s	0.7	1.5		0.2	0.1	3.5		4.4				

Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↖	↑	↗	↖	↕↕		↖	↕↕	↗
Traffic Volume (veh/h)	252	140	190	40	144	40	230	622	50	90	1090	409
Future Volume (veh/h)	252	140	190	40	144	40	230	622	50	90	1090	409
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	265	147	46	42	152	7	242	655	50	95	1147	233
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	342	375	315	65	258	211	278	1580	121	121	1369	752
Arrive On Green	0.10	0.20	0.20	0.04	0.14	0.14	0.16	0.49	0.49	0.07	0.40	0.40
Sat Flow, veh/h	3456	1870	1573	1781	1870	1527	1725	3233	246	1725	3441	1509
Grp Volume(v), veh/h	265	147	46	42	152	7	242	348	357	95	1147	233
Grp Sat Flow(s),veh/h/ln	1728	1870	1573	1781	1870	1527	1725	1721	1759	1725	1721	1509
Q Serve(g_s), s	6.6	6.0	2.1	2.1	6.7	0.4	12.1	11.4	11.5	4.8	26.6	8.1
Cycle Q Clear(g_c), s	6.6	6.0	2.1	2.1	6.7	0.4	12.1	11.4	11.5	4.8	26.6	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	342	375	315	65	258	211	278	841	860	121	1369	752
V/C Ratio(X)	0.78	0.39	0.15	0.65	0.59	0.03	0.87	0.41	0.41	0.78	0.84	0.31
Avail Cap(c_a), veh/h	392	782	658	143	721	588	334	868	887	264	1595	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	30.6	29.1	42.0	35.7	32.9	36.1	14.5	14.5	40.4	24.0	13.2
Incr Delay (d2), s/veh	8.3	0.7	0.2	10.3	2.1	0.1	18.6	0.3	0.3	10.5	3.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.7	0.8	1.1	3.1	0.1	6.2	4.0	4.1	2.3	10.3	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	31.3	29.3	52.3	37.8	33.0	54.7	14.8	14.8	50.8	27.6	13.4
LnGrp LOS	D	C	C	D	D	C	D	B	B	D	C	B
Approach Vol, veh/h		458			201			947			1475	
Approach Delay, s/veh		40.2			40.7			25.0			26.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.7	39.6	7.7	22.2	10.7	47.6	13.2	16.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	40.9	7.1	36.9	13.5	44.5	10.0	34.0					
Max Q Clear Time (g_c+Y+Rc), s	28.6	4.1	8.0	6.8	13.5	8.6	8.7					
Green Ext Time (p_c), s	0.2	6.5	0.0	0.9	0.1	4.2	0.1	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											29.2	
HCM 6th LOS											C	

# HCM 6th Signalized Intersection Summary

## 48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	890	280	50	1560	0	0	0	0	610	0	240
Future Volume (veh/h)	0	890	280	50	1560	0	0	0	0	610	0	240
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1707	1707	1707	1707	0				1707	1707	1707
Adj Flow Rate, veh/h	0	937	199	53	1642	0				642	0	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	13	13	13	13	0				13	13	13
Cap, veh/h	0	2835	869	109	3178	0				723	0	322
Arrive On Green	0.00	0.61	0.61	0.03	0.68	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	4815	1428	3155	4815	0				3252	0	1447
Grp Volume(v), veh/h	0	937	199	53	1642	0				642	0	202
Grp Sat Flow(s),veh/h/ln	0	1554	1428	1577	1554	0				1626	0	1447
Q Serve(g_s), s	0.0	11.8	7.6	2.0	20.8	0.0				23.0	0.0	15.1
Cycle Q Clear(g_c), s	0.0	11.8	7.6	2.0	20.8	0.0				23.0	0.0	15.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2835	869	109	3178	0				723	0	322
V/C Ratio(X)	0.00	0.33	0.23	0.49	0.52	0.00				0.89	0.00	0.63
Avail Cap(c_a), veh/h	0	2835	869	166	3178	0				1341	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.5	10.7	56.9	9.4	0.0				45.2	0.0	42.2
Incr Delay (d2), s/veh	0.0	0.3	0.6	1.2	0.6	0.0				1.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	2.3	0.8	6.1	0.0				9.4	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.8	11.3	58.1	10.0	0.0				46.8	0.0	42.9
LnGrp LOS		A	B	B	E	A				D	A	D
Approach Vol, veh/h		1136			1695					844		
Approach Delay, s/veh		11.8			11.5					45.8		
Approach LOS		B			B					D		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	8.8	79.0		32.2		87.8						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	60.3	48.0		49.5		59.0						
Max Q Clear Time (g_c+I), s	14.0	13.8		25.0		22.8						
Green Ext Time (p_c), s	0.0	7.9		1.7		15.4						

### Intersection Summary

HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

### Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM 6th Signalized Intersection Summary  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗		↑↑↑		↖	↖	↗	↖		↗
Traffic Volume (veh/h)	220	1120	160	0	1518	40	420	110	50	40	0	650
Future Volume (veh/h)	220	1120	160	0	1518	40	420	110	50	40	0	650
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	0	1707	1707	1707	1707	1707	1856	0	1856
Adj Flow Rate, veh/h	232	1179	0	0	1598	41	279	344	13	42	0	269
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	0	13	13	13	13	13	3	0	3
Cap, veh/h	180	3087		0	3038	78	393	413	348	0	0	0
Arrive On Green	0.11	0.66	0.00	0.00	0.51	0.51	0.24	0.24	0.24	0.00	0.00	0.00
Sat Flow, veh/h	1626	4661	2547	0	6169	152	1626	1707	1438		0	
Grp Volume(v), veh/h	232	1179	0	0	1187	452	279	344	13		0.0	
Grp Sat Flow(s),veh/h/ln	1626	1554	1273	0	1468	1677	1626	1707	1438			
Q Serve(g_s), s	13.3	13.7	0.0	0.0	21.6	21.6	18.8	23.0	0.8			
Cycle Q Clear(g_c), s	13.3	13.7	0.0	0.0	21.6	21.6	18.8	23.0	0.8			
Prop In Lane	1.00		1.00	0.00		0.09	1.00		1.00			
Lane Grp Cap(c), veh/h	180	3087		0	2257	859	393	413	348			
V/C Ratio(X)	1.29	0.38		0.00	0.53	0.53	0.71	0.83	0.04			
Avail Cap(c_a), veh/h	180	3087		0	2257	859	556	583	491			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	53.4	9.2	0.0	0.0	19.5	19.5	41.6	43.2	34.8			
Incr Delay (d2), s/veh	164.5	0.4	0.0	0.0	0.9	2.3	2.4	7.1	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	13.5	4.2	0.0	0.0	7.3	8.7	7.8	10.5	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	217.8	9.5	0.0	0.0	20.4	21.8	44.0	50.3	34.8			
LnGrp LOS	F	A		A	C	C	D	D	C			
Approach Vol, veh/h		1411	A		1639			636				
Approach Delay, s/veh		43.8			20.8			47.2				
Approach LOS		D			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		85.5			18.0	67.5		34.5				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		52.5			* 13	34.5		41.0				
Max Q Clear Time (g_c+I1), s		15.7			15.3	23.6		25.0				
Green Ext Time (p_c), s		5.9			0.0	5.8		3.0				

Intersection Summary

HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	990	50	60	1308	60	50	340	80	30	370	80
Future Volume (veh/h)	70	990	50	60	1308	60	50	340	80	30	370	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	74	1042	27	63	1377	27	53	358	20	32	389	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	116	1470	1279	108	1455	638	108	635	277	77	579	252
Arrive On Green	0.07	0.45	0.45	0.07	0.45	0.45	0.06	0.18	0.18	0.04	0.17	0.17
Sat Flow, veh/h	1626	3244	2478	1626	3244	1423	1767	3441	1501	1725	3441	1499
Grp Volume(v), veh/h	74	1042	27	63	1377	27	53	358	20	32	389	18
Grp Sat Flow(s),veh/h/ln	1626	1622	1239	1626	1622	1423	1767	1721	1501	1725	1721	1499
Q Serve(g_s), s	3.5	20.3	0.4	3.0	31.9	0.8	2.3	7.4	0.9	1.4	8.3	0.8
Cycle Q Clear(g_c), s	3.5	20.3	0.4	3.0	31.9	0.8	2.3	7.4	0.9	1.4	8.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	1470	1279	108	1455	638	108	635	277	77	579	252
V/C Ratio(X)	0.64	0.71	0.02	0.58	0.95	0.04	0.49	0.56	0.07	0.41	0.67	0.07
Avail Cap(c_a), veh/h	186	1470	1279	228	1500	658	383	1358	592	198	1008	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	17.3	9.4	35.6	20.8	12.2	35.7	29.1	26.5	36.5	30.6	27.5
Incr Delay (d2), s/veh	2.2	1.6	0.0	1.8	12.3	0.0	1.3	0.8	0.1	1.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	6.7	0.1	1.2	12.6	0.2	1.0	2.9	0.3	0.6	3.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	18.9	9.4	37.4	33.1	12.2	37.0	29.9	26.6	37.8	31.9	27.6
LnGrp LOS	D	B	A	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1143			1467			431			439	
Approach Delay, s/veh		19.9			32.9			30.6			32.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	20.5	9.2	41.3	8.8	19.2	9.6	40.9				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	31.0	31.0	11.0	34.3	17.0	23.0	9.0	36.3				
Max Q Clear Time (g_c+1), s	13.4	9.4	5.0	22.3	4.3	10.3	5.5	33.9				
Green Ext Time (p_c), s	0.0	2.0	0.0	5.2	0.0	1.7	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑ ↗			↖ ↗ ↑↑↑			↖ ↑↑↑ ↗			↖	↖ ↑↑↑	↗
Traffic Volume (veh/h)	90	880	40	260	1388	120	70	730	360	110	760	130
Future Volume (veh/h)	90	880	40	260	1388	120	70	730	360	110	760	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	95	926	37	274	1461	115	74	768	173	116	800	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	3	6	6	6	6	6
Cap, veh/h	125	1453	58	346	1535	121	125	1190	362	145	1258	383
Arrive On Green	0.08	0.32	0.32	0.11	0.35	0.35	0.07	0.24	0.24	0.08	0.25	0.25
Sat Flow, veh/h	1626	4594	183	3155	4399	346	1767	4944	1504	1725	4944	1505
Grp Volume(v), veh/h	95	626	337	274	1032	544	74	768	173	116	800	40
Grp Sat Flow(s),veh/h/ln	1626	1554	1670	1577	1554	1638	1767	1648	1504	1725	1648	1505
Q Serve(g_s), s	4.6	13.8	13.9	6.8	26.0	26.0	3.3	11.2	7.9	5.3	11.5	1.6
Cycle Q Clear(g_c), s	4.6	13.8	13.9	6.8	26.0	26.0	3.3	11.2	7.9	5.3	11.5	1.6
Prop In Lane	1.00		0.11	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	982	528	346	1085	572	125	1190	362	145	1258	383
V/C Ratio(X)	0.76	0.64	0.64	0.79	0.95	0.95	0.59	0.65	0.48	0.80	0.64	0.10
Avail Cap(c_a), veh/h	203	1007	541	472	1085	572	154	1541	469	151	1541	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	23.5	23.5	34.8	25.4	25.4	36.2	27.4	26.1	36.1	26.6	22.9
Incr Delay (d2), s/veh	3.6	1.4	2.7	4.3	17.0	26.2	1.7	0.8	1.3	22.8	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.8	5.3	2.6	11.0	13.1	1.4	4.1	2.7	3.0	4.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	24.9	26.2	39.2	42.5	51.7	37.8	28.2	27.5	58.9	27.4	23.1
LnGrp LOS	D	C	C	D	D	D	D	C	C	E	C	C
Approach Vol, veh/h	1058			1850			1015			956		
Approach Delay, s/veh	26.7			44.7			28.8			31.0		
Approach LOS	C			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	25.3	12.8	31.4	9.7	26.4	10.2	34.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	25.0	12.0	26.0	7.0	25.0	10.0	28.0					
Max Q Clear Time (g_c+1), s	13.2	8.8	15.9	5.3	13.5	6.6	28.0					
Green Ext Time (p_c), s	0.0	5.4	0.0	4.9	0.0	4.8	0.0	0.0				

### Intersection Summary

HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

### Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	170	1045	30	30	1342	120	50	200	90	120	110	160
Future Volume (veh/h)	170	1045	30	30	1342	120	50	200	90	120	110	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	179	1100	30	32	1413	117	53	211	20	126	116	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	2	2	2
Cap, veh/h	212	2076	57	73	1575	130	108	317	263	158	372	308
Arrive On Green	0.13	0.45	0.45	0.04	0.36	0.36	0.06	0.17	0.17	0.09	0.20	0.20
Sat Flow, veh/h	1626	4661	127	1626	4379	363	1767	1856	1536	1781	1870	1551
Grp Volume(v), veh/h	179	733	397	32	1003	527	53	211	20	126	116	42
Grp Sat Flow(s),veh/h/ln	1626	1554	1680	1626	1554	1635	1767	1856	1536	1781	1870	1551
Q Serve(g_s), s	8.5	13.5	13.5	1.5	24.0	24.0	2.3	8.4	0.9	5.5	4.2	1.8
Cycle Q Clear(g_c), s	8.5	13.5	13.5	1.5	24.0	24.0	2.3	8.4	0.9	5.5	4.2	1.8
Prop In Lane	1.00		0.08	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	1384	748	73	1118	588	108	317	263	158	372	308
V/C Ratio(X)	0.84	0.53	0.53	0.44	0.90	0.90	0.49	0.67	0.08	0.80	0.31	0.14
Avail Cap(c_a), veh/h	268	1384	748	207	1144	602	157	620	513	158	625	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	15.9	15.9	36.6	23.8	23.8	35.8	30.5	27.4	35.2	27.0	26.0
Incr Delay (d2), s/veh	14.7	0.4	0.7	1.5	9.4	16.0	1.3	3.8	0.2	22.4	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.2	4.6	0.6	9.2	10.7	1.0	3.9	0.3	3.2	1.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	16.2	16.6	38.2	33.3	39.9	37.1	34.3	27.6	57.6	27.4	26.2
LnGrp LOS	D	B	B	D	C	D	D	C	C	E	C	C
Approach Vol, veh/h	1309				1562		284				284	
Approach Delay, s/veh	20.7				35.6		34.3				40.6	
Approach LOS	C				D		C				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	19.2	7.5	41.1	8.8	21.3	14.3	34.3				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	26.3	10.0	32.0	7.0	26.3	13.0	29.0					
Max Q Clear Time (g_c+1), s	10.4	3.5	15.5	4.3	6.2	10.5	26.0					
Green Ext Time (p_c), s	0.0	1.6	0.0	6.6	0.0	0.6	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	705	210	290	1192	378	250	1278	180	498	1242	170
Future Volume (veh/h)	70	705	210	290	1192	378	250	1278	180	498	1242	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	74	742	183	305	1255	167	263	1345	172	524	1307	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	92	1053	251	235	1443	440	202	1390	177	350	1147	503
Arrive On Green	0.06	0.22	0.22	0.14	0.31	0.31	0.12	0.26	0.26	0.21	0.34	0.34
Sat Flow, veh/h	1626	4750	1131	1626	4661	1421	1668	5437	693	1668	3328	1459
Grp Volume(v), veh/h	74	686	239	305	1255	167	263	1117	400	524	1307	100
Grp Sat Flow(s),veh/h/ln	1626	1468	1476	1626	1554	1421	1668	1507	1611	1668	1664	1459
Q Serve(g_s), s	6.1	19.4	20.3	19.5	34.3	12.4	16.3	33.0	33.1	28.3	46.5	6.5
Cycle Q Clear(g_c), s	6.1	19.4	20.3	19.5	34.3	12.4	16.3	33.0	33.1	28.3	46.5	6.5
Prop In Lane	1.00		0.77	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	92	977	327	235	1443	440	202	1156	412	350	1147	503
V/C Ratio(X)	0.80	0.70	0.73	1.30	0.87	0.38	1.30	0.97	0.97	1.50	1.14	0.20
Avail Cap(c_a), veh/h	187	1306	438	235	1520	463	202	1156	412	350	1147	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	48.4	48.7	57.7	44.0	36.4	59.3	49.6	49.7	53.3	44.2	31.1
Incr Delay (d2), s/veh	14.9	1.1	4.1	161.6	5.5	0.5	168.3	18.9	36.5	238.3	73.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.0	7.7	18.4	13.5	4.3	16.1	13.8	16.9	34.5	29.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.8	49.5	52.9	219.3	49.5	37.0	227.6	68.6	86.2	291.6	117.8	31.3
LnGrp LOS	E	D	D	F	D	D	F	E	F	F	F	C
Approach Vol, veh/h		999			1727			1780			1931	
Approach Delay, s/veh		52.4			78.3			96.0			160.5	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	41.0	24.0	36.9	21.0	53.0	12.1	48.8				
Change Period (Y+Rc), s	4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	28	34.5	19.5	40.0	* 16	46.5	15.5	44.0				
Max Q Clear Time (g_c+Rc), s	30	35.1	21.5	22.3	18.3	48.5	8.1	36.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	5.5	0.0	0.0	0.1	4.3				

Intersection Summary

HCM 6th Ctrl Delay	103.8
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
54: Grove Ave & Edison Ave/Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1213	140	190	1531	70	160	510	80	139	390	120
Future Volume (veh/h)	210	1213	140	190	1531	70	160	510	80	139	390	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	214	1238	122	194	1562	65	163	520	69	142	398	89
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	250	1771	174	231	1814	75	200	656	87	177	563	125
Arrive On Green	0.15	0.32	0.32	0.14	0.31	0.31	0.11	0.21	0.21	0.10	0.20	0.20
Sat Flow, veh/h	1626	5478	538	1626	5826	242	1767	3130	414	1767	2869	635
Grp Volume(v), veh/h	214	995	365	194	1181	446	163	292	297	142	243	244
Grp Sat Flow(s),veh/h/ln	1626	1468	1611	1626	1468	1664	1767	1763	1781	1767	1763	1741
Q Serve(g_s), s	10.2	15.8	15.9	9.3	20.1	20.2	7.2	12.5	12.6	6.3	10.3	10.5
Cycle Q Clear(g_c), s	10.2	15.8	15.9	9.3	20.1	20.2	7.2	12.5	12.6	6.3	10.3	10.5
Prop In Lane	1.00		0.33	1.00		0.15	1.00		0.23	1.00		0.36
Lane Grp Cap(c), veh/h	250	1424	521	231	1372	518	200	369	373	177	346	342
V/C Ratio(X)	0.86	0.70	0.70	0.84	0.86	0.86	0.82	0.79	0.80	0.80	0.70	0.71
Avail Cap(c_a), veh/h	295	1424	521	310	1407	531	255	483	488	224	453	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	23.6	23.7	33.4	25.9	25.9	34.6	29.9	29.9	35.2	29.9	30.0
Incr Delay (d2), s/veh	18.9	1.5	4.2	14.3	5.6	13.3	14.7	6.5	6.7	15.2	3.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.4	6.3	4.5	7.4	9.5	3.8	5.8	5.9	3.4	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	25.1	27.9	47.7	31.4	39.2	49.3	36.4	36.7	50.4	33.2	33.6
LnGrp LOS	D	C	C	D	C	D	D	D	D	D	C	C
Approach Vol, veh/h		1574			1821			752			629	
Approach Delay, s/veh		29.4			35.1			39.3			37.3	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	21.2	15.8	30.3	13.5	20.2	16.8	29.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.1	21.9	15.2	24.8	11.5	20.5	14.5	25.5				
Max Q Clear Time (g_c+1), s	10.3	14.6	11.3	17.9	9.2	12.5	12.2	22.2				
Green Ext Time (p_c), s	0.1	2.1	0.2	4.6	0.1	1.8	0.1	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											34.2	
HCM 6th LOS											C	



# HCM 6th Signalized Intersection Summary

## 55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕		↖	↑↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	10	10	10	560	40	366	10	1350	410	312	1210	40
Future Volume (veh/h)	10	10	10	560	40	366	10	1350	410	312	1210	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	11	0	463	219	294	11	1421	397	328	1274	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	37	37	64	501	201	270	41	1581	441	261	1559	677
Arrive On Green	0.04	0.04	0.00	0.30	0.30	0.30	0.02	0.34	0.34	0.16	0.47	0.47
Sat Flow, veh/h	905	905	1572	1668	670	900	1668	4696	1311	1668	3328	1445
Grp Volume(v), veh/h	22	0	0	463	0	513	11	1368	450	328	1274	21
Grp Sat Flow(s),veh/h/ln	1810	0	1572	1668	0	1570	1668	1507	1488	1668	1664	1445
Q Serve(g_s), s	1.7	0.0	0.0	38.3	0.0	42.8	0.9	41.0	41.0	22.3	47.0	1.1
Cycle Q Clear(g_c), s	1.7	0.0	0.0	38.3	0.0	42.8	0.9	41.0	41.0	22.3	47.0	1.1
Prop In Lane	0.50		1.00	1.00		0.57	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	74	0	64	501	0	472	41	1521	501	261	1559	677
V/C Ratio(X)	0.30	0.00	0.00	0.92	0.00	1.09	0.27	0.90	0.90	1.26	0.82	0.03
Avail Cap(c_a), veh/h	150	0	130	501	0	472	132	1570	517	261	1559	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	0.0	0.0	48.3	0.0	49.8	68.2	45.0	45.0	60.1	32.6	20.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	23.0	0.0	67.2	1.3	7.2	18.3	142.5	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	18.7	0.0	25.1	0.4	15.6	16.9	19.4	18.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.2	0.0	0.0	71.2	0.0	117.1	69.5	52.2	63.2	202.6	36.2	20.4
LnGrp LOS	E	A	A	E	A	F	E	D	E	F	D	C
Approach Vol, veh/h		22			976			1829			1623	
Approach Delay, s/veh		67.2			95.3			55.0			69.6	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	54.5		12.0	8.2	73.2		49.0				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	22	49.5		11.8	* 11	60.5		42.8				
Max Q Clear Time (g_c+24), s	24.3	43.0		3.7	2.9	49.0		44.8				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	6.1		0.0				

### Intersection Summary

HCM 6th Ctrl Delay	69.2
HCM 6th LOS	E

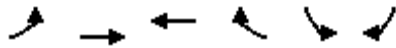
### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM 6th Signalized Intersection Summary  
56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↶	↑↑↑	↶		↶	↶	
Traffic Volume (veh/h)	40	752	746	270	220	300	
Future Volume (veh/h)	40	752	746	270	220	300	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1856	1856	
Adj Flow Rate, veh/h	42	792	785	208	232	77	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	10	10	10	10	3	3	
Cap, veh/h	80	2727	1030	273	312	277	
Arrive On Green	0.05	0.57	0.40	0.40	0.18	0.18	
Sat Flow, veh/h	1668	4940	2690	690	1767	1572	
Grp Volume(v), veh/h	42	792	502	491	232	77	
Grp Sat Flow(s),veh/h/ln	1668	1594	1664	1628	1767	1572	
Q Serve(g_s), s	0.9	3.0	9.3	9.3	4.4	1.5	
Cycle Q Clear(g_c), s	0.9	3.0	9.3	9.3	4.4	1.5	
Prop In Lane	1.00			0.42	1.00	1.00	
Lane Grp Cap(c), veh/h	80	2727	659	644	312	277	
V/C Ratio(X)	0.53	0.29	0.76	0.76	0.74	0.28	
Avail Cap(c_a), veh/h	239	3566	791	774	472	420	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.5	3.9	9.3	9.3	13.9	12.7	
Incr Delay (d2), s/veh	5.3	0.1	3.6	3.7	3.5	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.2	2.4	2.3	1.5	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	21.8	4.0	12.9	13.0	17.4	13.2	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		834	993		309		
Approach Delay, s/veh		4.9	12.9		16.4		
Approach LOS		A	B		B		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			24.8		10.8	6.2	18.6
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			26.5		9.5	5.1	16.9
Max Q Clear Time (g_c+1), s			5.0		6.4	2.9	11.3
Green Ext Time (p_c), s			5.1		0.2	0.0	2.8
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			10.3				
HCM 6th LOS			B				

HCM 6th Signalized Intersection Summary  
57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	320	40	90	60	10	350	340	1120	270	490	1090	550
Future Volume (veh/h)	320	40	90	60	10	350	340	1120	270	490	1090	550
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1618	1618	1618	1618	1618	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	337	42	17	63	11	75	358	1179	124	516	1147	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	19	19	19	19	19	19	10	10	10	10	10	10
Cap, veh/h	394	513	223	127	361	156	385	1664	630	590	1430	638
Arrive On Green	0.13	0.17	0.17	0.08	0.12	0.12	0.23	0.35	0.35	0.18	0.30	0.30
Sat Flow, veh/h	2990	3075	1339	1541	3075	1333	1668	4782	1459	3237	4782	1477
Grp Volume(v), veh/h	337	42	17	63	11	75	358	1179	124	516	1147	259
Grp Sat Flow(s),veh/h/ln	1495	1537	1339	1541	1537	1333	1668	1594	1459	1618	1594	1477
Q Serve(g_s), s	11.0	1.2	1.1	3.9	0.3	5.3	21.0	21.4	5.3	15.5	22.1	12.1
Cycle Q Clear(g_c), s	11.0	1.2	1.1	3.9	0.3	5.3	21.0	21.4	5.3	15.5	22.1	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	513	223	127	361	156	385	1664	630	590	1430	638
V/C Ratio(X)	0.85	0.08	0.08	0.50	0.03	0.48	0.93	0.71	0.20	0.88	0.80	0.41
Avail Cap(c_a), veh/h	457	1443	629	251	1474	639	405	1829	681	850	1925	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	35.2	35.2	43.9	39.1	41.3	37.7	28.3	17.8	39.8	32.4	19.7
Incr Delay (d2), s/veh	11.7	0.1	0.1	3.0	0.0	0.8	26.4	1.2	0.2	5.4	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.4	0.3	1.5	0.1	1.7	10.7	7.5	1.7	6.2	8.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	35.3	35.4	46.9	39.2	42.2	64.1	29.4	17.9	45.2	34.2	20.1
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	C	C
Approach Vol, veh/h		396			149			1661			1922	
Approach Delay, s/veh		51.4			43.9			36.0			35.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.9	41.3	13.0	22.9	27.8	36.4	17.9	17.9				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	26	38.3	* 16	47.0	* 24	40.3	* 15	48.0				
Max Q Clear Time (g_c+1/17), s	26	23.4	5.9	3.2	23.0	24.1	13.0	7.3				
Green Ext Time (p_c), s	0.7	6.0	0.1	0.3	0.1	5.5	0.2	0.2				

Intersection Summary

HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖↗	↑↑		↖	↑↑↑	↗	↖	↑↑↑	
Traffic Volume (veh/h)	80	450	30	1340	930	200	40	940	680	130	770	40
Future Volume (veh/h)	80	450	30	1340	930	200	40	940	680	130	770	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	82	464	0	1381	959	194	41	969	676	134	794	37
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	111	427		1317	1289	260	93	1019	914	130	1398	65
Arrive On Green	0.07	0.13	0.00	0.41	0.47	0.47	0.06	0.21	0.21	0.08	0.24	0.24
Sat Flow, veh/h	1668	3328	1485	3237	2750	556	1668	4782	1453	1668	5941	275
Grp Volume(v), veh/h	82	464	0	1381	580	573	41	969	676	134	603	228
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1618	1664	1641	1668	1594	1453	1668	1507	1696
Q Serve(g_s), s	7.0	18.6	0.0	59.0	41.2	41.3	3.4	29.0	30.9	11.3	17.1	17.3
Cycle Q Clear(g_c), s	7.0	18.6	0.0	59.0	41.2	41.3	3.4	29.0	30.9	11.3	17.1	17.3
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	111	427		1317	780	769	93	1019	914	130	1063	399
V/C Ratio(X)	0.74	1.09		1.05	0.74	0.74	0.44	0.95	0.74	1.03	0.57	0.57
Avail Cap(c_a), veh/h	150	427		1317	780	769	119	1019	914	130	1063	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	63.2	0.0	43.0	31.4	31.4	66.3	56.3	19.5	66.9	48.9	49.0
Incr Delay (d2), s/veh	15.3	68.9	0.0	38.6	4.2	4.3	1.2	17.4	2.8	87.3	0.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	11.8	0.0	29.6	16.8	16.6	1.5	12.8	15.5	7.8	6.2	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	132.1	0.0	81.6	35.6	35.7	67.5	73.7	22.4	154.2	49.4	50.3
LnGrp LOS	F	F		F	D	D	E	E	C	F	D	D
Approach Vol, veh/h		546	A		2534			1686			965	
Approach Delay, s/veh		124.6			60.7			53.0			64.1	
Approach LOS		F			E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	66.0	37.4	66.0	25.6	12.8	40.6	16.6	75.0				
Change Period (Y+Rc), s	4.7	6.5	7.0	7.0	* 4.7	6.5	7.0	7.0				
Max Green Setting (Gmax), s	30.9	59.0	18.6	* 10	31.9	13.0	64.6					
Max Q Clear Time (g_c+Y+Rc), s	31.0	61.0	20.6	5.4	19.3	9.0	43.3					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.1	10.3				

Intersection Summary

HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕		↔	↕↕
Traffic Volume (veh/h)	50	610	900	220	840	1400
Future Volume (veh/h)	50	610	900	220	840	1400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	53	0	947	0	884	1474
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	101		1030		901	2939
Arrive On Green	0.03	0.00	0.31	0.00	0.54	0.88
Sat Flow, veh/h	3237	1485	3504	0	1668	3416
Grp Volume(v), veh/h	53	0	947	0	884	1474
Grp Sat Flow(s),veh/h/ln	1618	1485	1664	0	1668	1664
Q Serve(g_s), s	2.3	0.0	38.4	0.0	72.5	13.0
Cycle Q Clear(g_c), s	2.3	0.0	38.4	0.0	72.5	13.0
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	101		1030		901	2939
V/C Ratio(X)	0.53		0.92		0.98	0.50
Avail Cap(c_a), veh/h	118		1140		958	3162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	0.0	46.6	0.0	31.5	1.7
Incr Delay (d2), s/veh	4.2	0.0	10.9	0.0	23.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	16.7	0.0	32.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.9	0.0	57.5	0.0	55.2	1.8
LnGrp LOS	E		E		E	A
Approach Vol, veh/h	53	A	947	A		2358
Approach Delay, s/veh	70.9		57.5			21.8
Approach LOS	E		E			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	30.2	49.8			130.0	9.9
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	30	47.9			132.9	5.1
Max Q Clear Time (g_c+Y), s	14.5	40.4			15.0	4.3
Green Ext Time (p_c), s	1.0	2.9			11.0	0.0

### Intersection Summary

HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C





















### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	380	0	220	470	533	0	0	1833	350
Future Volume (veh/h)	0	0	0	380	0	220	470	533	0	0	1833	350
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				400	0	0	495	561	0	0	1929	248
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				506	0	225	570	3688	0	0	3231	775
Arrive On Green				0.14	0.00	0.00	0.33	1.00	0.00	0.00	0.51	0.51
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	6643	1531
Grp Volume(v), veh/h				400	0	0	495	561	0	0	1929	248
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1596	1531
Q Serve(g_s), s				9.8	0.0	0.0	12.2	0.0	0.0	0.0	19.2	8.6
Cycle Q Clear(g_c), s				9.8	0.0	0.0	12.2	0.0	0.0	0.0	19.2	8.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				506	0	225	570	3688	0	0	3231	775
V/C Ratio(X)				0.79	0.00	0.00	0.87	0.15	0.00	0.00	0.60	0.32
Avail Cap(c_a), veh/h				880	0	391	990	3688	0	0	3231	775
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.92	0.92	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.3	0.0	0.0	29.1	0.0	0.0	0.0	15.7	13.1
Incr Delay (d2), s/veh				2.8	0.0	0.0	1.5	0.1	0.0	0.0	0.8	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	0.0	4.0	0.0	0.0	0.0	6.3	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.1	0.0	0.0	30.6	0.1	0.0	0.0	16.5	14.2
LnGrp LOS				D	A	A	C	A	A	A	B	B
Approach Vol, veh/h					400			1056			2177	
Approach Delay, s/veh					40.1			14.4			16.3	
Approach LOS					D			B			B	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		71.3		18.7	20.0	51.4						
Change Period (Y+Rc), s		5.8		5.8	5.0	5.8						
Max Green Setting (Gmax), s		56.0		22.4	26.0	25.0						
Max Q Clear Time (g_c+I1), s		2.0		11.8	14.2	21.2						
Green Ext Time (p_c), s		3.9		1.0	0.8	3.3						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↵	↵	↵	↵↵	↵↵↵			↵↵↵	↵
Traffic Volume (veh/h)	0	0	0	386	0	600	191	1315	0	0	2002	630
Future Volume (veh/h)	0	0	0	386	0	600	191	1315	0	0	2002	630
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				No
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				398	0	567	197	1356	0	0	2064	273
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				1249	0	556	190	2628	0	0	2122	648
Arrive On Green				0.35	0.00	0.35	0.11	1.00	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3534	0	1572	3428	5233	0	0	5233	1546
Grp Volume(v), veh/h				398	0	567	197	1356	0	0	2064	273
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1689	0	0	1689	1546
Q Serve(g_s), s				7.4	0.0	31.8	5.0	0.0	0.0	0.0	36.0	11.2
Cycle Q Clear(g_c), s				7.4	0.0	31.8	5.0	0.0	0.0	0.0	36.0	11.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1249	0	556	190	2628	0	0	2122	648
V/C Ratio(X)				0.32	0.00	1.02	1.03	0.52	0.00	0.00	0.97	0.42
Avail Cap(c_a), veh/h				1249	0	556	190	2628	0	0	2122	648
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.58	0.58	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				21.2	0.0	29.1	40.0	0.0	0.0	0.0	25.6	18.5
Incr Delay (d2), s/veh				0.1	0.0	43.5	58.8	0.4	0.0	0.0	14.1	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	17.5	3.4	0.1	0.0	0.0	15.2	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				21.4	0.0	72.6	98.8	0.4	0.0	0.0	39.7	20.5
LnGrp LOS				C	A	F	F	A	A	A	D	C
Approach Vol, veh/h						965		1553			2337	
Approach Delay, s/veh						51.4		12.9			37.5	
Approach LOS						D		B			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		52.4			9.0	43.4		37.6				
Change Period (Y+Rc), s		5.7			4.0	5.7		5.8				
Max Green Setting (Gmax), s		46.7			5.0	37.7		31.8				
Max Q Clear Time (g_c+I1), s		2.0			7.0	38.0		33.8				
Green Ext Time (p_c), s		7.2			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	420	0	0	0	0	793	410	720	1493	0
Future Volume (veh/h)	210	0	420	0	0	0	0	793	410	720	1493	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	320	0	180				0	835	166	758	1572	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	511	0	227				0	2714	650	842	3680	0
Arrive On Green	0.14	0.00	0.14				0.00	0.43	0.43	0.25	0.73	0.00
Sat Flow, veh/h	3534	0	1572				0	6643	1529	3428	5233	0
Grp Volume(v), veh/h	320	0	180				0	835	166	758	1572	0
Grp Sat Flow(s),veh/h/ln1767		0	1572				0	1596	1529	1714	1689	0
Q Serve(g_s), s	7.7	0.0	10.0				0.0	7.8	6.3	19.3	11.1	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.0				0.0	7.8	6.3	19.3	11.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	511	0	227				0	2714	650	842	3680	0
V/C Ratio(X)	0.63	0.00	0.79				0.00	0.31	0.26	0.90	0.43	0.00
Avail Cap(c_a), veh/h	754	0	335				0	2714	650	990	3680	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	36.2	0.0	37.2				0.0	17.1	16.7	32.9	4.9	0.0
Incr Delay (d2), s/veh	1.3	0.0	7.6				0.0	0.3	0.9	6.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	4.1				0.0	2.7	2.2	8.2	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	0.0	44.8				0.0	17.4	17.6	39.0	5.1	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		500						1001			2330	
Approach Delay, s/veh		40.1						17.4			16.2	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	27.1	44.1				71.2		18.8				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	26.6	28.2				59.2		19.2				
Max Q Clear Time (g_c+Y), s	21.3	9.8				13.1		12.0				
Green Ext Time (p_c), s	0.8	5.7				15.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.



# HCM 6th Signalized Intersection Summary

## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	0	273	0	0	0	0	1216	304	670	1722	0
Future Volume (veh/h)	290	0	273	0	0	0	0	1216	304	670	1722	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	305	0	220				0	1280	275	705	1813	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	573	0	255				0	1823	392	793	3616	0
Arrive On Green	0.16	0.00	0.16				0.00	0.44	0.44	0.31	0.95	0.00
Sat Flow, veh/h	3619	0	1610				0	4328	894	3428	5233	0
Grp Volume(v), veh/h	305	0	220				0	1039	516	705	1813	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1677	1714	1689	0
Q Serve(g_s), s	7.0	0.0	12.0				0.0	22.5	22.5	17.6	3.1	0.0
Cycle Q Clear(g_c), s	7.0	0.0	12.0				0.0	22.5	22.5	17.6	3.1	0.0
Prop In Lane	1.00		1.00				0.00		0.53	1.00		0.00
Lane Grp Cap(c), veh/h	573	0	255				0	1480	735	793	3616	0
V/C Ratio(X)	0.53	0.00	0.86				0.00	0.70	0.70	0.89	0.50	0.00
Avail Cap(c_a), veh/h	611	0	272				0	1480	735	914	3616	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.27	0.27	0.00
Uniform Delay (d), s/veh	34.8	0.0	36.9				0.0	20.5	20.5	30.1	0.7	0.0
Incr Delay (d2), s/veh	0.8	0.0	22.7				0.0	2.8	5.6	3.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	6.1				0.0	8.4	9.0	6.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	0.0	59.6				0.0	23.3	26.1	33.0	0.9	0.0
LnGrp LOS	D	A	E				A	C	C	C	A	A
Approach Vol, veh/h		525						1555			2518	
Approach Delay, s/veh		45.6						24.2			9.9	
Approach LOS		D						C			A	
Timer - Assigned Phs	1	2		4			6					
Phs Duration (G+Y+Rc), s	24.8	45.1		20.1			69.9					
Change Period (Y+Rc), s	4.0	5.7		5.8			5.7					
Max Green Setting (Gmax), s	24.0	35.3		15.2			63.3					
Max Q Clear Time (g_c+1/3), s	19.6	24.5		14.0			5.1					
Green Ext Time (p_c), s	1.2	5.1		0.3			11.2					

### Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	980	391	301	720	120	331	743	231	240	1033	400
Future Volume (veh/h)	200	980	391	301	720	120	331	743	231	240	1033	400
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	208	1021	283	314	750	59	345	774	191	250	1076	353
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	963	421	209	908	397	273	1221	298	285	1156	379
Arrive On Green	0.13	0.27	0.27	0.12	0.26	0.26	0.15	0.30	0.30	0.16	0.31	0.31
Sat Flow, veh/h	1767	3526	1543	1767	3526	1542	1767	4045	988	1767	3753	1231
Grp Volume(v), veh/h	208	1021	283	314	750	59	345	645	320	250	968	461
Grp Sat Flow(s),veh/h/ln	1767	1763	1543	1767	1763	1542	1767	1689	1656	1767	1689	1607
Q Serve(g_s), s	12.7	30.0	17.9	13.0	22.0	3.2	17.0	18.1	18.4	15.2	30.5	30.6
Cycle Q Clear(g_c), s	12.7	30.0	17.9	13.0	22.0	3.2	17.0	18.1	18.4	15.2	30.5	30.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.77
Lane Grp Cap(c), veh/h	237	963	421	209	908	397	273	1019	500	285	1041	495
V/C Ratio(X)	0.88	1.06	0.67	1.50	0.83	0.15	1.26	0.63	0.64	0.88	0.93	0.93
Avail Cap(c_a), veh/h	241	963	421	209	908	397	273	1019	500	338	1045	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	39.9	35.5	48.4	38.5	31.5	46.4	33.1	33.2	45.0	36.9	36.9
Incr Delay (d2), s/veh	30.3	46.4	5.5	249.0	7.0	0.4	143.7	1.8	3.9	23.1	14.5	24.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	18.4	7.0	19.9	9.9	1.2	18.0	7.2	7.5	8.2	13.8	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	86.3	41.0	297.4	45.5	31.8	190.1	34.9	37.0	68.1	51.4	61.8
LnGrp LOS	E	F	D	F	D	C	F	C	D	E	D	E
Approach Vol, veh/h		1512			1123			1310			1679	
Approach Delay, s/veh		76.6			115.2			76.3			56.7	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.7	37.1	17.0	34.0	21.0	37.8	18.7	32.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	21.0	30.0	13.0	30.0	17.0	34.0	15.0	28.0				
Max Q Clear Time (g_c+1/2), s	17.2	20.4	15.0	32.0	19.0	32.6	14.7	24.0				
Green Ext Time (p_c), s	0.5	6.0	0.0	0.0	0.0	1.3	0.0	2.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											78.3	
HCM 6th LOS											E	

# HCM 6th Signalized Intersection Summary

## 6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	880	41	162	910	160	31	598	101	410	795	430
Future Volume (veh/h)	390	880	41	162	910	160	31	598	101	410	795	430
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	394	889	40	164	919	153	31	604	93	414	803	389
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	269	1152	52	188	874	145	1	685	105	282	963	464
Arrive On Green	0.15	0.34	0.34	0.11	0.29	0.29	0.00	0.22	0.22	0.16	0.42	0.42
Sat Flow, veh/h	1767	3433	154	1767	3015	502	1767	3053	469	1767	2292	1105
Grp Volume(v), veh/h	394	457	472	164	537	535	31	348	349	414	617	575
Grp Sat Flow(s),veh/h/ln	1767	1763	1824	1767	1763	1754	1767	1763	1760	1767	1763	1635
Q Serve(g_s), s	21.0	32.0	32.0	12.6	40.0	40.0	0.1	26.3	26.5	22.0	43.0	43.4
Cycle Q Clear(g_c), s	21.0	32.0	32.0	12.6	40.0	40.0	0.1	26.3	26.5	22.0	43.0	43.4
Prop In Lane	1.00		0.08	1.00		0.29	1.00		0.27	1.00		0.68
Lane Grp Cap(c), veh/h	269	592	612	188	511	509	1	396	395	282	741	687
V/C Ratio(X)	1.46	0.77	0.77	0.87	1.05	1.05	24.20	0.88	0.88	1.47	0.83	0.84
Avail Cap(c_a), veh/h	269	592	612	295	511	509	218	486	485	282	741	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	41.1	41.1	60.7	49.0	49.0	69.0	51.7	51.8	58.0	35.7	35.8
Incr Delay (d2), s/veh	228.4	6.2	6.0	10.1	53.9	54.1	10668.8	13.9	14.4	229.5	7.9	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	26.2	14.4	14.8	6.0	24.5	24.4	3.8	12.9	13.0	27.6	19.3	18.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	286.9	47.3	47.1	70.8	102.8	103.1	10737.8	65.6	66.2	287.4	43.6	44.6
LnGrp LOS	F	D	D	E	F	F	F	E	E	F	D	D
Approach Vol, veh/h		1323			1236			728			1606	
Approach Delay, s/veh		118.6			98.7			520.3			106.8	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	36.0	21.7	53.3	0.0	63.0	28.0	47.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	27.0	38.0	23.0	38.0	17.0	43.0	21.0	40.0				
Max Q Clear Time (g_c+Y), s	24.0	28.5	14.6	34.0	0.0	45.4	23.0	42.0				
Green Ext Time (p_c), s	0.0	2.3	0.1	1.9	0.0	0.0	0.0	0.0				

### Intersection Summary

HCM 6th Ctrl Delay	169.5
HCM 6th LOS	F

### Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	270	231	131	240	120	161	915	101	110	1255	300
Future Volume (veh/h)	160	270	231	131	240	120	161	915	101	110	1255	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	284	106	138	253	75	169	963	97	116	1321	287
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	198	417	152	175	410	119	198	1842	185	143	1510	328
Arrive On Green	0.11	0.17	0.17	0.10	0.15	0.15	0.11	0.39	0.39	0.08	0.36	0.36
Sat Flow, veh/h	1767	2514	914	1767	2687	777	1767	4670	469	1767	4154	902
Grp Volume(v), veh/h	168	197	193	138	164	164	169	696	364	116	1074	534
Grp Sat Flow(s),veh/h/ln	1767	1763	1665	1767	1763	1702	1767	1689	1762	1767	1689	1679
Q Serve(g_s), s	10.1	11.3	11.8	8.2	9.4	9.8	10.1	17.0	17.0	7.0	32.0	32.1
Cycle Q Clear(g_c), s	10.1	11.3	11.8	8.2	9.4	9.8	10.1	17.0	17.0	7.0	32.0	32.1
Prop In Lane	1.00		0.55	1.00		0.46	1.00		0.27	1.00		0.54
Lane Grp Cap(c), veh/h	198	292	276	175	269	260	198	1332	695	143	1228	610
V/C Ratio(X)	0.85	0.67	0.70	0.79	0.61	0.63	0.85	0.52	0.52	0.81	0.87	0.88
Avail Cap(c_a), veh/h	342	539	509	175	372	360	211	1332	695	259	1264	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	42.3	42.5	47.5	42.7	42.9	47.1	24.9	24.9	48.8	32.0	32.1
Incr Delay (d2), s/veh	3.8	3.8	4.5	29.2	3.1	3.6	24.6	0.5	1.0	4.1	7.2	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	5.1	5.1	5.0	4.2	4.3	5.6	6.4	6.8	3.1	13.2	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	46.1	47.0	76.7	45.8	46.4	71.6	25.4	25.9	52.8	39.2	45.3
LnGrp LOS	D	D	D	E	D	D	E	C	C	D	D	D
Approach Vol, veh/h		558			466			1229			1724	
Approach Delay, s/veh		47.8			55.2			31.9			42.0	
Approach LOS		D			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	50.1	17.2	24.4	19.6	46.7	18.6	23.0				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	15.8	37.5	10.7	33.0	12.9	40.4	20.9	22.8				
Max Q Clear Time (g_c+1), s	19.0	19.0	10.2	13.8	12.1	34.1	12.1	11.8				
Green Ext Time (p_c), s	0.1	8.3	0.0	2.9	0.0	5.2	0.1	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				41.3								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary  
8: Haven Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	290	71	90	280	30	91	601	100	50	868	100
Future Volume (veh/h)	70	290	71	90	280	30	91	601	100	50	868	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	74	305	43	95	295	23	96	633	91	53	914	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	2	3	2	2	2	3	3	2	2	3	3
Cap, veh/h	111	508	71	128	571	44	127	1143	164	92	1123	118
Arrive On Green	0.06	0.16	0.16	0.07	0.17	0.17	0.07	0.37	0.37	0.05	0.35	0.35
Sat Flow, veh/h	1767	3131	437	1781	3342	259	1767	3094	444	1781	3219	338
Grp Volume(v), veh/h	74	172	176	95	156	162	96	360	364	53	500	510
Grp Sat Flow(s),veh/h/ln	1767	1777	1792	1781	1777	1824	1767	1763	1776	1781	1763	1795
Q Serve(g_s), s	2.1	4.7	4.8	2.7	4.2	4.2	2.8	8.4	8.5	1.5	13.5	13.5
Cycle Q Clear(g_c), s	2.1	4.7	4.8	2.7	4.2	4.2	2.8	8.4	8.5	1.5	13.5	13.5
Prop In Lane	1.00		0.24	1.00		0.14	1.00		0.25	1.00		0.19
Lane Grp Cap(c), veh/h	111	288	291	128	303	312	127	651	656	92	615	626
V/C Ratio(X)	0.66	0.60	0.61	0.74	0.51	0.52	0.75	0.55	0.55	0.58	0.81	0.81
Avail Cap(c_a), veh/h	610	890	897	338	613	630	173	707	712	174	707	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	20.3	20.3	23.7	19.6	19.7	23.7	13.0	13.0	24.2	15.4	15.4
Incr Delay (d2), s/veh	6.6	2.0	2.0	8.3	1.3	1.3	11.9	0.8	0.8	5.7	6.4	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	1.8	1.9	1.4	1.7	1.7	1.4	2.7	2.7	0.7	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	22.2	22.3	32.0	21.0	21.0	35.6	13.8	13.8	29.8	21.9	21.8
LnGrp LOS	C	C	C	C	C	C	D	B	B	C	C	C
Approach Vol, veh/h		422			413			820			1063	
Approach Delay, s/veh		23.7			23.5			16.4			22.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	23.8	8.2	13.0	8.3	22.7	7.8	13.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	20.9	9.9	26.1	5.1	20.9	18.0	18.0				
Max Q Clear Time (g_c+1), s	13.5	10.5	4.7	6.8	4.8	15.5	4.1	6.2				
Green Ext Time (p_c), s	0.0	3.0	0.1	1.7	0.0	2.7	0.1	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											20.9	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
 9: Archibald Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕		↕	↕ ↑↑↑	↕ ↑↑↑		↕ ↑↑↑	↕ ↑↑↑	
Traffic Volume (veh/h)	10	0	10	131	0	180	10	827	21	180	1297	10
Future Volume (veh/h)	10	0	10	131	0	180	10	827	21	180	1297	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No		No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	0	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	0	0	138	0	30	11	871	21	189	1365	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	0	2	3	3	3	3	3	3
Cap, veh/h	46	0	0	0	0	0	45	1688	41	305	2483	20
Arrive On Green	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.33	0.33	0.17	0.48	0.48
Sat Flow, veh/h	1781	0	0		0		1767	5086	122	1767	5183	42
Grp Volume(v), veh/h	11	0	0		0.0		11	578	314	189	889	487
Grp Sat Flow(s),veh/h/ln	1781	0	0				1767	1689	1831	1767	1689	1848
Q Serve(g_s), s	0.3	0.0	0.0				0.3	6.6	6.6	4.7	8.9	8.9
Cycle Q Clear(g_c), s	0.3	0.0	0.0				0.3	6.6	6.6	4.7	8.9	8.9
Prop In Lane	1.00		0.00				1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	46	0	0				45	1121	608	305	1618	885
V/C Ratio(X)	0.24	0.00	0.00				0.24	0.52	0.52	0.62	0.55	0.55
Avail Cap(c_a), veh/h	335	0	0				332	2433	1319	424	2609	1428
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	0.0				22.9	12.9	12.9	18.4	8.8	8.8
Incr Delay (d2), s/veh	3.2	0.0	0.0				2.7	0.4	0.8	2.0	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0				0.1	1.8	2.1	1.7	2.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	0.0	0.0				25.6	13.3	13.7	20.4	9.2	9.5
LnGrp LOS	C	A	A				C	B	B	C	A	A
Approach Vol, veh/h		11						903			1565	
Approach Delay, s/veh		26.1						13.6			10.6	
Approach LOS		C						B			B	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	5.8	23.4		8.7	8.7	30.4						
Change Period (Y+Rc), s	7.5	7.5		7.5	7.5	7.5						
Max Green Setting (Gmax), s	1.5	34.5		9.0	9.0	37.0						
Max Q Clear Time (g_c+I), s	1.5	8.6		2.3	2.3	10.9						
Green Ext Time (p_c), s	0.2	6.7		0.0	0.0	11.4						

Intersection Summary

HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
 10: Haven Ave & Schaefer Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	0	271	0	0	0	351	752	0	0	828	20
Future Volume (veh/h)	150	0	271	0	0	0	351	752	0	0	828	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1900	1900	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h	158	0	56	0	0	0	369	792	0	0	872	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	3	3	0	0	3	3
Cap, veh/h	352	0	207	0	255	0	345	2226	0	0	1122	26
Arrive On Green	0.13	0.00	0.13	0.00	0.00	0.00	0.20	0.63	0.00	0.00	0.32	0.32
Sat Flow, veh/h	1781	0	1544	0	1900	0	1767	3618	0	0	3614	81
Grp Volume(v), veh/h	158	0	56	0	0	0	369	792	0	0	437	455
Grp Sat Flow(s),veh/h/ln	1781	0	1544	0	1900	0	1767	3618	0	0	3614	81
Q Serve(g_s), s	5.4	0.0	2.1	0.0	0.0	0.0	12.5	6.8	0.0	0.0	14.3	14.3
Cycle Q Clear(g_c), s	5.4	0.0	2.1	0.0	0.0	0.0	12.5	6.8	0.0	0.0	14.3	14.3
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	0.00		0.04
Lane Grp Cap(c), veh/h	352	0	207	0	255	0	345	2226	0	0	562	586
V/C Ratio(X)	0.45	0.00	0.27	0.00	0.00	0.00	1.07	0.36	0.00	0.00	0.78	0.78
Avail Cap(c_a), veh/h	809	0	603	0	742	0	345	2480	0	0	689	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	24.9	0.0	0.0	0.0	25.7	5.6	0.0	0.0	19.7	19.7
Incr Delay (d2), s/veh	0.7	0.0	0.5	0.0	0.0	0.0	67.9	0.1	0.0	0.0	4.9	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.7	0.0	0.0	0.0	11.1	1.6	0.0	0.0	5.7	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	0.0	25.4	0.0	0.0	0.0	93.6	5.7	0.0	0.0	24.6	24.4
LnGrp LOS	C	A	C	A	A	A	F	A	A	A	C	C
Approach Vol, veh/h		214			0			1161			892	
Approach Delay, s/veh		26.6			0.0			33.7			24.5	
Approach LOS		C						C			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.9		16.1	20.0	27.9		16.1				
Change Period (Y+Rc), s		7.5		7.5	7.5	7.5		7.5				
Max Green Setting (Gmax), s		45.0		25.0	12.5	25.0		25.0				
Max Q Clear Time (g_c+11), s		8.8		7.4	14.5	16.3		0.0				
Green Ext Time (p_c), s		7.0		0.2	0.0	3.8		0.0				

Intersection Summary

HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑↑	↔	↔↔	↑↑↑↑		↔	↑↑↑↑	↔	↔	↑↑↑↑	
Traffic Volume (veh/h)	70	1324	767	451	991	120	453	637	511	150	939	220
Future Volume (veh/h)	70	1324	767	451	991	120	453	637	511	150	939	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	73	1379	0	470	1032	106	472	664	0	156	978	195
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	134	1343		481	1844	188	403	1932		189	1099	219
Arrive On Green	0.04	0.22	0.00	0.15	0.32	0.32	0.23	0.38	0.00	0.11	0.26	0.26
Sat Flow, veh/h	3291	6128	1510	3291	5683	578	1767	5066	1572	1767	4222	840
Grp Volume(v), veh/h	73	1379	0	470	833	305	472	664	0	156	782	391
Grp Sat Flow(s),veh/h/ln	1646	1532	1510	1646	1532	1665	1767	1689	1572	1767	1689	1685
Q Serve(g_s), s	2.4	24.0	0.0	15.6	16.4	16.6	25.0	10.2	0.0	9.5	24.4	24.5
Cycle Q Clear(g_c), s	2.4	24.0	0.0	15.6	16.4	16.6	25.0	10.2	0.0	9.5	24.4	24.5
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	134	1343		481	1492	540	403	1932		189	879	439
V/C Ratio(X)	0.54	1.03		0.98	0.56	0.56	1.17	0.34		0.82	0.89	0.89
Avail Cap(c_a), veh/h	240	1343		481	1492	540	403	1932		274	894	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	42.8	0.0	46.6	30.5	30.6	42.3	24.1	0.0	47.9	39.0	39.0
Incr Delay (d2), s/veh	7.2	31.6	0.0	35.3	0.8	2.3	100.0	0.2	0.0	19.2	11.5	20.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	11.5	0.0	8.4	5.8	6.6	21.4	3.8	0.0	5.0	10.8	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.7	74.4	0.0	81.9	31.3	32.9	142.3	24.3	0.0	67.1	50.5	59.7
LnGrp LOS	E	F		F	C	C	F	C		E	D	E
Approach Vol, veh/h		1452	A		1608			1136	A		1329	
Approach Delay, s/veh		73.6			46.4			73.3			55.1	
Approach LOS		E			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	45.8	20.0	28.0	29.0	32.5	8.5	39.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	37.0	37.0	16.0	24.0	25.0	29.0	8.0	32.0				
Max Q Clear Time (g_c+I1), s	12.2	12.2	17.6	26.0	27.0	26.5	4.4	18.6				
Green Ext Time (p_c), s	0.4	7.6	0.0	0.0	0.0	2.0	0.1	8.7				

Intersection Summary

HCM 6th Ctrl Delay	61.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1266	219	369	1279	360	123	432	178	210	640	340
Future Volume (veh/h)	320	1266	219	369	1279	360	123	432	178	210	640	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	327	1292	204	377	1305	84	126	441	153	214	653	303
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	352	1659	261	430	1423	344	151	572	196	241	636	295
Arrive On Green	0.21	0.31	0.31	0.13	0.23	0.23	0.09	0.22	0.22	0.14	0.27	0.27
Sat Flow, veh/h	1697	5364	843	3291	6128	1479	1767	2559	879	1767	2322	1078
Grp Volume(v), veh/h	327	1106	390	377	1305	84	126	302	292	214	496	460
Grp Sat Flow(s),veh/h/ln	1697	1532	1611	1646	1532	1479	1767	1763	1676	1767	1763	1637
Q Serve(g_s), s	24.5	28.4	28.6	14.6	26.9	6.0	9.1	20.8	21.2	15.4	35.5	35.5
Cycle Q Clear(g_c), s	24.5	28.4	28.6	14.6	26.9	6.0	9.1	20.8	21.2	15.4	35.5	35.5
Prop In Lane	1.00		0.52	1.00		1.00	1.00		0.52	1.00		0.66
Lane Grp Cap(c), veh/h	352	1422	498	430	1423	344	151	394	374	241	483	448
V/C Ratio(X)	0.93	0.78	0.78	0.88	0.92	0.24	0.83	0.77	0.78	0.89	1.03	1.03
Avail Cap(c_a), veh/h	556	1578	553	546	1423	344	307	394	374	416	483	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	40.7	40.8	55.3	48.5	40.5	58.3	47.2	47.3	55.0	47.0	47.0
Incr Delay (d2), s/veh	11.7	2.5	7.1	10.8	9.8	0.5	4.5	8.0	9.2	5.8	47.9	49.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	10.6	11.8	6.5	10.8	2.2	4.2	9.8	9.6	7.1	21.4	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	43.2	47.9	66.1	58.3	41.0	62.9	55.2	56.6	60.8	94.9	96.5
LnGrp LOS	E	D	D	E	E	D	E	E	E	E	F	F
Approach Vol, veh/h		1823			1766			720			1170	
Approach Delay, s/veh		47.6			59.2			57.1			89.3	
Approach LOS		D			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.1	35.4	23.4	46.6	17.6	42.0	33.4	36.6				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	30.5	27.5	21.5	44.5	22.5	35.5	42.5	23.5				
Max Q Clear Time (g_c+1/4), s	17.4	23.2	16.6	30.6	11.1	37.5	26.5	28.9				
Green Ext Time (p_c), s	0.2	0.9	0.3	9.5	0.1	0.0	0.4	0.0				

Intersection Summary

HCM 6th Ctrl Delay	61.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶↷	↑↑↑		↶↷	↑↑↑	↶	↶↷	↑↑↑	↶	↶↷	↑↑↑	↶
Traffic Volume (veh/h)	385	1328	270	713	1702	300	320	658	478	500	1170	285
Future Volume (veh/h)	385	1328	270	713	1702	300	320	658	478	500	1170	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	401	1383	257	743	1773	187	333	685	217	521	1219	122
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	388	1387	257	704	1761	537	325	878	266	520	1167	355
Arrive On Green	0.12	0.27	0.27	0.21	0.36	0.36	0.09	0.17	0.17	0.15	0.23	0.23
Sat Flow, veh/h	3291	5215	967	3291	4863	1484	3483	5147	1561	3483	5147	1565
Grp Volume(v), veh/h	401	1219	421	743	1773	187	333	685	217	521	1219	122
Grp Sat Flow(s),veh/h/ln	1646	1532	1585	1646	1621	1484	1742	1716	1561	1742	1716	1565
Q Serve(g_s), s	17.7	39.7	39.9	32.1	54.3	13.8	14.0	19.1	20.1	22.4	34.0	9.8
Cycle Q Clear(g_c), s	17.7	39.7	39.9	32.1	54.3	13.8	14.0	19.1	20.1	22.4	34.0	9.8
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	1223	422	704	1761	537	325	878	266	520	1167	355
V/C Ratio(X)	1.03	1.00	1.00	1.05	1.01	0.35	1.02	0.78	0.81	1.00	1.04	0.34
Avail Cap(c_a), veh/h	388	1223	422	704	1761	537	325	878	266	520	1167	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.2	55.0	55.0	59.0	47.9	34.9	68.0	59.5	59.9	63.8	58.0	48.6
Incr Delay (d2), s/veh	54.3	24.9	43.7	49.3	23.2	0.5	56.3	4.6	17.6	39.9	38.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	17.5	20.4	17.7	24.5	4.9	8.6	8.5	9.1	12.6	18.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.4	79.9	98.7	108.2	71.0	35.4	124.3	64.1	77.5	103.7	96.9	49.3
LnGrp LOS	F	E	F	F	F	D	F	E	E	F	F	D
Approach Vol, veh/h		2041			2703			1235			1862	
Approach Delay, s/veh		91.7			78.8			82.7			95.7	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.6	47.4	21.5	41.5	25.2	61.8	29.9	33.1				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	32.1	39.9	14.0	34.0	17.7	54.3	22.4	25.6				
Max Q Clear Time (g_c+Rc), s	34.1	41.9	16.0	36.0	19.7	56.3	24.4	22.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7				

Intersection Summary

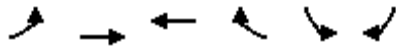
HCM 6th Ctrl Delay	86.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



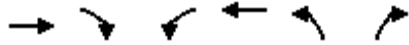
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1900	1394	0	260	1721
Future Volume (veh/h)	0	1900	1394	0	260	1721
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	2000	1467	0	274	1804
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	2091	1455	0	818	1456
Arrive On Green	0.00	0.43	0.43	0.00	0.48	0.48
Sat Flow, veh/h	0	5184	3563	0	1697	3019
Grp Volume(v), veh/h	0	2000	1467	0	274	1804
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1697	1510
Q Serve(g_s), s	0.0	55.7	60.2	0.0	14.0	67.5
Cycle Q Clear(g_c), s	0.0	55.7	60.2	0.0	14.0	67.5
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2091	1455	0	818	1456
V/C Ratio(X)	0.00	0.96	1.01	0.00	0.33	1.24
Avail Cap(c_a), veh/h	0	2091	1455	0	818	1456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	38.6	39.9	0.0	22.4	36.3
Incr Delay (d2), s/veh	0.0	11.2	25.5	0.0	0.2	113.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.7	28.3	0.0	5.7	47.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	49.8	65.4	0.0	22.6	150.0
LnGrp LOS	A	D	F	A	C	F
Approach Vol, veh/h		2000	1467		2078	
Approach Delay, s/veh		49.8	65.4		133.2	
Approach LOS		D	E		F	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.0		73.0		67.0
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		60.2		67.5		60.2
Max Q Clear Time (g_c+I1), s		57.7		69.5		62.2
Green Ext Time (p_c), s		2.2		0.0		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			85.2			
HCM 6th LOS			F			

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	771	1389	170	590	803	170
Future Volume (veh/h)	771	1389	170	590	803	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	812	1462	179	621	845	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	2504	1185	157	2968	963	428
Arrive On Green	0.51	0.51	0.05	0.61	0.28	0.28
Sat Flow, veh/h	5024	1470	3291	5024	3393	1510
Grp Volume(v), veh/h	812	1462	179	621	845	100
Grp Sat Flow(s),veh/h/ln	1621	1470	1646	1621	1697	1510
Q Serve(g_s), s	12.2	64.7	6.0	7.2	29.8	6.4
Cycle Q Clear(g_c), s	12.2	64.7	6.0	7.2	29.8	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2504	1185	157	2968	963	428
V/C Ratio(X)	0.32	1.23	1.14	0.21	0.88	0.23
Avail Cap(c_a), veh/h	2504	1185	157	2968	1485	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	9.1	59.8	10.9	42.9	34.5
Incr Delay (d2), s/veh	0.1	112.5	114.0	0.0	4.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	73.6	4.9	2.3	13.0	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.8	121.6	173.9	11.0	47.0	34.8
LnGrp LOS	B	F	F	B	D	C
Approach Vol, veh/h	2274			800	945	
Approach Delay, s/veh	84.5			47.4	45.7	
Approach LOS	F			D	D	
Timer - Assigned Phs	1	2		6	8	
Phs Duration (G+Y+Rc), s	12.0	72.0		84.0	41.7	
Change Period (Y+Rc), s	6.0	7.3		7.3	6.0	
Max Green Setting (Gmax), s	6.0	64.7		76.7	55.0	
Max Q Clear Time (g_c+1), s	6.0	66.7		9.2	31.8	
Green Ext Time (p_c), s	0.0	0.0		4.1	3.8	

Intersection Summary

HCM 6th Ctrl Delay	68.0
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 16: Ivy Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	771	30	81	353	20	10	10	40	20	10	10
Future Volume (veh/h)	20	771	30	81	353	20	10	10	40	20	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.99	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	812	31	85	372	19	11	11	5	21	11	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	1415	54	151	1593	81	209	40	18	252	30	5
Arrive On Green	0.03	0.41	0.41	0.08	0.46	0.46	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1781	3486	133	1781	3435	175	675	675	307	974	510	93
Grp Volume(v), veh/h	21	414	429	85	192	199	27	0	0	34	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1842	1781	1777	1833	1656	0	0	1577	0	0
Q Serve(g_s), s	0.3	5.4	5.4	1.4	1.9	2.0	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	5.4	5.4	1.4	1.9	2.0	0.4	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.10	0.41		0.19	0.62		0.06
Lane Grp Cap(c), veh/h	48	721	747	151	824	850	267	0	0	288	0	0
V/C Ratio(X)	0.44	0.57	0.57	0.56	0.23	0.23	0.10	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	297	1535	1592	565	1802	1859	1813	0	0	1765	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.4	6.9	6.9	13.2	4.8	4.8	13.5	0.0	0.0	13.5	0.0	0.0
Incr Delay (d2), s/veh	6.3	0.7	0.7	3.3	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.5	0.2	0.2	0.2	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	7.6	7.6	16.5	5.0	5.0	13.6	0.0	0.0	13.7	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		864			476			27			34	
Approach Delay, s/veh		7.9			7.0			13.6			13.7	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.3	7.0	16.7		6.3	5.3	18.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		31.1	9.5	25.9		31.1	5.0	30.4				
Max Q Clear Time (g_c+I1), s		2.4	3.4	7.4		2.6	2.3	4.0				
Green Ext Time (p_c), s		0.1	0.1	4.6		0.1	0.0	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.9							
HCM 6th LOS					A							

HCM 6th Signalized Intersection Summary  
17: Archibald Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕	↖	↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (veh/h)	190	361	260	38	112	161	191	1151	34	245	1702	230
Future Volume (veh/h)	190	361	260	38	112	161	191	1151	34	245	1702	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	380	174	40	118	30	201	1212	14	258	1792	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	285	480	216	166	600	261	282	1949	595	343	2038	622
Arrive On Green	0.08	0.20	0.20	0.05	0.17	0.17	0.08	0.38	0.38	0.10	0.40	0.40
Sat Flow, veh/h	3456	2364	1065	3456	3554	1548	3428	5066	1546	3428	5066	1546
Grp Volume(v), veh/h	200	284	270	40	118	30	201	1212	14	258	1792	137
Grp Sat Flow(s),veh/h/ln	1728	1777	1651	1728	1777	1548	1714	1689	1546	1714	1689	1546
Q Serve(g_s), s	5.3	14.4	14.7	1.1	2.7	1.6	5.4	18.3	0.5	6.9	31.0	5.5
Cycle Q Clear(g_c), s	5.3	14.4	14.7	1.1	2.7	1.6	5.4	18.3	0.5	6.9	31.0	5.5
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	285	361	335	166	600	261	282	1949	595	343	2038	622
V/C Ratio(X)	0.70	0.79	0.80	0.24	0.20	0.11	0.71	0.62	0.02	0.75	0.88	0.22
Avail Cap(c_a), veh/h	821	497	462	584	751	327	652	2113	645	652	2113	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	35.8	35.9	43.4	33.8	33.4	42.4	23.6	18.1	41.5	26.2	18.6
Incr Delay (d2), s/veh	3.1	3.8	4.9	0.7	0.1	0.1	3.3	0.5	0.0	3.4	4.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.3	6.1	0.5	1.1	0.6	2.3	6.6	0.2	2.9	11.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	39.5	40.8	44.1	33.9	33.4	45.7	24.1	18.1	44.8	30.7	18.7
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		754			188			1427			2187	
Approach Delay, s/veh		41.6			36.0			27.0			31.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.5	43.9	9.6	26.7	12.8	45.6	12.8	23.5				
Change Period (Y+Rc), s	5.0	7.5	5.0	7.5	5.0	7.5	5.0	7.5				
Max Green Setting (Gmax), s	10.0	39.5	16.0	26.5	18.0	39.5	22.5	20.0				
Max Q Clear Time (g_c+1), s	10.0	20.3	3.1	16.7	7.4	33.0	7.3	4.7				
Green Ext Time (p_c), s	0.5	7.5	0.0	1.5	0.4	5.1	0.5	0.3				

Intersection Summary

HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th TWSC  
18: Park Place & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	609	30	40	280	30	21
Future Vol, veh/h	609	30	40	280	30	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	641	32	42	295	32	22
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	673	0	873	321
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	232	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	914	-	289	675
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	785	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	914	-	276	675
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	749	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.1	16.6			
HCM LOS			C			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	365	-	-	914	-	
HCM Lane V/C Ratio	0.147	-	-	0.046	-	
HCM Control Delay (s)	16.6	-	-	9.1	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	

HCM 6th Signalized Intersection Summary  
 19: Celebration Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	580	30	80	280	20	30	10	51	10	10	10
Future Volume (veh/h)	20	580	30	80	280	20	30	10	51	10	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	611	29	84	295	17	32	11	11	11	11	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	950	45	247	1465	84	219	74	45	173	140	28
Arrive On Green	0.03	0.28	0.28	0.14	0.43	0.43	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3448	163	1781	3416	196	728	520	319	480	989	200
Grp Volume(v), veh/h	21	315	325	84	153	159	54	0	0	25	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1835	1781	1777	1835	1568	0	0	1668	0	0
Q Serve(g_s), s	0.6	7.7	7.7	2.1	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	7.7	7.7	2.1	2.7	2.7	1.3	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.11	0.59		0.20	0.44		0.12
Lane Grp Cap(c), veh/h	45	489	505	247	762	787	338	0	0	341	0	0
V/C Ratio(X)	0.47	0.64	0.64	0.34	0.20	0.20	0.16	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	191	898	927	360	1138	1176	1133	0	0	1178	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.8	15.8	15.8	19.3	8.8	8.8	18.8	0.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	7.3	1.7	1.7	0.8	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	2.6	0.7	0.7	0.7	0.5	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	17.5	17.5	20.1	9.0	9.0	19.1	0.0	0.0	18.6	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		661			396			54			25	
Approach Delay, s/veh		17.9			11.3			19.1			18.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.0	14.3	21.1		14.0	6.8	28.7				
Change Period (Y+Rc), s		7.0	7.5	7.5		7.0	5.5	7.5				
Max Green Setting (Gmax), s		33.0	10.0	25.0		33.0	5.3	31.7				
Max Q Clear Time (g_c+I1), s		3.3	4.1	9.7		2.6	2.6	4.7				
Green Ext Time (p_c), s		0.3	0.1	3.5		0.1	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

HCM 6th TWSC  
20: Proposed St A & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	625	16	46	368	12	28
Future Vol, veh/h	625	16	46	368	12	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	658	17	48	387	13	29

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	675	0	957 338
Stage 1	-	-	-	-	667 -
Stage 2	-	-	-	-	290 -
Critical Hdwy	-	-	4.1	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	926	-	259 664
Stage 1	-	-	-	-	477 -
Stage 2	-	-	-	-	740 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	926	-	246 664
Mov Cap-2 Maneuver	-	-	-	-	246 -
Stage 1	-	-	-	-	477 -
Stage 2	-	-	-	-	702 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	440	-	-	926	-
HCM Lane V/C Ratio	0.096	-	-	0.052	-
HCM Control Delay (s)	14	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

HCM 6th Signalized Intersection Summary  
21: Sumner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	442	106	13	247	19	47	502	9	46	812	121
Future Volume (veh/h)	103	442	106	13	247	19	47	502	9	46	812	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	108	465	80	14	260	12	49	528	8	48	855	110
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	140	688	118	32	573	26	88	1198	18	87	1054	136
Arrive On Green	0.08	0.23	0.23	0.02	0.17	0.17	0.05	0.34	0.34	0.05	0.34	0.34
Sat Flow, veh/h	1781	3031	518	1781	3458	159	1767	3555	54	1781	3134	403
Grp Volume(v), veh/h	108	271	274	14	133	139	49	262	274	48	481	484
Grp Sat Flow(s),veh/h/ln	1781	1777	1773	1781	1777	1840	1767	1763	1846	1781	1763	1774
Q Serve(g_s), s	2.9	6.8	6.9	0.4	3.3	3.3	1.3	5.6	5.6	1.3	12.1	12.1
Cycle Q Clear(g_c), s	2.9	6.8	6.9	0.4	3.3	3.3	1.3	5.6	5.6	1.3	12.1	12.1
Prop In Lane	1.00		0.29	1.00		0.09	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	140	403	402	32	295	305	88	594	622	87	593	597
V/C Ratio(X)	0.77	0.67	0.68	0.44	0.45	0.46	0.56	0.44	0.44	0.55	0.81	0.81
Avail Cap(c_a), veh/h	201	675	673	183	656	680	181	669	701	183	669	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	17.2	17.2	23.7	18.3	18.3	22.6	12.6	12.6	22.6	14.8	14.8
Incr Delay (d2), s/veh	10.6	2.0	2.0	9.5	1.1	1.1	5.4	0.5	0.5	5.3	6.8	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.3	2.3	0.2	1.1	1.2	0.6	1.7	1.8	0.6	4.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	19.1	19.2	33.2	19.4	19.4	28.1	13.1	13.1	27.9	21.5	21.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	C	C
Approach Vol, veh/h		653			286			585			1013	
Approach Delay, s/veh		21.4			20.1			14.3			21.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	20.9	5.4	15.6	6.9	20.9	8.3	12.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	3.3	7.6	2.4	8.9	3.3	14.1	4.9	5.3				
Green Ext Time (p_c), s	0.0	2.1	0.0	1.9	0.0	2.2	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.8								
HCM 6th LOS				B								

HCM 6th TWSC  
22: Proposed Driveway B & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	381	109	142	168	46	67
Future Vol, veh/h	381	109	142	168	46	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	401	115	149	177	48	71

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	516	0	846 258
Stage 1	-	-	-	-	459 -
Stage 2	-	-	-	-	387 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1046	-	301 741
Stage 1	-	-	-	-	603 -
Stage 2	-	-	-	-	656 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1046	-	258 741
Mov Cap-2 Maneuver	-	-	-	-	258 -
Stage 1	-	-	-	-	603 -
Stage 2	-	-	-	-	563 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4.1	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	421	-	-	1046	-
HCM Lane V/C Ratio	0.283	-	-	0.143	-
HCM Control Delay (s)	16.9	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.1	-	-	0.5	-

# HCM 6th Signalized Intersection Summary

# Subarea 29 Specific Plan Amendment

23: Mill Creek Ave/Scholar Way & Eucalyptus Ave Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Volume (veh/h)	40	403	9	58	293	50	13	193	57	30	214	30
Future Volume (veh/h)	40	403	9	58	293	50	13	193	57	30	214	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	42	424	9	61	308	38	14	203	18	32	225	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	3	3	2
Cap, veh/h	85	828	18	114	792	97	32	497	44	67	576	38
Arrive On Green	0.05	0.23	0.23	0.06	0.25	0.25	0.02	0.15	0.15	0.04	0.17	0.17
Sat Flow, veh/h	1781	3558	75	1781	3185	389	1781	3271	287	1767	3351	222
Grp Volume(v), veh/h	42	212	221	61	171	175	14	108	113	32	118	122
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1797	1781	1763	1795	1767	1763	1809
Q Serve(g_s), s	0.8	3.6	3.6	1.2	2.8	2.8	0.3	1.9	2.0	0.6	2.1	2.1
Cycle Q Clear(g_c), s	0.8	3.6	3.6	1.2	2.8	2.8	0.3	1.9	2.0	0.6	2.1	2.1
Prop In Lane	1.00		0.04	1.00		0.22	1.00		0.16	1.00		0.12
Lane Grp Cap(c), veh/h	85	413	432	114	442	447	32	268	273	67	303	311
V/C Ratio(X)	0.49	0.51	0.51	0.54	0.39	0.39	0.43	0.40	0.41	0.47	0.39	0.39
Avail Cap(c_a), veh/h	279	912	953	279	912	923	254	1910	1945	277	1935	1986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	11.7	11.7	15.9	10.9	11.0	17.0	13.4	13.5	16.5	12.9	12.9
Incr Delay (d2), s/veh	4.3	1.0	0.9	3.9	0.6	0.6	8.8	1.0	1.0	5.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	1.3	0.4	0.7	0.7	0.2	0.6	0.6	0.3	0.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	12.7	12.7	19.8	11.5	11.5	25.9	14.4	14.5	21.6	13.7	13.7
LnGrp LOS	C	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		475			407			235			272	
Approach Delay, s/veh		13.4			12.8			15.1			14.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	9.8	6.7	12.7	5.1	10.5	6.2	13.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	38.0	5.5	18.0	5.0	38.5	5.5	18.0				
Max Q Clear Time (g_c+I1), s	2.6	4.0	3.2	5.6	2.3	4.1	2.8	4.8				
Green Ext Time (p_c), s	0.0	1.1	0.0	2.0	0.0	1.2	0.0	1.3				

## Intersection Summary

HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
24: Hamner Ave & Eucalyptus Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↑↑↑		↔	↑↑↑	
Traffic Volume (veh/h)	202	10	346	20	10	20	200	1374	10	40	1773	190
Future Volume (veh/h)	202	10	346	20	10	20	200	1374	10	40	1773	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	210	10	52	21	10	2	208	1431	10	42	1847	190
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	360	27	138	55	47	9	215	2878	20	88	2249	230
Arrive On Green	0.10	0.10	0.10	0.03	0.03	0.03	0.12	0.55	0.55	0.05	0.48	0.48
Sat Flow, veh/h	3456	255	1327	1810	1537	307	1795	5273	37	1795	4730	484
Grp Volume(v), veh/h	210	0	62	21	0	12	208	931	510	42	1337	700
Grp Sat Flow(s),veh/h/ln	1728	0	1583	1810	0	1845	1795	1716	1879	1795	1716	1782
Q Serve(g_s), s	5.6	0.0	3.5	1.1	0.0	0.6	11.1	16.3	16.3	2.2	32.2	32.7
Cycle Q Clear(g_c), s	5.6	0.0	3.5	1.1	0.0	0.6	11.1	16.3	16.3	2.2	32.2	32.7
Prop In Lane	1.00		0.84	1.00		0.17	1.00		0.02	1.00		0.27
Lane Grp Cap(c), veh/h	360	0	165	55	0	56	215	1873	1025	88	1631	847
V/C Ratio(X)	0.58	0.00	0.38	0.38	0.00	0.21	0.97	0.50	0.50	0.48	0.82	0.83
Avail Cap(c_a), veh/h	916	0	420	327	0	334	215	1873	1025	196	1698	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	0.0	40.2	45.7	0.0	45.5	42.2	13.6	13.6	44.5	21.7	21.8
Incr Delay (d2), s/veh	2.1	0.0	2.0	6.1	0.0	2.7	52.4	0.3	0.5	4.8	3.4	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.4	0.6	0.0	0.3	7.8	5.4	6.0	1.0	12.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	0.0	42.2	51.8	0.0	48.1	94.6	13.9	14.1	49.3	25.1	28.5
LnGrp LOS	D	A	D	D	A	D	F	B	B	D	C	C
Approach Vol, veh/h		272			33			1649			2079	
Approach Delay, s/veh		43.0			50.5			24.1			26.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	52.2		16.5	11.2	59.0		9.4				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	1.5	47.6		25.5	10.5	48.6		17.4				
Max Q Clear Time (g_c+ll), s	1.5	34.7		7.6	4.2	18.3		3.1				
Green Ext Time (p_c), s	0.0	11.1		1.4	0.0	15.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	69	10	52	30	10	60	41	1246	40	60	1810	90
Future Volume (veh/h)	69	10	52	30	10	60	41	1246	40	60	1810	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	73	11	9	32	11	9	43	1312	22	63	1905	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	310	155	127	310	155	127	140	2305	696	173	2400	725
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.08	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	1380	940	769	1380	940	769	1767	5066	1530	1767	5066	1530
Grp Volume(v), veh/h	73	0	20	32	0	20	43	1312	22	63	1905	52
Grp Sat Flow(s),veh/h/ln	1380	0	1710	1380	0	1710	1767	1689	1530	1767	1689	1530
Q Serve(g_s), s	3.5	0.0	0.7	1.5	0.0	0.7	1.7	14.2	0.6	2.5	23.6	1.4
Cycle Q Clear(g_c), s	4.2	0.0	0.7	2.2	0.0	0.7	1.7	14.2	0.6	2.5	23.6	1.4
Prop In Lane	1.00		0.45	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	0	282	310	0	282	140	2305	696	173	2400	725
V/C Ratio(X)	0.24	0.00	0.07	0.10	0.00	0.07	0.31	0.57	0.03	0.36	0.79	0.07
Avail Cap(c_a), veh/h	770	0	851	770	0	851	238	2520	761	238	2520	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	26.3	27.2	0.0	26.3	32.3	14.9	11.2	31.4	16.5	10.7
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.2	0.0	0.1	1.5	0.3	0.0	1.5	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.3	0.5	0.0	0.3	0.7	4.4	0.2	1.0	7.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	0.0	26.4	27.4	0.0	26.4	33.8	15.2	11.2	32.9	18.4	10.7
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		93			52			1377			2020	
Approach Delay, s/veh		28.1			27.0			15.8			18.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	41.4		18.3	13.4	42.7		18.3				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	37.0		37.0	10.0	37.0		37.0				
Max Q Clear Time (g_c+14), s	14.5	16.2		6.2	3.7	25.6		4.2				
Green Ext Time (p_c), s	0.1	11.4		0.4	0.0	9.7		0.2				

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary  
 26: Sumner Ave & E Parkview St

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	83	10	29	16	10	118	70	399	55	170	625	70
Future Volume (veh/h)	83	10	29	16	10	118	70	399	55	170	625	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1870	1870	1856	1856
Adj Flow Rate, veh/h	87	11	9	17	11	21	74	420	42	179	658	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	2	2	3	3
Cap, veh/h	368	19	15	217	63	88	136	953	95	235	1139	107
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.29	0.29	0.13	0.35	0.35
Sat Flow, veh/h	1227	155	127	448	515	722	1767	3238	322	1781	3257	307
Grp Volume(v), veh/h	107	0	0	49	0	0	74	228	234	179	356	364
Grp Sat Flow(s),veh/h/ln1508		0	0	1685	0	0	1767	1763	1798	1781	1763	1800
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	1.2	3.1	3.2	2.9	4.9	4.9
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.8	0.0	0.0	1.2	3.1	3.2	2.9	4.9	4.9
Prop In Lane	0.81		0.08	0.35		0.43	1.00		0.18	1.00		0.17
Lane Grp Cap(c), veh/h	402	0	0	367	0	0	136	519	529	235	616	630
V/C Ratio(X)	0.27	0.00	0.00	0.13	0.00	0.00	0.55	0.44	0.44	0.76	0.58	0.58
Avail Cap(c_a), veh/h	1091	0	0	1119	0	0	402	1062	1083	626	1281	1308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	11.9	0.0	0.0	13.3	8.5	8.6	12.5	7.9	7.9
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	0.0	0.0	3.4	0.6	0.6	5.0	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.5	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.7	0.7	1.1	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	0.0	0.0	12.0	0.0	0.0	16.7	9.1	9.1	17.5	8.8	8.8
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		107			49			536			899	
Approach Delay, s/veh		12.7			12.0			10.2			10.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s8.4	13.3			8.1	6.8	14.9		8.1				
Change Period (Y+Rc), s 4.5	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s 10.5	18.0			18.0	6.8	21.7		18.0				
Max Q Clear Time (g_c+14.5)	5.2			3.9	3.2	6.9		2.8				
Green Ext Time (p_c), s 0.2	2.0			0.4	0.0	3.5		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.6								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	40	10	15	20	10	20	23	202	10	10	194	77
Future Vol, veh/h	40	10	15	20	10	20	23	202	10	10	194	77
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	3	3	2
Mvmt Flow	42	11	16	21	11	21	24	213	11	11	204	81

































Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	427	539	143	397	574	112	285	0	0	224	0	0
Stage 1	267	267	-	267	267	-	-	-	-	-	-	-
Stage 2	160	272	-	130	307	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	512	448	879	537	428	920	1274	-	-	1335	-	-
Stage 1	715	687	-	715	687	-	-	-	-	-	-	-
Stage 2	826	683	-	860	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	481	436	879	507	416	920	1274	-	-	1335	-	-
Mov Cap-2 Maneuver	481	436	-	507	416	-	-	-	-	-	-	-
Stage 1	701	682	-	701	674	-	-	-	-	-	-	-
Stage 2	780	670	-	825	655	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.8		11.7		0.8		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1274	-	-	528	587	1335	-	-
HCM Lane V/C Ratio	0.019	-	-	0.13	0.09	0.008	-	-
HCM Control Delay (s)	7.9	-	-	12.8	11.7	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			  			  	
Traffic Volume (veh/h)	524	610	157	270	477	194	144	966	310	317	1079	663
Future Volume (veh/h)	524	610	157	270	477	194	144	966	310	317	1079	663
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	535	622	44	276	487	89	147	986	220	323	1101	377
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	594	973	426	337	709	309	174	1043	317	351	1498	456
Arrive On Green	0.17	0.28	0.28	0.10	0.20	0.20	0.10	0.20	0.20	0.20	0.29	0.29
Sat Flow, veh/h	3428	3526	1543	3428	3526	1539	1795	5147	1563	1795	5147	1568
Grp Volume(v), veh/h	535	622	44	276	487	89	147	986	220	323	1101	377
Grp Sat Flow(s),veh/h/ln	1714	1763	1543	1714	1763	1539	1795	1716	1563	1795	1716	1568
Q Serve(g_s), s	17.8	18.0	1.7	9.2	14.9	5.7	9.4	22.0	15.2	20.5	22.4	15.5
Cycle Q Clear(g_c), s	17.8	18.0	1.7	9.2	14.9	5.7	9.4	22.0	15.2	20.5	22.4	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	594	973	426	337	709	309	174	1043	317	351	1498	456
V/C Ratio(X)	0.90	0.64	0.10	0.82	0.69	0.29	0.84	0.95	0.69	0.92	0.74	0.83
Avail Cap(c_a), veh/h	738	1299	568	767	1329	580	185	1043	317	572	1675	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	37.0	15.1	51.4	43.0	39.4	51.6	45.7	43.0	45.8	37.1	13.6
Incr Delay (d2), s/veh	10.8	1.0	0.1	1.9	1.7	0.7	25.5	16.5	7.1	9.3	1.7	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	7.5	0.9	3.9	6.4	2.1	5.3	10.6	6.2	9.6	9.1	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	38.0	15.3	53.2	44.7	40.1	77.1	62.1	50.0	55.2	38.9	24.2
LnGrp LOS	E	D	B	D	D	D	E	E	D	E	D	C
Approach Vol, veh/h		1201			852			1353			1801	
Approach Delay, s/veh		46.0			47.0			61.8			38.7	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.7	30.8	17.4	39.3	18.5	41.0	26.1	30.6				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	7.2	* 7.2	6.0	7.2				
Max Green Setting (Gmax), s	37.0	12.8	26.0	42.8	12.0	* 38	25.0	43.8				
Max Q Clear Time (g_c+I1), s	22.5	24.0	11.2	20.0	11.4	24.4	19.8	16.9				
Green Ext Time (p_c), s	0.2	0.0	0.3	5.5	0.0	8.7	0.4	4.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			47.7									
HCM 6th LOS			D									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
29: Charlotte Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1333	10	10	633	91	20	10	40	50	10	30
Future Volume (veh/h)	40	1333	10	10	633	91	20	10	40	50	10	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	42	1403	7	11	666	88	21	11	6	53	11	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	103	1888	820	34	1549	204	185	87	33	239	46	20
Arrive On Green	0.06	0.54	0.54	0.02	0.50	0.50	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1739	3469	1507	1739	3070	405	684	660	252	1006	352	149
Grp Volume(v), veh/h	42	1403	7	11	376	378	38	0	0	71	0	0
Grp Sat Flow(s),veh/h/ln	1739	1735	1507	1739	1735	1740	1596	0	0	1507	0	0
Q Serve(g_s), s	1.4	18.3	0.1	0.4	8.1	8.1	0.0	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	1.4	18.3	0.1	0.4	8.1	8.1	1.1	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.23	0.55		0.16	0.75		0.10
Lane Grp Cap(c), veh/h	103	1888	820	34	875	878	305	0	0	305	0	0
V/C Ratio(X)	0.41	0.74	0.01	0.32	0.43	0.43	0.12	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	206	2056	893	206	1028	1031	873	0	0	853	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.8	10.3	6.2	28.6	9.3	9.3	22.8	0.0	0.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	2.6	1.8	0.0	5.4	0.7	0.7	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.6	0.0	0.2	2.6	2.6	0.5	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	12.1	6.2	33.9	10.0	10.0	22.9	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	C	B	A	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1452			765			38			71	
Approach Delay, s/veh		12.6			10.3			22.9			23.6	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.8	6.2	39.1		13.8	8.5	36.8				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		30.0	7.0	35.0		30.0	7.0	35.0				
Max Q Clear Time (g_c+11), s		3.1	2.4	20.3		4.3	3.4	10.1				
Green Ext Time (p_c), s		0.1	0.0	11.9		0.3	0.0	9.2				

Intersection Summary

HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
30: Archibald Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↔	↔	↑↑	↔	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	340	724	360	99	284	92	190	895	153	94	1538	260
Future Volume (veh/h)	340	724	360	99	284	92	190	895	153	94	1538	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	358	762	0	104	299	18	200	942	64	99	1619	257
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	3	3	3
Cap, veh/h	423	763		128	591	257	255	2111	645	206	1771	280
Arrive On Green	0.13	0.22	0.00	0.07	0.17	0.17	0.07	0.42	0.42	0.06	0.40	0.40
Sat Flow, veh/h	3374	3469	1547	1781	3554	1548	3428	5066	1546	3428	4399	695
Grp Volume(v), veh/h	358	762	0	104	299	18	200	942	64	99	1241	635
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1781	1777	1548	1714	1689	1546	1714	1689	1716
Q Serve(g_s), s	13.5	28.5	0.0	7.5	9.9	1.3	7.4	17.3	3.3	3.6	45.0	45.4
Cycle Q Clear(g_c), s	13.5	28.5	0.0	7.5	9.9	1.3	7.4	17.3	3.3	3.6	45.0	45.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	423	763		128	591	257	255	2111	645	206	1359	691
V/C Ratio(X)	0.85	1.00		0.81	0.51	0.07	0.79	0.45	0.10	0.48	0.91	0.92
Avail Cap(c_a), veh/h	612	763		199	591	257	384	2111	645	384	1368	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	50.5	0.0	59.3	49.2	45.6	59.0	27.1	23.0	59.0	36.6	36.7
Incr Delay (d2), s/veh	7.4	32.3	0.0	10.7	0.5	0.1	4.8	0.3	0.1	1.3	10.0	17.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	15.6	0.0	3.7	4.4	0.5	3.3	6.6	1.2	1.6	19.1	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	82.8	0.0	70.0	49.7	45.7	63.8	27.4	23.1	60.3	46.5	54.6
LnGrp LOS	E	F		E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		1120	A		421			1206			1975	
Approach Delay, s/veh		76.4			54.6			33.2			49.8	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	61.5	16.8	36.0	17.1	59.7	23.8	29.0				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	14.5	52.5	14.5	28.5	14.5	52.5	23.5	19.5				
Max Q Clear Time (g_c+1), s	15.6	19.3	9.5	30.5	9.4	47.4	15.5	11.9				
Green Ext Time (p_c), s	0.1	13.3	0.1	0.0	0.2	4.7	0.8	0.9				

Intersection Summary

HCM 6th Ctrl Delay	52.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 31: McCleve Way/Parkplace Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	881	50	10	413	20	40	10	20	21	10	20
Future Volume (veh/h)	40	881	50	10	413	20	40	10	20	21	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	918	27	10	430	11	42	10	3	22	10	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	1382	599	33	1213	525	331	61	230	267	100	20
Arrive On Green	0.07	0.39	0.39	0.02	0.34	0.34	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3554	1540	1781	3554	1539	1089	415	1550	765	677	135
Grp Volume(v), veh/h	42	918	27	10	430	11	52	0	3	35	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1781	1777	1539	1504	0	1550	1577	0	0
Q Serve(g_s), s	0.9	8.1	0.4	0.2	3.5	0.2	0.4	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	8.1	0.4	0.2	3.5	0.2	1.0	0.0	0.1	0.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.81		1.00	0.63		0.09
Lane Grp Cap(c), veh/h	117	1382	599	33	1213	525	393	0	230	387	0	0
V/C Ratio(X)	0.36	0.66	0.05	0.30	0.35	0.02	0.13	0.00	0.01	0.09	0.00	0.00
Avail Cap(c_a), veh/h	326	1952	846	326	1952	845	1323	0	1216	1350	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.1	9.6	7.3	18.5	9.4	8.4	14.3	0.0	13.9	14.1	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.6	0.0	5.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.2	0.1	0.1	1.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	10.2	7.3	23.6	9.6	8.4	14.3	0.0	13.9	14.2	0.0	0.0
LnGrp LOS	B	B	A	C	A	A	B	A	B	B	A	A
Approach Vol, veh/h		987			451			55			35	
Approach Delay, s/veh		10.5			9.9			14.3			14.2	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.7	5.7	20.9		11.7	7.5	19.0				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		30.0	7.0	21.0		30.0	7.0	21.0				
Max Q Clear Time (g_c+I1), s		3.0	2.2	10.1		2.6	2.9	5.5				
Green Ext Time (p_c), s		0.2	0.0	4.7		0.1	0.0	2.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					10.5							
HCM 6th LOS					B							



HCM 6th Signalized Intersection Summary  
32: McCleve Way/Celebration Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	831	30	40	384	80	20	10	30	71	20	40
Future Volume (veh/h)	60	831	30	40	384	80	20	10	30	71	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	848	14	41	392	35	20	10	7	72	20	7
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1156	500	115	1076	465	305	122	260	321	77	18
Arrive On Green	0.09	0.33	0.33	0.06	0.30	0.30	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1538	1781	3554	1537	888	725	1549	948	459	107
Grp Volume(v), veh/h	61	848	14	41	392	35	30	0	7	99	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1538	1781	1777	1537	1613	0	1549	1515	0	0
Q Serve(g_s), s	1.2	8.1	0.2	0.8	3.3	0.6	0.0	0.0	0.1	1.4	0.0	0.0
Cycle Q Clear(g_c), s	1.2	8.1	0.2	0.8	3.3	0.6	0.5	0.0	0.1	2.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.67		1.00	0.73		0.07
Lane Grp Cap(c), veh/h	155	1156	500	115	1076	465	427	0	260	416	0	0
V/C Ratio(X)	0.39	0.73	0.03	0.36	0.36	0.08	0.07	0.00	0.03	0.24	0.00	0.00
Avail Cap(c_a), veh/h	324	1386	600	324	1386	599	1193	0	1048	1165	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.6	11.5	8.8	17.2	10.5	9.6	13.5	0.0	13.4	14.1	0.0	0.0
Incr Delay (d2), s/veh	1.6	1.7	0.0	1.9	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	0.1	0.3	1.0	0.2	0.2	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	13.1	8.9	19.1	10.7	9.6	13.6	0.0	13.4	14.2	0.0	0.0
LnGrp LOS	B	B	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		923			468			37			99	
Approach Delay, s/veh		13.4			11.4			13.5			14.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.5	7.5	18.5		12.5	8.4	17.6				
Change Period (Y+Rc), s		6.0	5.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s		26.0	7.0	15.0		26.0	7.0	15.0				
Max Q Clear Time (g_c+I1), s		2.5	2.8	10.1		4.1	3.2	5.3				
Green Ext Time (p_c), s		0.1	0.0	2.4		0.3	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	801	170	508	399	157	90	331	339	188	462	77
Future Volume (veh/h)	43	801	170	508	399	157	90	331	339	188	462	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	826	164	524	411	136	93	341	219	194	476	71
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	73	795	158	435	1237	404	114	403	254	214	773	115
Arrive On Green	0.04	0.27	0.27	0.25	0.48	0.48	0.06	0.20	0.20	0.12	0.25	0.25
Sat Flow, veh/h	1781	2944	585	1767	2601	851	1767	2065	1298	1767	3070	455
Grp Volume(v), veh/h	44	499	491	524	277	270	93	290	270	194	272	275
Grp Sat Flow(s),veh/h/ln	1781	1777	1752	1767	1763	1689	1767	1763	1600	1767	1763	1763
Q Serve(g_s), s	3.4	37.9	37.9	34.6	13.7	14.0	7.3	22.3	22.9	15.2	19.2	19.4
Cycle Q Clear(g_c), s	3.4	37.9	37.9	34.6	13.7	14.0	7.3	22.3	22.9	15.2	19.2	19.4
Prop In Lane	1.00		0.33	1.00		0.50	1.00		0.81	1.00		0.26
Lane Grp Cap(c), veh/h	73	480	473	435	838	803	114	344	313	214	444	444
V/C Ratio(X)	0.60	1.04	1.04	1.20	0.33	0.34	0.81	0.84	0.86	0.91	0.61	0.62
Avail Cap(c_a), veh/h	127	480	473	435	838	803	176	464	421	214	502	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.2	51.3	51.3	52.9	22.9	23.0	64.8	54.4	54.7	60.9	46.5	46.6
Incr Delay (d2), s/veh	3.0	51.8	52.1	111.6	0.1	0.1	8.2	10.1	13.1	36.4	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	23.6	23.3	28.3	5.5	5.4	3.5	10.6	10.2	8.9	8.5	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	103.0	103.3	164.6	23.0	23.1	73.1	64.5	67.8	97.3	48.3	48.5
LnGrp LOS	E	F	F	F	C	C	E	E	E	F	D	D
Approach Vol, veh/h		1034			1071			653			741	
Approach Delay, s/veh		101.7			92.3			67.1			61.2	
Approach LOS		F			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	34.4	39.6	44.4	14.1	42.4	10.7	73.3				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	37.0	37.0	34.6	37.9	14.0	40.0	10.0	62.5				
Max Q Clear Time (g_c+I1), s	24.9	36.6	39.9	9.3	21.4	5.4	16.0					
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	2.8	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	83.8
HCM 6th LOS	F

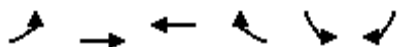
Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 34: Bellegrave Ave & Proposed Driveway B

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	8	1236	1102	131	53	22	
Future Volume (veh/h)	8	1236	1102	131	53	22	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	0.96	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	8	1301	1160	126	56	4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	19	2210	1578	171	219	16	
Arrive On Green	0.01	0.62	0.49	0.49	0.14	0.14	
Sat Flow, veh/h	1781	3647	3317	349	1618	116	
Grp Volume(v), veh/h	8	1301	638	648	61	0	
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1795	1763	0	
Q Serve(g_s), s	0.2	8.1	10.6	10.7	1.1	0.0	
Cycle Q Clear(g_c), s	0.2	8.1	10.6	10.7	1.1	0.0	
Prop In Lane	1.00			0.19	0.92	0.07	
Lane Grp Cap(c), veh/h	19	2210	870	879	238	0	
V/C Ratio(X)	0.42	0.59	0.73	0.74	0.26	0.00	
Avail Cap(c_a), veh/h	241	3129	1109	1120	876	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	18.2	4.2	7.5	7.5	14.3	0.0	
Incr Delay (d2), s/veh	14.1	0.3	1.9	1.9	0.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.9	1.9	0.4	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	32.3	4.4	9.4	9.5	14.9	0.0	
LnGrp LOS	C	A	A	A	B	A	
Approach Vol, veh/h		1309	1286		61		
Approach Delay, s/veh		4.6	9.4		14.9		
Approach LOS		A	A		B		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			27.5		9.5	4.9	22.6
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			32.6		18.4	5.0	23.1
Max Q Clear Time (g_c+1), s			10.1		3.1	2.2	12.7
Green Ext Time (p_c), s			9.2		0.1	0.0	5.5

### Intersection Summary

HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

### Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
 35: Scholar Way/Mill Creek Ave & Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1098	98	220	1067	28	66	122	120	12	124	99
Future Volume (veh/h)	90	1098	98	220	1067	28	66	122	120	12	124	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	95	1156	99	232	1123	14	69	128	25	13	131	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	124	1298	111	268	1683	739	112	507	96	38	242	200
Arrive On Green	0.07	0.40	0.40	0.15	0.48	0.48	0.06	0.17	0.17	0.02	0.13	0.13
Sat Flow, veh/h	1767	3278	280	1767	3526	1547	1767	2943	559	1767	1856	1531
Grp Volume(v), veh/h	95	621	634	232	1123	14	69	75	78	13	131	16
Grp Sat Flow(s),veh/h/ln	1767	1763	1796	1767	1763	1547	1767	1763	1739	1767	1856	1531
Q Serve(g_s), s	4.8	29.8	30.0	11.7	22.2	0.4	3.5	3.4	3.5	0.7	6.0	0.8
Cycle Q Clear(g_c), s	4.8	29.8	30.0	11.7	22.2	0.4	3.5	3.4	3.5	0.7	6.0	0.8
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	124	698	711	268	1683	739	112	304	300	38	242	200
V/C Ratio(X)	0.77	0.89	0.89	0.87	0.67	0.02	0.61	0.25	0.26	0.34	0.54	0.08
Avail Cap(c_a), veh/h	156	757	771	311	1824	800	156	766	756	136	786	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	25.6	25.6	37.7	18.2	12.5	41.5	32.5	32.6	43.8	37.0	34.7
Incr Delay (d2), s/veh	16.2	12.0	12.1	19.8	0.8	0.0	2.0	0.2	0.2	2.0	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	13.3	13.6	6.2	7.9	0.1	1.5	1.4	1.4	0.3	2.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	37.6	37.7	57.5	19.1	12.5	43.5	32.7	32.7	45.8	37.7	34.8
LnGrp LOS	E	D	D	E	B	B	D	C	C	D	D	C
Approach Vol, veh/h		1350			1369			222			160	
Approach Delay, s/veh		39.1			25.5			36.0			38.0	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	18.4	11.4	50.4	7.0	22.2	18.8	43.0				
Change Period (Y+Rc), s	5.0	6.5	5.0	7.0	5.0	6.5	5.0	7.0				
Max Green Setting (Gmax), s	38.5	38.5	8.0	47.0	7.0	39.5	16.0	39.0				
Max Q Clear Time (g_c+1/5), s	11.5	8.0	6.8	24.2	2.7	5.5	13.7	32.0				
Green Ext Time (p_c), s	0.0	0.4	0.0	7.7	0.0	0.5	0.1	4.0				

Intersection Summary

HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	800	120	244	700	350	180	718	269	340	1356	250
Future Volume (veh/h)	200	800	120	244	700	350	180	718	269	340	1356	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	206	825	47	252	722	221	186	740	256	351	1398	191
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	181	1004	445	324	977	760	257	1898	733	311	1977	611
Arrive On Green	0.10	0.28	0.28	0.09	0.27	0.27	0.07	0.37	0.37	0.09	0.39	0.39
Sat Flow, veh/h	1795	3582	1589	3483	3582	2786	3428	5066	1566	3428	5066	1566
Grp Volume(v), veh/h	206	825	47	252	722	221	186	740	256	351	1398	191
Grp Sat Flow(s),veh/h/ln	1795	1791	1589	1742	1791	1393	1714	1689	1566	1714	1689	1566
Q Serve(g_s), s	10.0	21.4	2.2	7.0	18.2	6.2	5.3	10.6	10.3	9.0	23.1	8.4
Cycle Q Clear(g_c), s	10.0	21.4	2.2	7.0	18.2	6.2	5.3	10.6	10.3	9.0	23.1	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	1004	445	324	977	760	257	1898	733	311	1977	611
V/C Ratio(X)	1.14	0.82	0.11	0.78	0.74	0.29	0.72	0.39	0.35	1.13	0.71	0.31
Avail Cap(c_a), veh/h	181	1444	641	527	1625	1264	415	2553	936	311	2400	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	33.4	26.5	44.0	32.9	28.5	44.9	22.7	16.8	45.1	25.5	21.0
Incr Delay (d2), s/veh	109.0	1.7	0.0	1.5	1.1	0.2	3.8	0.2	0.3	90.4	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	8.8	0.8	2.9	7.5	2.0	2.2	3.8	3.4	7.5	8.4	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.6	35.1	26.5	45.5	34.0	28.7	48.7	22.9	17.1	135.5	26.4	21.4
LnGrp LOS	F	D	C	D	C	C	D	C	B	F	C	C
Approach Vol, veh/h		1078			1195			1182			1940	
Approach Delay, s/veh		57.4			35.4			25.7			45.6	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	41.2	13.2	31.8	11.4	42.7	14.0	31.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	50.0	50.0	15.0	40.0	12.0	47.0	10.0	45.0				
Max Q Clear Time (g_c+fl), s	12.6	12.6	9.0	23.4	7.3	25.1	12.0	20.2				
Green Ext Time (p_c), s	0.0	7.4	0.2	3.1	0.2	13.4	0.0	5.5				

Intersection Summary

HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
37: Sumner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Traffic Volume (veh/h)	269	1190	80	250	1110	125	60	284	160	221	484	364
Future Volume (veh/h)	269	1190	80	250	1110	125	60	284	160	221	484	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	277	1227	27	258	1144	40	62	293	33	228	499	185
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	362	1712	522	342	1683	520	84	570	248	266	934	409
Arrive On Green	0.10	0.33	0.33	0.10	0.33	0.33	0.05	0.16	0.16	0.15	0.27	0.27
Sat Flow, veh/h	3483	5147	1569	3483	5147	1590	1767	3526	1535	1767	3526	1542
Grp Volume(v), veh/h	277	1227	27	258	1144	40	62	293	33	228	499	185
Grp Sat Flow(s),veh/h/ln	1742	1716	1569	1742	1716	1590	1767	1763	1535	1767	1763	1542
Q Serve(g_s), s	6.0	16.3	0.9	5.6	15.0	1.4	2.7	5.9	1.4	9.8	9.4	7.8
Cycle Q Clear(g_c), s	6.0	16.3	0.9	5.6	15.0	1.4	2.7	5.9	1.4	9.8	9.4	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	1712	522	342	1683	520	84	570	248	266	934	409
V/C Ratio(X)	0.77	0.72	0.05	0.75	0.68	0.08	0.74	0.51	0.13	0.86	0.53	0.45
Avail Cap(c_a), veh/h	451	2245	685	380	2140	661	215	1810	788	283	1945	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	22.8	17.7	34.2	22.7	18.1	36.6	29.9	28.0	32.3	24.5	23.9
Incr Delay (d2), s/veh	4.5	0.8	0.0	7.0	0.6	0.1	4.7	0.5	0.2	19.8	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.0	0.3	2.6	5.5	0.5	1.2	2.4	0.5	5.3	3.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	23.5	17.7	41.2	23.3	18.2	41.4	30.4	28.2	52.1	24.9	24.5
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1531			1442			388			912	
Approach Delay, s/veh		26.1			26.4			32.0			31.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	31.4	8.2	26.2	12.6	31.0	16.2	18.1				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	34.0	9.5	43.0	10.1	32.4	12.5	40.0				
Max Q Clear Time (g_c+1), s	17.6	18.3	4.7	11.4	8.0	17.0	11.8	7.9				
Green Ext Time (p_c), s	0.1	7.2	0.0	3.0	0.1	6.7	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
38: Scholar Way & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	30	1491	70	170	1465	86	80	122	150	80	132	40
Future Volume (veh/h)	30	1491	70	170	1465	86	80	122	150	80	132	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1569	72	179	1542	88	84	128	27	84	139	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	58	2197	101	219	2617	149	107	208	171	108	396	171
Arrive On Green	0.03	0.44	0.44	0.12	0.53	0.53	0.06	0.11	0.11	0.06	0.11	0.11
Sat Flow, veh/h	1795	5036	231	1795	4980	284	1767	1856	1527	1767	3526	1527
Grp Volume(v), veh/h	32	1069	572	179	1062	568	84	128	27	84	139	42
Grp Sat Flow(s),veh/h/ln	1795	1716	1836	1795	1716	1833	1767	1856	1527	1767	1763	1527
Q Serve(g_s), s	1.3	19.0	19.0	7.2	15.8	15.8	3.5	4.9	1.2	3.5	2.7	1.9
Cycle Q Clear(g_c), s	1.3	19.0	19.0	7.2	15.8	15.8	3.5	4.9	1.2	3.5	2.7	1.9
Prop In Lane	1.00		0.13	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	1497	801	219	1803	963	107	208	171	108	396	171
V/C Ratio(X)	0.55	0.71	0.71	0.82	0.59	0.59	0.78	0.62	0.16	0.78	0.35	0.25
Avail Cap(c_a), veh/h	123	1799	963	316	2168	1158	164	928	764	254	1944	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	17.2	17.2	31.9	12.1	12.1	34.4	31.5	29.8	34.4	30.5	30.1
Incr Delay (d2), s/veh	2.9	1.2	2.2	6.9	0.4	0.7	5.8	1.1	0.2	4.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.5	7.2	3.3	4.9	5.3	1.6	2.2	0.4	1.6	1.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	18.4	19.4	38.8	12.5	12.8	40.2	32.6	30.0	38.9	30.7	30.4
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h	1673				1809		239				265	
Approach Delay, s/veh	19.1				15.2		35.0				33.3	
Approach LOS	B				B		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	44.6	9.0	13.8	13.6	37.9	9.0	13.8				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	47.0	47.0	6.9	41.0	13.1	39.0	10.7	37.2				
Max Q Clear Time (g_c+1), s	17.8	17.8	5.5	4.7	9.2	21.0	5.5	6.9				
Green Ext Time (p_c), s	0.0	15.4	0.0	0.6	0.1	11.5	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
39: Hamner Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	320	1287	143	590	1177	380	293	600	330	547	579	240
Future Volume (veh/h)	320	1287	143	590	1177	380	293	600	330	547	579	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	327	1313	45	602	1201	215	299	612	58	558	591	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	385	1579	488	586	1305	580	358	839	258	612	1215	375
Arrive On Green	0.11	0.31	0.31	0.17	0.36	0.36	0.10	0.16	0.16	0.18	0.24	0.24
Sat Flow, veh/h	3483	5147	1590	3483	3582	1591	3483	5147	1583	3483	5147	1587
Grp Volume(v), veh/h	327	1313	45	602	1201	215	299	612	58	558	591	58
Grp Sat Flow(s),veh/h/ln	1742	1716	1590	1742	1791	1591	1742	1716	1583	1742	1716	1587
Q Serve(g_s), s	10.1	26.1	2.2	18.5	35.3	10.9	9.3	12.4	3.5	17.3	10.9	3.2
Cycle Q Clear(g_c), s	10.1	26.1	2.2	18.5	35.3	10.9	9.3	12.4	3.5	17.3	10.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1579	488	586	1305	580	358	839	258	612	1215	375
V/C Ratio(X)	0.85	0.83	0.09	1.03	0.92	0.37	0.84	0.73	0.22	0.91	0.49	0.15
Avail Cap(c_a), veh/h	681	1579	488	586	1305	580	744	1329	409	649	1215	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	35.5	27.2	45.8	33.4	25.7	48.4	43.7	40.0	44.5	36.3	33.3
Incr Delay (d2), s/veh	1.9	5.0	0.4	41.3	10.4	1.5	2.0	0.5	0.2	16.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	11.1	0.9	11.1	16.2	4.2	4.0	5.1	1.3	8.6	4.4	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	40.5	27.6	87.1	43.8	27.2	50.4	44.2	40.2	60.6	36.4	33.4
LnGrp LOS	D	D	C	F	D	C	D	D	D	E	D	C
Approach Vol, veh/h		1685			2018			969			1207	
Approach Delay, s/veh		42.0			55.0			45.9			47.4	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	39.6	15.8	31.6	16.7	46.0	23.8	23.5				
Change Period (Y+Rc), s	4.5	5.9	4.5	5.6	4.5	5.9	4.5	5.6				
Max Green Setting (Gmax), s	18.5	22.1	23.5	25.4	21.5	19.1	20.5	28.4				
Max Q Clear Time (g_c+Y), s	20.5	28.1	11.3	12.9	12.1	37.3	19.3	14.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑				↑	↑	↑↑
Traffic Volume (veh/h)	0	1422	1032	0	1667	540	0	0	0	350	10	870
Future Volume (veh/h)	0	1422	1032	0	1667	540	0	0	0	350	10	870
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	1885	1885
Adj Flow Rate, veh/h	0	1451	577	0	1701	551				364	0	839
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	1	1				1	1	1
Cap, veh/h	0	2779	860	0	2779	1242				862	0	767
Arrive On Green	0.00	0.54	0.54	0.00	1.00	1.00				0.24	0.00	0.24
Sat Flow, veh/h	0	5316	1593	0	5316	1590				3591	0	3195
Grp Volume(v), veh/h	0	1451	577	0	1701	551				364	0	839
Grp Sat Flow(s),veh/h/ln	0	1716	1593	0	1716	1590				1795	0	1598
Q Serve(g_s), s	0.0	9.9	14.4	0.0	0.0	0.0				4.7	0.0	13.2
Cycle Q Clear(g_c), s	0.0	9.9	14.4	0.0	0.0	0.0				4.7	0.0	13.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2779	860	0	2779	1242				862	0	767
V/C Ratio(X)	0.00	0.52	0.67	0.00	0.61	0.44				0.42	0.00	1.09
Avail Cap(c_a), veh/h	0	2779	860	0	2779	1242				862	0	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.75	0.75				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.1	9.1	0.0	0.0	0.0				17.7	0.0	20.9
Incr Delay (d2), s/veh	0.0	0.7	4.1	0.0	0.8	0.9				0.1	0.0	61.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	4.1	0.0	0.2	0.3				1.8	0.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.8	13.3	0.0	0.8	0.9				17.8	0.0	82.1
LnGrp LOS	A	A	B	A	A	A				B	A	F
Approach Vol, veh/h		2028			2252						1203	
Approach Delay, s/veh		10.1			0.8						62.7	
Approach LOS		B			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		36.0		19.0		36.0						
Change Period (Y+Rc), s		6.3		5.8		6.3						
Max Green Setting (Gmax), s		29.7		13.2		29.7						
Max Q Clear Time (g_c+I1), s		16.4		15.2		2.0						
Green Ext Time (p_c), s		6.7		0.0		11.0						

Intersection Summary

HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

# HCM 6th Signalized Intersection Summary

## 41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗	↖	↖	↗			
Traffic Volume (veh/h)	100	1392	280	0	1542	160	665	0	440	0	0	0
Future Volume (veh/h)	100	1392	280	0	1542	160	665	0	440	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1885	1885	1885	0	1885	1885	1885	1885	1885			
Adj Flow Rate, veh/h	103	1435	289	0	1590	96	686	0	402			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	1	1	1	0	1	1	1	1	1			
Cap, veh/h	178	2082	1242	0	2966	918	731	0	651			
Arrive On Green	1.00	1.00	1.00	0.00	0.58	0.58	0.20	0.00	0.20			
Sat Flow, veh/h	154	3613	1591	0	5316	1593	3591	0	3195			
Grp Volume(v), veh/h	288	1250	289	0	1590	96	686	0	402			
Grp Sat Flow(s),veh/h/ln	645	1561	1591	0	1716	1593	1795	0	1598			
Q Serve(g_s), s	21.3	0.0	0.0	0.0	10.4	1.5	10.3	0.0	6.3			
Cycle Q Clear(g_c), s	31.7	0.0	0.0	0.0	10.4	1.5	10.3	0.0	6.3			
Prop In Lane	0.36		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	461	1800	1242	0	2966	918	731	0	651			
V/C Ratio(X)	0.62	0.69	0.23	0.00	0.54	0.10	0.94	0.00	0.62			
Avail Cap(c_a), veh/h	461	1800	1242	0	2966	918	731	0	651			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.85	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	3.3	0.0	0.0	0.0	7.1	5.3	21.6	0.0	20.0			
Incr Delay (d2), s/veh	5.4	1.9	0.4	0.0	0.7	0.2	19.5	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.7	0.5	0.1	0.0	2.4	0.4	5.9	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	1.9	0.4	0.0	7.8	5.5	41.0	0.0	21.3			
LnGrp LOS	A	A	A	A	A	A	D	A	C			
Approach Vol, veh/h		1827			1686			1088				
Approach Delay, s/veh		2.7			7.7			33.7				
Approach LOS		A			A			C				
Timer - Assigned Phs		2			6			8				
Phs Duration (G+Y+Rc), s		38.0			38.0			17.0				
Change Period (Y+Rc), s		6.3			6.3			5.8				
Max Green Setting (Gmax), s		31.7			31.7			11.2				
Max Q Clear Time (g_c+I1), s		33.7			12.4			12.3				
Green Ext Time (p_c), s		0.0			7.6			0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					11.9							
HCM 6th LOS					B							
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	370	1090	200	190	690	50	270	675	210	150	768	580
Future Volume (veh/h)	370	1090	200	190	690	50	270	675	210	150	768	580
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	385	1135	62	198	719	13	281	703	68	156	800	304
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	3	3	3
Cap, veh/h	481	1406	434	286	1128	343	376	1534	474	266	1371	423
Arrive On Green	0.14	0.28	0.28	0.08	0.22	0.22	0.11	0.30	0.30	0.08	0.27	0.27
Sat Flow, veh/h	3374	4985	1539	3428	5066	1540	3428	5066	1565	3428	5066	1564
Grp Volume(v), veh/h	385	1135	62	198	719	13	281	703	68	156	800	304
Grp Sat Flow(s),veh/h/ln	1687	1662	1539	1714	1689	1540	1714	1689	1565	1714	1689	1564
Q Serve(g_s), s	9.8	18.7	2.7	5.0	11.4	0.6	7.0	9.9	2.8	3.9	12.1	15.6
Cycle Q Clear(g_c), s	9.8	18.7	2.7	5.0	11.4	0.6	7.0	9.9	2.8	3.9	12.1	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	1406	434	286	1128	343	376	1534	474	266	1371	423
V/C Ratio(X)	0.80	0.81	0.14	0.69	0.64	0.04	0.75	0.46	0.14	0.59	0.58	0.72
Avail Cap(c_a), veh/h	992	1579	487	1202	1891	575	1396	2005	619	1396	2005	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	29.5	23.7	39.4	31.1	26.9	38.2	25.0	22.5	39.4	27.9	29.2
Incr Delay (d2), s/veh	2.3	2.9	0.1	2.2	0.6	0.0	2.2	0.2	0.1	1.5	0.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	7.2	0.9	2.1	4.4	0.2	2.9	3.7	1.0	1.6	4.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	32.4	23.9	41.7	31.7	27.0	40.4	25.2	22.6	41.0	28.3	31.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1582			930			1052			1260	
Approach Delay, s/veh		33.7			33.8			29.1			30.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.9	11.8	32.3	17.6	26.7	14.7	29.4				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	31.0	28.0	36.0	35.0	26.0	33.0	36.0	35.0				
Max Q Clear Time (g_c+1), s	17.0	20.7	5.9	11.9	11.8	13.4	9.0	17.6				
Green Ext Time (p_c), s	0.5	4.0	0.4	4.6	0.8	4.4	0.7	5.7				

Intersection Summary

HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

## 43: Hamner Ave & 68th St

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	200	40	220	220	120	80	681	240	130	580	90
Future Volume (veh/h)	80	200	40	220	220	120	80	681	240	130	580	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	83	208	8	229	229	32	83	709	140	135	604	43
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	105	280	232	255	446	376	105	2253	688	157	2402	726
Arrive On Green	0.06	0.15	0.15	0.14	0.24	0.24	0.06	0.44	0.44	0.09	0.47	0.47
Sat Flow, veh/h	1781	1870	1546	1781	1870	1575	1795	5147	1571	1795	5147	1555
Grp Volume(v), veh/h	83	208	8	229	229	32	83	709	140	135	604	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1546	1781	1870	1575	1795	1716	1571	1795	1716	1555
Q Serve(g_s), s	5.5	12.8	0.5	15.2	12.7	1.9	5.5	10.8	6.6	8.9	8.5	1.8
Cycle Q Clear(g_c), s	5.5	12.8	0.5	15.2	12.7	1.9	5.5	10.8	6.6	8.9	8.5	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	280	232	255	446	376	105	2253	688	157	2402	726
V/C Ratio(X)	0.79	0.74	0.03	0.90	0.51	0.09	0.79	0.31	0.20	0.86	0.25	0.06
Avail Cap(c_a), veh/h	223	541	447	334	670	564	157	2253	688	157	2402	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	48.8	43.6	50.5	39.6	35.5	55.8	22.0	20.8	54.0	19.3	17.5
Incr Delay (d2), s/veh	5.0	1.5	0.0	18.6	0.3	0.0	7.9	0.4	0.7	33.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.9	0.2	7.9	5.7	0.7	2.6	4.2	2.5	5.4	3.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	50.2	43.6	69.1	40.0	35.5	63.7	22.4	21.5	87.8	19.6	17.7
LnGrp LOS	E	D	D	E	D	D	E	C	C	F	B	B
Approach Vol, veh/h		299			490			932			782	
Approach Delay, s/veh		53.0			53.3			25.9			31.3	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	60.0	60.0	21.7	23.3	11.5	63.5	11.1	33.9				
Change Period (Y+Rc), s	4.5	* 7.5	4.5	5.3	4.5	7.5	4.0	* 5.3				
Max Green Setting (Gmax), s	10.5	* 31	22.5	34.7	10.5	30.5	15.0	* 43				
Max Q Clear Time (g_c+fl), s	12.8	12.8	17.2	14.8	7.5	10.5	7.5	14.7				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.1	0.0	2.4	0.0	0.1				

### Intersection Summary

HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

### Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
44: Hamner Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	60	150	20	80	10	260	891	10	30	460	210
Future Volume (veh/h)	200	60	150	20	80	10	260	891	10	30	460	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	202	61	47	20	81	2	263	900	6	30	465	54
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	257	391	329	42	165	138	328	2123	637	60	943	412
Arrive On Green	0.15	0.21	0.21	0.02	0.09	0.09	0.18	0.41	0.41	0.03	0.26	0.26
Sat Flow, veh/h	1767	1856	1561	1767	1856	1546	1795	5147	1544	1795	3582	1567
Grp Volume(v), veh/h	202	61	47	20	81	2	263	900	6	30	465	54
Grp Sat Flow(s),veh/h/ln	1767	1856	1561	1767	1856	1546	1795	1716	1544	1795	1791	1567
Q Serve(g_s), s	6.2	1.5	1.4	0.6	2.3	0.1	7.9	7.0	0.1	0.9	6.2	1.5
Cycle Q Clear(g_c), s	6.2	1.5	1.4	0.6	2.3	0.1	7.9	7.0	0.1	0.9	6.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	391	329	42	165	138	328	2123	637	60	943	412
V/C Ratio(X)	0.79	0.16	0.14	0.47	0.49	0.01	0.80	0.42	0.01	0.50	0.49	0.13
Avail Cap(c_a), veh/h	549	1664	1400	188	1285	1071	685	5374	1612	214	2799	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	18.1	18.1	27.1	24.4	23.4	22.0	11.8	9.8	26.8	17.6	15.8
Incr Delay (d2), s/veh	5.2	0.2	0.2	8.1	2.2	0.0	4.6	0.1	0.0	6.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.6	0.5	0.3	1.1	0.0	3.2	2.0	0.0	0.5	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	18.3	18.3	35.2	26.7	23.4	26.6	11.9	9.8	33.2	18.0	16.0
LnGrp LOS	C	B	B	D	C	C	C	B	A	C	B	B
Approach Vol, veh/h		310			103			1169			549	
Approach Delay, s/veh		24.9			28.3			15.2			18.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	27.7	5.8	16.4	14.8	19.3	12.7	9.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	58.8	58.8	6.0	50.5	21.5	44.0	17.5	39.0				
Max Q Clear Time (g_c+1/2g), s	9.0	9.0	2.6	3.5	9.9	8.2	8.2	4.3				
Green Ext Time (p_c), s	0.0	6.6	0.0	0.4	0.5	3.1	0.3	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.1								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
45: Archibald Ave & Chandler St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	440	350	200	180	40	190	535	230	60	568	200
Future Volume (veh/h)	190	440	350	200	180	40	190	535	230	60	568	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	463	202	211	189	9	200	563	120	63	598	191
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	236	700	306	247	703	309	236	1918	585	81	761	242
Arrive On Green	0.13	0.20	0.20	0.14	0.20	0.20	0.13	0.38	0.38	0.05	0.29	0.29
Sat Flow, veh/h	1767	3526	1539	1767	3526	1550	1767	5066	1546	1767	2616	834
Grp Volume(v), veh/h	200	463	202	211	189	9	200	563	120	63	403	386
Grp Sat Flow(s),veh/h/ln	1767	1763	1539	1767	1763	1550	1767	1689	1546	1767	1763	1687
Q Serve(g_s), s	9.8	10.7	10.7	10.3	4.0	0.4	9.8	6.9	4.6	3.1	18.6	18.7
Cycle Q Clear(g_c), s	9.8	10.7	10.7	10.3	4.0	0.4	9.8	6.9	4.6	3.1	18.6	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	236	700	306	247	703	309	236	1918	585	81	513	490
V/C Ratio(X)	0.85	0.66	0.66	0.85	0.27	0.03	0.85	0.29	0.21	0.78	0.79	0.79
Avail Cap(c_a), veh/h	550	1512	660	578	1548	681	529	3659	1116	289	1035	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	32.7	32.7	37.2	30.0	28.6	37.5	19.2	18.5	41.8	28.9	28.9
Incr Delay (d2), s/veh	3.2	1.1	2.4	3.2	0.2	0.0	3.2	0.1	0.2	5.9	2.7	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	4.4	4.0	4.4	1.6	0.1	4.2	2.4	1.6	1.4	7.5	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	33.8	35.2	40.4	30.2	28.6	40.7	19.3	18.7	47.8	31.6	31.8
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		865			409			883			852	
Approach Delay, s/veh		35.7			35.4			24.1			32.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	40.5	16.4	23.1	16.3	32.8	16.3	23.2				
Change Period (Y+Rc), s	4.5	7.0	4.0	5.5	4.5	7.0	4.5	5.5				
Max Green Setting (Gmax), s	14.5	64.0	29.0	38.0	26.5	52.0	27.6	38.9				
Max Q Clear Time (g_c+I), s	11.5	8.9	12.3	12.7	11.8	20.7	11.8	6.0				
Green Ext Time (p_c), s	0.0	4.2	0.1	3.5	0.1	4.8	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



# HCM 6th Signalized Intersection Summary

## 46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	270	60	380	160	514	70	740	650	310	430	30
Future Volume (veh/h)	57	270	60	380	160	514	70	740	650	310	430	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	59	281	6	282	327	327	73	771	366	323	448	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	1	1	1
Cap, veh/h	179	357	157	471	495	411	94	1116	489	359	1240	75
Arrive On Green	0.10	0.10	0.10	0.26	0.26	0.26	0.05	0.31	0.31	0.10	0.36	0.36
Sat Flow, veh/h	1739	3469	1522	1781	1870	1555	1795	3582	1569	3483	3426	206
Grp Volume(v), veh/h	59	281	6	282	327	327	73	771	366	323	233	242
Grp Sat Flow(s),veh/h/ln	1739	1735	1522	1781	1870	1555	1795	1791	1569	1742	1791	1841
Q Serve(g_s), s	2.6	6.5	0.3	11.4	12.9	16.2	3.3	15.6	17.3	7.6	7.9	8.0
Cycle Q Clear(g_c), s	2.6	6.5	0.3	11.4	12.9	16.2	3.3	15.6	17.3	7.6	7.9	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	179	357	157	471	495	411	94	1116	489	359	648	666
V/C Ratio(X)	0.33	0.79	0.04	0.60	0.66	0.80	0.77	0.69	0.75	0.90	0.36	0.36
Avail Cap(c_a), veh/h	179	357	157	636	668	555	185	1540	674	359	770	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	36.1	33.4	26.5	27.1	28.3	38.6	24.9	25.5	36.6	19.3	19.3
Incr Delay (d2), s/veh	1.1	11.1	0.1	1.2	1.5	5.7	12.5	0.8	3.0	24.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.2	0.1	4.8	5.7	6.3	1.7	6.0	6.1	4.2	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	47.2	33.4	27.8	28.6	34.0	51.1	25.7	28.5	61.4	19.7	19.7
LnGrp LOS	D	D	C	C	C	C	D	C	C	E	B	B
Approach Vol, veh/h		346			936			1210			798	
Approach Delay, s/veh		45.0			30.2			28.1			36.5	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	30.2		13.0	8.8	34.4		26.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.5	35.5		8.5	8.5	35.5		29.5				
Max Q Clear Time (g_c+1), s	19.6	19.3		8.5	5.3	10.0		18.2				
Green Ext Time (p_c), s	0.0	5.5		0.0	0.0	2.4		3.2				

### Intersection Summary

HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

### Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
47: River Rd & Corydon St

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	366	220	110	50	190	50	220	949	50	120	869	279
Future Volume (veh/h)	366	220	110	50	190	50	220	949	50	120	869	279
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	381	229	32	52	198	11	229	989	49	125	905	127
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	401	450	379	79	317	260	253	1295	64	158	1148	685
Arrive On Green	0.12	0.24	0.24	0.04	0.17	0.17	0.14	0.38	0.38	0.09	0.33	0.33
Sat Flow, veh/h	3456	1870	1575	1781	1870	1534	1767	3413	169	1767	3526	1544
Grp Volume(v), veh/h	381	229	32	52	198	11	229	511	527	125	905	127
Grp Sat Flow(s),veh/h/ln	1728	1870	1575	1781	1870	1534	1767	1763	1819	1767	1763	1544
Q Serve(g_s), s	8.0	7.8	1.2	2.1	7.2	0.4	9.3	18.5	18.5	5.1	17.1	3.7
Cycle Q Clear(g_c), s	8.0	7.8	1.2	2.1	7.2	0.4	9.3	18.5	18.5	5.1	17.1	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	401	450	379	79	317	260	253	669	691	158	1148	685
V/C Ratio(X)	0.95	0.51	0.08	0.66	0.63	0.04	0.90	0.76	0.76	0.79	0.79	0.19
Avail Cap(c_a), veh/h	401	901	759	175	868	712	253	755	780	195	1395	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	24.1	21.6	34.4	28.3	25.5	30.9	19.9	19.9	32.7	22.4	12.4
Incr Delay (d2), s/veh	32.4	0.9	0.1	8.8	2.0	0.1	32.5	4.1	4.0	16.1	2.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	3.3	0.4	1.1	3.2	0.2	5.9	7.3	7.5	2.7	6.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	24.9	21.6	43.3	30.3	25.5	63.4	24.0	23.8	48.8	25.0	12.6
LnGrp LOS	E	C	C	D	C	C	E	C	C	D	C	B
Approach Vol, veh/h		642			261			1267			1157	
Approach Delay, s/veh		48.3			32.7			31.0			26.2	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	28.4	7.8	22.1	11.0	32.3	13.0	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	29.0	7.2	35.3	8.1	31.4	8.5	34.0				
Max Q Clear Time (g_c+I1), s	11.3	19.1	4.1	9.8	7.1	20.5	10.0	9.2				
Green Ext Time (p_c), s	0.0	4.3	0.0	1.4	0.0	4.5	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											32.8	
HCM 6th LOS											C	

# HCM 6th Signalized Intersection Summary

## 48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1600	520	270	1480	0	0	0	0	820	10	420
Future Volume (veh/h)	0	1600	520	270	1480	0	0	0	0	820	10	420
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1781	1781	1781
Adj Flow Rate, veh/h	0	1616	410	273	1495	0				835	0	376
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	8	8	8	8	0				8	8	8
Cap, veh/h	0	2328	713	308	2991	0				952	0	423
Arrive On Green	0.00	0.48	0.48	0.09	0.62	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	5024	1490	3291	5024	0				3393	0	1510
Grp Volume(v), veh/h	0	1616	410	273	1495	0				835	0	376
Grp Sat Flow(s),veh/h/ln	0	1621	1490	1646	1621	0				1697	0	1510
Q Serve(g_s), s	0.0	28.5	21.8	9.0	18.8	0.0				25.8	0.0	26.3
Cycle Q Clear(g_c), s	0.0	28.5	21.8	9.0	18.8	0.0				25.8	0.0	26.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2328	713	308	2991	0				952	0	423
V/C Ratio(X)	0.00	0.69	0.57	0.89	0.50	0.00				0.88	0.00	0.89
Avail Cap(c_a), veh/h	0	2328	713	308	2991	0				1712	0	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.4	20.6	49.3	11.8	0.0				37.8	0.0	37.9
Incr Delay (d2), s/veh	0.0	1.7	3.4	24.3	0.6	0.0				1.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.4	7.7	4.6	6.1	0.0				10.7	0.0	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.1	24.0	73.6	12.4	0.0				38.8	0.0	40.5
LnGrp LOS	A	C	C	E	B	A				D	A	D
Approach Vol, veh/h		2026			1768						1211	
Approach Delay, s/veh		24.1			21.8						39.4	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	5.0	58.7		36.3		73.7						
Change Period (Y+Rc), s	4.7	6.0		5.5		6.0						
Max Green Setting (Gmax), s	15	28.0		55.5		43.0						
Max Q Clear Time (g_c+I), s	15	30.5		28.3		20.8						
Green Ext Time (p_c), s	0.0	0.0		2.6		10.8						

### Intersection Summary

HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

### Notes

User approved volume balancing among the lanes for turning movement.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
 49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗		↑↑↑		↖	↖	↗	↖		↗
Traffic Volume (veh/h)	420	1750	250	0	1741	100	340	130	200	140	0	700
Future Volume (veh/h)	420	1750	250	0	1741	100	340	130	200	140	0	700
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	0	1781	1781	1781	1781	1781	1856	0	1856
Adj Flow Rate, veh/h	424	1768	0	0	1759	95	237	279	106	141	0	75
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	0	8	8	8	8	8	3	0	3
Cap, veh/h	414	3455		0	2558	138	329	345	290	0	0	0
Arrive On Green	0.24	0.71	0.00	0.00	0.43	0.43	0.19	0.19	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1697	4863	2657	0	6239	323	1697	1781	1498		0	
Grp Volume(v), veh/h	424	1768	0	0	1350	504	237	279	106		0.0	
Grp Sat Flow(s),veh/h/ln	1697	1621	1329	0	1532	1717	1697	1781	1498			
Q Serve(g_s), s	29.3	19.8	0.0	0.0	28.6	28.6	15.7	18.0	7.4			
Cycle Q Clear(g_c), s	29.3	19.8	0.0	0.0	28.6	28.6	15.7	18.0	7.4			
Prop In Lane	1.00		1.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	414	3455		0	1963	733	329	345	290			
V/C Ratio(X)	1.02	0.51		0.00	0.69	0.69	0.72	0.81	0.37			
Avail Cap(c_a), veh/h	414	3455		0	1963	733	459	482	406			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	45.3	7.9	0.0	0.0	27.9	27.9	45.3	46.2	42.0			
Incr Delay (d2), s/veh	50.3	0.5	0.0	0.0	2.0	5.2	3.3	6.9	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.6	5.8	0.0	0.0	10.5	12.5	6.9	8.6	2.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.7	8.4	0.0	0.0	29.9	33.1	48.7	53.2	42.7			
LnGrp LOS	F	A		A	C	C	D	D	D			
Approach Vol, veh/h		2192	A		1854			622				
Approach Delay, s/veh		25.3			30.7			49.7				
Approach LOS		C			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.3			34.0	57.3		28.7				
Change Period (Y+Rc), s		6.0			* 4.7	6.0		5.5				
Max Green Setting (Gmax), s		57.0			* 29	23.0		32.5				
Max Q Clear Time (g_c+I1), s		21.8			31.3	30.6		20.0				
Green Ext Time (p_c), s		10.6			0.0	0.0		2.5				

Intersection Summary

HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
50: Ramona Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1400	100	80	1171	30	90	400	40	50	360	100
Future Volume (veh/h)	120	1400	100	80	1171	30	90	400	40	50	360	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	1474	65	84	1233	14	95	421	9	53	379	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	154	1618	1420	114	1537	674	123	655	285	100	609	266
Arrive On Green	0.09	0.48	0.48	0.07	0.45	0.45	0.07	0.19	0.19	0.06	0.17	0.17
Sat Flow, veh/h	1697	3385	2586	1697	3385	1485	1781	3526	1537	1767	3526	1536
Grp Volume(v), veh/h	126	1474	65	84	1233	14	95	421	9	53	379	22
Grp Sat Flow(s),veh/h/ln	1697	1692	1293	1697	1692	1485	1781	1763	1537	1767	1763	1536
Q Serve(g_s), s	6.7	37.2	1.1	4.5	28.9	0.5	4.8	10.2	0.4	2.7	9.2	1.1
Cycle Q Clear(g_c), s	6.7	37.2	1.1	4.5	28.9	0.5	4.8	10.2	0.4	2.7	9.2	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1618	1420	114	1537	674	123	655	285	100	609	266
V/C Ratio(X)	0.82	0.91	0.05	0.74	0.80	0.02	0.77	0.64	0.03	0.53	0.62	0.08
Avail Cap(c_a), veh/h	165	1695	1479	128	1622	712	135	1259	549	172	1335	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	22.3	9.7	42.3	21.7	13.9	42.3	34.8	30.8	42.4	35.4	32.1
Incr Delay (d2), s/veh	23.0	7.6	0.0	14.5	2.6	0.0	19.0	1.0	0.0	1.6	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	14.5	0.3	2.3	10.7	0.1	2.7	4.2	0.2	1.2	3.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	29.9	9.7	56.8	24.3	13.9	61.3	35.8	30.9	44.1	36.4	32.2
LnGrp LOS	E	C	A	E	C	B	E	D	C	D	D	C
Approach Vol, veh/h		1665			1331			525			454	
Approach Delay, s/veh		31.7			26.2			40.3			37.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	23.2	10.2	49.9	10.4	22.0	12.4	47.7				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.7	4.0	6.0	4.0	5.7				
Max Green Setting (Gmax), s	33.0	33.0	7.0	46.3	7.0	35.0	9.0	44.3				
Max Q Clear Time (g_c+14), s	14.5	12.2	6.5	39.2	6.8	11.2	8.7	30.9				
Green Ext Time (p_c), s	0.0	2.3	0.0	4.9	0.0	2.1	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
51: Central Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑ ↗			↖ ↗ ↑↑↑ ↘			↖ ↑↑↑ ↗		↖	↖ ↑↑↑ ↗	↖	↖ ↑↑↑ ↗
Traffic Volume (veh/h)	170	1360	80	380	991	60	90	1020	610	110	750	110
Future Volume (veh/h)	170	1360	80	380	991	60	90	1020	610	110	750	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	1432	79	400	1043	58	95	1074	441	116	789	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	3	3	3	3	3
Cap, veh/h	208	1461	81	395	1447	80	120	1520	463	124	1533	467
Arrive On Green	0.12	0.31	0.31	0.12	0.31	0.31	0.07	0.30	0.30	0.07	0.30	0.30
Sat Flow, veh/h	1697	4711	260	3291	4709	262	1781	5066	1544	1767	5066	1544
Grp Volume(v), veh/h	179	985	526	400	718	383	95	1074	441	116	789	36
Grp Sat Flow(s),veh/h/ln	1697	1621	1729	1646	1621	1729	1781	1689	1544	1767	1689	1544
Q Serve(g_s), s	10.3	30.1	30.1	12.0	19.7	19.7	5.3	18.8	28.0	6.5	12.9	1.7
Cycle Q Clear(g_c), s	10.3	30.1	30.1	12.0	19.7	19.7	5.3	18.8	28.0	6.5	12.9	1.7
Prop In Lane	1.00		0.15	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1005	536	395	996	531	120	1520	463	124	1533	467
V/C Ratio(X)	0.86	0.98	0.98	1.01	0.72	0.72	0.79	0.71	0.95	0.94	0.51	0.08
Avail Cap(c_a), veh/h	238	1005	536	395	996	531	196	1520	463	124	1533	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	34.2	34.2	44.0	30.8	30.8	45.9	31.1	34.3	46.3	28.8	24.9
Incr Delay (d2), s/veh	21.6	23.7	33.8	48.5	2.8	5.1	4.3	1.7	30.1	61.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	14.3	16.8	7.3	7.6	8.5	2.4	7.4	13.7	4.9	5.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	57.9	68.0	92.5	33.6	36.0	50.3	32.7	64.4	107.3	29.2	25.0
LnGrp LOS	E	E	E	F	C	D	D	C	E	F	C	C
Approach Vol, veh/h	1690			1501			1610			941		
Approach Delay, s/veh	61.7			49.9			42.5			38.7		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	36.0	16.0	37.0	10.7	36.3	16.3	36.7				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	30.0	12.0	31.0	11.0	26.0	14.0	29.0					
Max Q Clear Time (g_c+1/5), s	30.0	14.0	32.1	7.3	14.9	12.3	21.7					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.6	0.0	4.5				

Intersection Summary

HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
52: Mountain Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑ ↗			↖ ↑↑ ↗			↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	270	1672	60	30	1090	80	30	90	30	70	150	210
Future Volume (veh/h)	270	1672	60	30	1090	80	30	90	30	70	150	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	284	1760	61	32	1147	76	32	95	8	74	158	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	233	1920	66	80	1434	95	84	328	271	141	387	321
Arrive On Green	0.14	0.40	0.40	0.05	0.31	0.31	0.05	0.18	0.18	0.08	0.21	0.21
Sat Flow, veh/h	1697	4821	167	1697	4653	308	1781	1870	1549	1781	1870	1551
Grp Volume(v), veh/h	284	1183	638	32	799	424	32	95	8	74	158	55
Grp Sat Flow(s),veh/h/ln	1697	1621	1746	1697	1621	1719	1781	1870	1549	1781	1870	1551
Q Serve(g_s), s	9.0	22.7	22.7	1.2	14.8	14.9	1.1	2.9	0.3	2.6	4.8	1.9
Cycle Q Clear(g_c), s	9.0	22.7	22.7	1.2	14.8	14.9	1.1	2.9	0.3	2.6	4.8	1.9
Prop In Lane	1.00		0.10	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	1291	695	80	999	530	84	328	271	141	387	321
V/C Ratio(X)	1.22	0.92	0.92	0.40	0.80	0.80	0.38	0.29	0.03	0.53	0.41	0.17
Avail Cap(c_a), veh/h	233	1291	695	181	1088	577	190	779	645	190	779	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	18.7	18.7	30.3	20.8	20.8	30.3	23.5	22.4	29.0	22.5	21.4
Incr Delay (d2), s/veh	131.3	10.4	17.2	1.2	4.1	7.4	1.1	0.8	0.1	1.1	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	8.8	10.8	0.5	5.4	6.2	0.5	1.3	0.1	1.1	2.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.6	29.1	35.9	31.5	24.9	28.3	31.4	24.3	22.5	30.2	23.2	21.6
LnGrp LOS	F	C	D	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h	2105		1255				135			287		
Approach Delay, s/veh	48.8		26.2				25.8			24.7		
Approach LOS	D		C				C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	17.2	7.1	32.1	7.1	19.3	13.0	26.2				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	27.3	7.0	24.0	7.0	27.3	9.0	22.0					
Max Q Clear Time (g_c+1/4), s	4.9	3.2	24.7	3.1	6.8	11.0	16.9					
Green Ext Time (p_c), s	0.0	0.7	0.0	0.0	0.0	0.9	0.0	3.2				

Intersection Summary

HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1192	300	210	900	452	180	1275	330	415	1356	120
Future Volume (veh/h)	190	1192	300	210	900	452	180	1275	330	415	1356	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	198	1242	282	219	938	211	188	1328	313	432	1412	63
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	159	1368	309	182	1394	425	168	1291	303	344	1231	540
Arrive On Green	0.09	0.27	0.27	0.11	0.29	0.29	0.10	0.26	0.26	0.20	0.36	0.36
Sat Flow, veh/h	1697	5015	1132	1697	4863	1482	1697	4972	1168	1697	3385	1484
Grp Volume(v), veh/h	198	1138	386	219	938	211	188	1227	414	432	1412	63
Grp Sat Flow(s),veh/h/ln	1697	1532	1552	1697	1621	1482	1697	1532	1544	1697	1692	1484
Q Serve(g_s), s	13.5	34.5	34.8	15.5	24.6	17.1	14.3	37.5	37.5	29.3	52.5	4.1
Cycle Q Clear(g_c), s	13.5	34.5	34.8	15.5	24.6	17.1	14.3	37.5	37.5	29.3	52.5	4.1
Prop In Lane	1.00		0.73	1.00		1.00	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	159	1253	423	182	1394	425	168	1194	401	344	1231	540
V/C Ratio(X)	1.25	0.91	0.91	1.20	0.67	0.50	1.12	1.03	1.03	1.25	1.15	0.12
Avail Cap(c_a), veh/h	159	1273	430	182	1415	431	168	1194	401	344	1231	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.4	50.7	50.8	64.4	45.5	42.8	65.0	53.4	53.4	57.5	45.9	30.5
Incr Delay (d2), s/veh	153.2	9.6	23.5	131.6	1.2	0.9	104.8	33.5	53.3	136.2	76.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	14.0	15.9	13.2	9.9	6.3	10.9	17.5	19.8	25.1	33.8	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	218.6	60.3	74.3	196.1	46.8	43.7	169.9	86.9	106.7	193.8	122.1	30.6
LnGrp LOS	F	E	E	F	D	D	F	F	F	F	F	C
Approach Vol, veh/h		1722			1368			1829			1907	
Approach Delay, s/veh		81.7			70.2			99.9			135.3	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	44.0	20.0	46.4	19.0	59.0	18.0	48.4				
Change Period (Y+Rc), s	4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	29.0	37.5	15.5	40.0	* 14	52.5	13.5	42.0				
Max Q Clear Time (g_c+Bl), s	11.3	39.5	17.5	36.8	16.3	54.5	15.5	26.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.6				

Intersection Summary

HCM 6th Ctrl Delay	99.2
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
54: Grove Ave & Edison Ave/Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑			↖ ↑↑↑			↖ ↑↑			↖ ↑↑		
Traffic Volume (veh/h)	150	1647	90	100	1422	92	80	510	180	72	460	140
Future Volume (veh/h)	150	1647	90	100	1422	92	80	510	180	72	460	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	158	1734	86	105	1497	84	84	537	137	76	484	106
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	195	2018	100	132	1780	100	107	687	174	103	702	153
Arrive On Green	0.12	0.33	0.33	0.08	0.30	0.30	0.06	0.25	0.25	0.06	0.24	0.24
Sat Flow, veh/h	1697	6025	299	1697	5982	335	1767	2784	707	1767	2879	627
Grp Volume(v), veh/h	158	1323	497	105	1150	431	84	339	335	76	295	295
Grp Sat Flow(s),veh/h/ln	1697	1532	1728	1697	1532	1721	1767	1763	1728	1767	1763	1743
Q Serve(g_s), s	5.8	17.1	17.1	3.9	14.9	15.0	3.0	11.4	11.5	2.7	9.7	9.8
Cycle Q Clear(g_c), s	5.8	17.1	17.1	3.9	14.9	15.0	3.0	11.4	11.5	2.7	9.7	9.8
Prop In Lane	1.00		0.17	1.00		0.19	1.00		0.41	1.00		0.36
Lane Grp Cap(c), veh/h	195	1540	579	132	1368	512	107	435	426	103	430	425
V/C Ratio(X)	0.81	0.86	0.86	0.80	0.84	0.84	0.78	0.78	0.79	0.74	0.69	0.69
Avail Cap(c_a), veh/h	226	1565	588	146	1368	512	153	545	534	141	534	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	19.8	19.8	28.9	21.0	21.0	29.5	22.4	22.4	29.5	21.9	21.9
Incr Delay (d2), s/veh	17.1	5.0	12.1	23.4	4.9	12.0	15.4	5.7	6.0	12.5	2.7	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.2	8.1	2.4	5.5	7.2	1.7	5.1	5.1	1.5	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	24.8	31.9	52.3	25.8	33.0	44.9	28.1	28.4	42.0	24.6	24.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1978			1686			758			666	
Approach Delay, s/veh		28.1			29.3			30.1			26.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	20.2	9.5	25.8	8.4	20.0	11.8	23.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	19.7	5.5	21.7	5.5	19.3	8.5	18.7				
Max Q Clear Time (g_c+14), s	14.5	13.5	5.9	19.1	5.0	11.8	7.8	17.0				
Green Ext Time (p_c), s	0.0	2.2	0.0	2.2	0.0	2.2	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											28.6	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕		↖	↑↑↑		↖	↑↑	↗
Traffic Volume (veh/h)	10	40	10	590	10	283	10	1310	660	363	1660	30
Future Volume (veh/h)	10	40	10	590	10	283	10	1310	660	363	1660	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	11	42	2	442	262	252	11	1379	636	382	1747	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	23	89	92	355	172	166	42	1840	594	294	1858	807
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.02	0.40	0.40	0.17	0.55	0.55
Sat Flow, veh/h	381	1455	1510	1739	845	813	1697	4596	1484	1697	3385	1471
Grp Volume(v), veh/h	53	0	2	442	0	514	11	1379	636	382	1747	17
Grp Sat Flow(s),veh/h/ln	1836	0	1510	1739	0	1659	1697	1532	1484	1697	1692	1471
Q Serve(g_s), s	4.1	0.0	0.2	29.8	0.0	29.8	0.9	37.6	58.5	25.3	70.3	0.8
Cycle Q Clear(g_c), s	4.1	0.0	0.2	29.8	0.0	29.8	0.9	37.6	58.5	25.3	70.3	0.8
Prop In Lane	0.21		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	92	355	0	338	42	1840	594	294	1858	807
V/C Ratio(X)	0.47	0.00	0.02	1.25	0.00	1.52	0.26	0.75	1.07	1.30	0.94	0.02
Avail Cap(c_a), veh/h	161	0	132	355	0	338	178	1840	594	294	1858	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	0.0	64.5	58.2	0.0	58.2	70.0	37.5	43.8	60.4	30.7	15.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	132.4	0.0	248.5	1.2	1.7	57.1	157.9	10.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	25.8	0.0	35.6	0.4	13.7	29.6	23.4	28.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	0.0	64.5	190.5	0.0	306.6	71.2	39.3	101.0	218.3	40.8	15.1
LnGrp LOS	E	A	E	F	A	F	E	D	F	F	D	B
Approach Vol, veh/h		55		956				2026			2146	
Approach Delay, s/veh		67.4		253.0				58.8			72.2	
Approach LOS		E		F				E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	65.0		15.1	8.3	86.7		36.0				
Change Period (Y+Rc), s	4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	25	58.5		12.8	* 15	68.5		29.8				
Max Q Clear Time (g_c+R), s	27.3	60.5		6.1	2.9	72.3		31.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	100.3
HCM 6th LOS	F

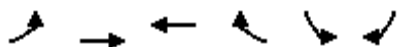
Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# HCM 6th Signalized Intersection Summary

## 56: Merrill Ave & Grove Ave

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↑↗		↙	↘	
Traffic Volume (veh/h)	180	1133	813	200	250	130	
Future Volume (veh/h)	180	1133	813	200	250	130	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1856	1856	
Adj Flow Rate, veh/h	189	1193	856	174	263	30	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	5	5	5	5	3	3	
Cap, veh/h	240	3061	1082	220	330	294	
Arrive On Green	0.14	0.61	0.38	0.38	0.19	0.19	
Sat Flow, veh/h	1739	5149	2963	584	1767	1572	
Grp Volume(v), veh/h	189	1193	517	513	263	30	
Grp Sat Flow(s),veh/h/ln	1739	1662	1735	1721	1767	1572	
Q Serve(g_s), s	4.8	5.5	12.0	12.0	6.4	0.7	
Cycle Q Clear(g_c), s	4.8	5.5	12.0	12.0	6.4	0.7	
Prop In Lane	1.00			0.34	1.00	1.00	
Lane Grp Cap(c), veh/h	240	3061	654	648	330	294	
V/C Ratio(X)	0.79	0.39	0.79	0.79	0.80	0.10	
Avail Cap(c_a), veh/h	358	3736	771	765	473	421	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	18.9	4.4	12.5	12.5	17.6	15.2	
Incr Delay (d2), s/veh	6.8	0.1	4.8	4.8	6.1	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.0	0.7	4.0	4.0	2.5	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.7	4.5	17.3	17.4	23.6	15.4	
LnGrp LOS	C	A	B	B	C	B	
Approach Vol, veh/h		1382	1030		293		
Approach Delay, s/veh		7.4	17.3		22.8		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			32.3		13.0	10.7	21.5
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			33.9		12.1	9.3	20.1
Max Q Clear Time (g_c+1), s			7.5		8.4	6.8	14.0
Green Ext Time (p_c), s			8.8		0.2	0.1	3.1
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			12.9				
HCM 6th LOS			B				
<b>Notes</b>							
User approved pedestrian interval to be less than phase max green.							

# HCM 6th Signalized Intersection Summary

## 57: Euclid Ave & Kimball Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	570	80	410	70	30	210	210	1070	30	280	1340	510
Future Volume (veh/h)	570	80	410	70	30	210	210	1070	30	280	1340	510
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	961	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	576	81	175	71	30	29	212	1081	12	283	1354	300
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	548	1131	495	131	321	138	201	1520	577	341	1448	913
Arrive On Green	0.31	0.33	0.33	0.08	0.09	0.09	0.12	0.31	0.31	0.10	0.30	0.30
Sat Flow, veh/h	1776	3469	1520	1739	3469	1497	1697	4863	1482	3291	4863	1502
Grp Volume(v), veh/h	576	81	175	71	30	29	212	1081	12	283	1354	300
Grp Sat Flow(s),veh/h/ln	888	1735	1520	1739	1735	1497	1697	1621	1482	1646	1621	1502
Q Serve(g_s), s	37.3	1.9	10.6	4.8	1.0	2.2	14.3	23.7	0.6	10.2	32.7	11.9
Cycle Q Clear(g_c), s	37.3	1.9	10.6	4.8	1.0	2.2	14.3	23.7	0.6	10.2	32.7	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	548	1131	495	131	321	138	201	1520	577	341	1448	913
V/C Ratio(X)	1.05	0.07	0.35	0.54	0.09	0.21	1.06	0.71	0.02	0.83	0.94	0.33
Avail Cap(c_a), veh/h	548	1745	765	235	1142	493	201	1520	577	553	1469	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	28.1	31.0	53.9	50.2	50.8	53.3	36.7	22.8	53.1	41.3	11.7
Incr Delay (d2), s/veh	52.6	0.0	0.4	3.5	0.0	0.3	79.1	1.6	0.0	2.6	11.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	3.8	2.1	0.4	0.8	10.2	9.1	0.2	4.2	13.8	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.4	28.1	31.5	57.4	50.2	51.0	132.4	38.3	22.9	55.7	52.6	11.9
LnGrp LOS	F	C	C	E	D	D	F	D	C	E	D	B
Approach Vol, veh/h		832			130			1305			1937	
Approach Delay, s/veh		74.7			54.3			53.4			46.8	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	44.3	13.8	45.6	19.0	42.5	42.0	17.4				
Change Period (Y+Rc), s	4.7	6.5	* 4.7	6.2	* 4.7	6.5	* 4.7	6.2				
Max Green Setting (Gmax), s	26	30.5	* 16	60.8	* 14	36.5	* 37	39.8				
Max Q Clear Time (g_c+1/2I), s	11.2	25.7	6.8	12.6	16.3	34.7	39.3	4.2				
Green Ext Time (p_c), s	0.3	2.6	0.1	1.0	0.0	1.2	0.0	0.1				

### Intersection Summary

HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

### Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	760	50	830	630	110	30	750	1310	300	1010	120
Future Volume (veh/h)	140	760	50	830	630	110	30	750	1310	300	1010	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	147	800	0	874	663	108	32	789	1327	316	1063	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	171	756		928	1176	191	87	869	679	263	1597	168
Arrive On Green	0.10	0.22	0.00	0.27	0.39	0.39	0.05	0.18	0.18	0.15	0.28	0.28
Sat Flow, veh/h	1739	3469	1547	3374	2979	485	1697	4863	1475	1697	5660	597
Grp Volume(v), veh/h	147	800	0	874	386	385	32	789	1327	316	861	315
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1687	1735	1729	1697	1621	1475	1697	1532	1661
Q Serve(g_s), s	11.5	30.0	0.0	34.9	23.8	23.9	2.5	21.9	24.6	21.3	22.8	23.1
Cycle Q Clear(g_c), s	11.5	30.0	0.0	34.9	23.8	23.9	2.5	21.9	24.6	21.3	22.8	23.1
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	171	756		928	685	682	87	869	679	263	1297	468
V/C Ratio(X)	0.86	1.06		0.94	0.56	0.56	0.37	0.91	1.96	1.20	0.66	0.67
Avail Cap(c_a), veh/h	282	756		1012	685	682	196	1007	721	263	1297	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.1	53.8	0.0	48.8	32.4	32.4	63.1	55.4	37.8	58.2	43.6	43.8
Incr Delay (d2), s/veh	7.0	49.1	0.0	15.0	1.3	1.3	1.0	10.0	435.3	122.0	1.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	17.9	0.0	16.2	10.0	10.0	1.1	9.4	103.6	17.7	8.4	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	102.9	0.0	63.8	33.8	33.8	64.1	65.4	473.1	180.1	44.7	46.8
LnGrp LOS	E	F		E	C	C	E	E	F	F	D	D
Approach Vol, veh/h		947	A		1645			2148			1492	
Approach Delay, s/veh		97.5			49.7			317.2			73.8	
Approach LOS		F			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	31.1	43.5	37.0	11.8	45.3	19.2	61.3				
Change Period (Y+Rc), s	4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	28.5	28.5	* 41	30.0	* 16	33.9	* 22	49.0				
Max Q Clear Time (g_c+Y), s	23.9	23.9	36.9	32.0	4.5	25.1	13.5	25.9				
Green Ext Time (p_c), s	0.0	0.3	1.0	0.0	0.0	3.2	0.1	6.5				

Intersection Summary

HCM 6th Ctrl Delay	155.0
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↔		↔	↕↕
Traffic Volume (veh/h)	90	1040	1170	120	470	1290
Future Volume (veh/h)	90	1040	1170	120	470	1290
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	95	0	1232	0	495	1358
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	182		1423		531	2683
Arrive On Green	0.06	0.00	0.42	0.00	0.31	0.79
Sat Flow, veh/h	3291	1510	3563	0	1697	3474
Grp Volume(v), veh/h	95	0	1232	0	495	1358
Grp Sat Flow(s),veh/h/ln	1646	1510	1692	0	1697	1692
Q Serve(g_s), s	2.2	0.0	26.2	0.0	22.4	11.0
Cycle Q Clear(g_c), s	2.2	0.0	26.2	0.0	22.4	11.0
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	182		1423		531	2683
V/C Ratio(X)	0.52		0.87		0.93	0.51
Avail Cap(c_a), veh/h	212		1701		612	3123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	20.9	0.0	26.3	2.8
Incr Delay (d2), s/veh	2.3	0.0	4.1	0.0	18.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.2	0.0	10.5	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.6	0.0	25.0	0.0	45.1	2.9
LnGrp LOS	D		C		D	A
Approach Vol, veh/h	95	A	1232	A		1853
Approach Delay, s/veh	38.6		25.0			14.2
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	29.4	39.7			69.1	9.9
Change Period (Y+Rc), s	4.7	6.5			6.5	5.5
Max Green Setting (Gmax), s	29.4	39.7			72.9	5.1
Max Q Clear Time (g_c+Y), s	24.4	28.2			13.0	4.2
Green Ext Time (p_c), s	0.4	5.0			9.3	0.0

### Intersection Summary

HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

### Notes





















\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.



# HCM 6th Signalized Intersection Summary






























## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	626	5	404	0	0	0	0	1871	386	253	715	0
Future Volume (veh/h)	626	5	404	0	0	0	0	1871	386	253	715	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	727	0	159				0	1949	360	264	745	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	818	0	364				0	2096	379	274	3144	0
Arrive On Green	0.23	0.00	0.23				0.00	0.49	0.49	0.03	0.20	0.00
Sat Flow, veh/h	3619	0	1610				0	4468	777	3428	5233	0
Grp Volume(v), veh/h	727	0	159				0	1521	788	264	745	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1701	1714	1689	0
Q Serve(g_s), s	14.6	0.0	6.4				0.0	31.5	33.2	5.8	9.2	0.0
Cycle Q Clear(g_c), s	14.6	0.0	6.4				0.0	31.5	33.2	5.8	9.2	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	818	0	364				0	1646	829	274	3144	0
V/C Ratio(X)	0.89	0.00	0.44				0.00	0.92	0.95	0.96	0.24	0.00
Avail Cap(c_a), veh/h	840	0	374				0	1646	829	274	3144	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	28.1	0.0	24.9				0.0	17.9	18.4	36.4	15.0	0.0
Incr Delay (d2), s/veh	11.4	0.0	0.8				0.0	10.2	21.4	41.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	2.4				0.0	13.1	16.4	4.0	3.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	0.0	25.8				0.0	28.2	39.7	77.5	15.1	0.0
LnGrp LOS	D	A	C				A	C	D	E	B	A
Approach Vol, veh/h		886						2309			1009	
Approach Delay, s/veh		37.0						32.1			31.4	
Approach LOS		D						C			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	10.0	42.3	22.7	52.3								
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7								
Max Green Setting (Gmax), s	6.0	36.1	17.4	46.1								
Max Q Clear Time (g_c+I1), s	7.8	35.2	16.6	11.2								
Green Ext Time (p_c), s	0.0	0.8	0.4	3.9								
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.0									
HCM 6th LOS			C									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												























HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (veh/h)	279	478	217	132	726	269	343	1647	111	185	917	235
Future Volume (veh/h)	279	478	217	132	726	269	343	1647	111	185	917	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	300	514	125	142	781	200	369	1771	115	199	986	222
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	290	997	437	169	756	330	382	1860	121	197	1147	258
Arrive On Green	0.16	0.28	0.28	0.10	0.21	0.21	0.22	0.39	0.39	0.11	0.29	0.29
Sat Flow, veh/h	1767	3526	1543	1767	3526	1540	1725	4739	307	1725	4021	903
Grp Volume(v), veh/h	300	514	125	142	781	200	369	1231	655	199	808	400
Grp Sat Flow(s),veh/h/ln	1767	1763	1543	1767	1763	1540	1725	1648	1750	1725	1648	1628
Q Serve(g_s), s	23.0	17.1	8.8	11.1	30.0	16.4	29.6	50.7	50.9	16.0	32.5	32.6
Cycle Q Clear(g_c), s	23.0	17.1	8.8	11.1	30.0	16.4	29.6	50.7	50.9	16.0	32.5	32.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.55
Lane Grp Cap(c), veh/h	290	997	437	169	756	330	382	1294	687	197	940	465
V/C Ratio(X)	1.03	0.52	0.29	0.84	1.03	0.61	0.97	0.95	0.95	1.01	0.86	0.86
Avail Cap(c_a), veh/h	290	997	437	253	756	330	382	1296	688	197	942	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	42.1	39.1	62.2	55.0	49.6	53.9	41.2	41.3	62.0	47.3	47.4
Incr Delay (d2), s/veh	61.5	0.9	0.8	22.3	41.6	4.7	37.3	15.2	23.9	66.4	8.7	16.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	7.6	3.5	6.0	17.7	6.8	16.8	23.1	26.3	10.7	14.4	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.0	43.0	39.9	84.5	96.5	54.3	91.3	56.4	65.2	128.4	56.0	63.6
LnGrp LOS	F	D	D	F	F	D	F	E	E	F	E	E
Approach Vol, veh/h		939			1123			2255			1407	
Approach Delay, s/veh		67.2			87.5			64.7			68.4	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	58.9	17.4	43.6	35.0	43.9	27.0	34.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	16.0	55.0	20.0	33.0	31.0	40.0	23.0	30.0				
Max Q Clear Time (g_c+I1), s	18.0	52.9	13.1	19.1	31.6	34.6	25.0	32.0				
Green Ext Time (p_c), s	0.0	2.0	0.4	5.5	0.0	4.4	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				70.5								
HCM 6th LOS				E								

























HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	519	122	179	544	211	164	1197	310	286	509	307
Future Volume (veh/h)	348	519	122	179	544	211	164	1197	310	286	509	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	387	577	129	199	604	203	182	1330	196	318	566	278
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	224	392	88	145	576	193	324	1077	466	346	874	429
Arrive On Green	0.13	0.27	0.27	0.08	0.22	0.22	0.09	0.31	0.31	0.17	0.38	0.38
Sat Flow, veh/h	1767	1462	327	1767	2577	864	1767	3526	1525	1767	2278	1117
Grp Volume(v), veh/h	387	0	706	199	413	394	182	1330	196	318	438	406
Grp Sat Flow(s),veh/h/ln	1767	0	1789	1767	1763	1679	1767	1763	1525	1767	1763	1632
Q Serve(g_s), s	17.0	0.0	36.0	11.0	30.0	30.0	9.4	41.0	13.7	19.6	27.3	27.4
Cycle Q Clear(g_c), s	17.0	0.0	36.0	11.0	30.0	30.0	9.4	41.0	13.7	19.6	27.3	27.4
Prop In Lane	1.00		0.18	1.00		0.51	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	224	0	480	145	394	375	324	1077	466	346	676	626
V/C Ratio(X)	1.73	0.00	1.47	1.37	1.05	1.05	0.56	1.23	0.42	0.92	0.65	0.65
Avail Cap(c_a), veh/h	224	0	480	145	394	375	604	1077	466	488	676	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	49.1	61.6	52.1	52.1	29.1	46.6	37.1	41.6	33.9	33.9
Incr Delay (d2), s/veh	345.8	0.0	222.9	205.4	58.2	60.2	1.1	113.7	0.4	16.9	2.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.1	0.0	45.7	13.2	19.6	18.9	4.1	34.8	5.2	7.9	12.1	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	404.4	0.0	272.0	267.0	110.3	112.3	30.2	160.3	37.6	58.5	35.9	36.1
LnGrp LOS	F	A	F	F	F	F	C	F	D	E	D	D
Approach Vol, veh/h		1093			1006			1708			1162	
Approach Delay, s/veh		318.9			142.1			132.3			42.1	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.2	46.0	18.0	43.0	16.7	56.5	24.0	37.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	41.0	11.0	36.0	33.0	41.0	17.0	30.0				
Max Q Clear Time (g_c+I1), s	21.6	43.0	13.0	38.0	11.4	29.4	19.0	32.0				
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.3	3.7	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	154.2											
HCM 6th LOS	F											
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary  
11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	498	159	531	828	267	224	1455	650	267	788	129
Future Volume (veh/h)	60	498	159	531	828	267	224	1455	650	267	788	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	65	541	0	577	900	205	243	1582	0	290	857	54
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
Percent Heavy Veh, %	13	13	13	13	13	13	6	6	6	6	6	6
Cap, veh/h	99	706		634	661	551	267	1218		207	1099	475
Arrive On Green	0.03	0.22	0.00	0.20	0.39	0.39	0.15	0.35	0.00	0.12	0.32	0.32
Sat Flow, veh/h	3155	3244	1447	3155	1707	1422	1725	3441	1535	1725	3441	1489
Grp Volume(v), veh/h	65	541	0	577	900	205	243	1582	0	290	857	54
Grp Sat Flow(s),veh/h/ln	1577	1622	1447	1577	1707	1422	1725	1721	1535	1725	1721	1489
Q Serve(g_s), s	3.1	23.4	0.0	26.8	58.0	15.4	20.7	53.0	0.0	18.0	33.8	3.8
Cycle Q Clear(g_c), s	3.1	23.4	0.0	26.8	58.0	15.4	20.7	53.0	0.0	18.0	33.8	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	706		634	661	551	267	1218		207	1099	475
V/C Ratio(X)	0.65	0.77		0.91	1.36	0.37	0.91	1.30		1.40	0.78	0.11
Avail Cap(c_a), veh/h	105	706		674	661	551	300	1218		207	1099	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.7	55.0	0.0	58.5	45.9	32.8	62.2	48.4	0.0	65.9	46.2	36.0
Incr Delay (d2), s/veh	18.1	5.9	0.0	17.0	172.0	0.9	30.7	140.5	0.0	205.8	4.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	10.2	0.0	12.2	56.0	5.5	11.4	46.4	0.0	19.8	15.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.8	60.9	0.0	75.5	217.8	33.7	92.9	188.9	0.0	271.7	50.5	36.2
LnGrp LOS	F	E		E	F	C	F	F		F	D	D
Approach Vol, veh/h		606	A		1682			1825	A		1201	
Approach Delay, s/veh		64.0			146.6			176.1			103.2	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	57.0	34.1	36.6	27.2	51.8	8.7	62.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	18.0	53.0	32.0	31.0	26.0	45.0	5.0	58.0				
Max Q Clear Time (g_c+I1), s	20.0	55.0	28.8	25.4	22.7	35.8	5.1	60.0				
Green Ext Time (p_c), s	0.0	0.0	1.3	2.6	0.5	5.9	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	137.5											
HCM 6th LOS	F											
<b>Notes</b>												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												
































HCM 6th Signalized Intersection Summary  
12: Haven Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1296	58	110	1364	409	56	776	228	517	515	185
Future Volume (veh/h)	219	1296	58	110	1364	409	56	776	228	517	515	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	226	1336	20	113	1406	192	58	800	219	533	531	168
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	201	1593	486	155	1570	379	75	701	192	313	1030	324
Arrive On Green	0.12	0.34	0.34	0.05	0.27	0.27	0.04	0.26	0.26	0.18	0.39	0.39
Sat Flow, veh/h	1626	4661	1421	3155	5873	1419	1767	2722	745	1767	2626	827
Grp Volume(v), veh/h	226	1336	20	113	1406	192	58	518	501	533	356	343
Grp Sat Flow(s),veh/h/ln	1626	1554	1421	1577	1468	1419	1767	1763	1704	1767	1763	1690
Q Serve(g_s), s	18.5	39.5	1.4	5.3	34.5	17.1	4.9	38.5	38.5	26.5	23.0	23.2
Cycle Q Clear(g_c), s	18.5	39.5	1.4	5.3	34.5	17.1	4.9	38.5	38.5	26.5	23.0	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		0.49
Lane Grp Cap(c), veh/h	201	1593	486	155	1570	379	75	454	439	313	692	663
V/C Ratio(X)	1.12	0.84	0.04	0.73	0.90	0.51	0.77	1.14	1.14	1.70	0.51	0.52
Avail Cap(c_a), veh/h	201	1593	486	433	1592	385	124	454	439	313	692	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	45.4	32.8	70.1	52.7	46.4	70.8	55.5	55.5	61.5	34.6	34.6
Incr Delay (d2), s/veh	100.3	4.3	0.0	2.4	7.2	1.5	6.1	86.8	87.5	328.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	15.9	0.5	2.2	13.5	6.3	2.3	28.0	27.2	40.5	10.0	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	165.8	49.7	32.9	72.5	59.9	47.9	76.9	142.3	143.0	390.2	34.9	35.0
LnGrp LOS	F	D	C	E	E	D	E	F	F	F	C	C
Approach Vol, veh/h		1582			1711			1077			1232	
Approach Delay, s/veh		66.0			59.4			139.1			188.6	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	45.0	13.9	57.6	12.9	65.1	25.0	46.4				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	26.5	38.5	20.5	38.5	10.5	54.5	18.5	40.5				
Max Q Clear Time (g_c+I1), s	28.5	40.5	7.3	41.5	6.9	25.2	20.5	36.5				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	3.1	0.0	3.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			105.0									
HCM 6th LOS			F									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary  
13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	  		 		
Traffic Volume (veh/h)	298	1675	175	395	1398	293	191	841	520	264	408	135
Future Volume (veh/h)	298	1675	175	395	1398	293	191	841	520	264	408	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	314	1763	173	416	1472	204	201	885	399	278	429	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	284	2049	201	437	1373	602	204	1055	321	261	793	346
Arrive On Green	0.09	0.37	0.37	0.14	0.42	0.42	0.06	0.21	0.21	0.08	0.23	0.23
Sat Flow, veh/h	3155	5468	537	3155	3244	1423	3401	5025	1527	3401	3497	1528
Grp Volume(v), veh/h	314	1420	516	416	1472	204	201	885	399	278	429	33
Grp Sat Flow(s),veh/h/ln	1577	1468	1600	1577	1622	1423	1700	1675	1527	1700	1749	1528
Q Serve(g_s), s	13.5	44.6	44.6	19.6	63.5	14.5	8.9	25.3	31.5	11.5	16.2	2.6
Cycle Q Clear(g_c), s	13.5	44.6	44.6	19.6	63.5	14.5	8.9	25.3	31.5	11.5	16.2	2.6
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	1650	599	437	1373	602	204	1055	321	261	793	346
V/C Ratio(X)	1.11	0.86	0.86	0.95	1.07	0.34	0.99	0.84	1.24	1.07	0.54	0.10
Avail Cap(c_a), veh/h	284	1650	599	437	1373	602	204	1055	321	261	793	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.2	43.3	43.3	64.1	43.2	29.1	70.4	56.8	59.3	69.3	51.1	45.8
Incr Delay (d2), s/veh	84.9	5.0	12.3	30.7	46.1	0.4	58.5	6.2	133.5	74.3	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	16.9	19.7	9.8	33.9	5.1	5.5	11.4	24.1	7.7	7.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.1	48.2	55.6	94.8	89.3	29.5	128.9	63.0	192.7	143.6	52.0	46.0
LnGrp LOS	F	D	E	F	F	C	F	E	F	F	D	D
Approach Vol, veh/h		2250			2092			1485			740	
Approach Delay, s/veh		64.6			84.6			106.7			86.1	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.3	63.7	16.5	41.5	21.0	71.0	19.0	39.0				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	20.8	56.2	9.0	34.0	13.5	63.5	11.5	31.5				
Max Q Clear Time (g_c+I1), s	21.6	46.6	10.9	18.2	15.5	65.5	13.5	33.5				
Green Ext Time (p_c), s	0.0	8.1	0.0	3.1	0.0	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				82.9								
HCM 6th LOS				F								

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour Improvements



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1797	1144	0	213	1498
Future Volume (veh/h)	0	1797	1144	0	213	1498
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	1912	1217	0	227	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	2713	1888	0	359	
Arrive On Green	0.00	0.58	0.58	0.00	0.11	0.00
Sat Flow, veh/h	0	4968	3415	0	3155	1447
Grp Volume(v), veh/h	0	1912	1217	0	227	0
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1577	1447
Q Serve(g_s), s	0.0	11.8	10.2	0.0	2.8	0.0
Cycle Q Clear(g_c), s	0.0	11.8	10.2	0.0	2.8	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2713	1888	0	359	
V/C Ratio(X)	0.00	0.70	0.64	0.00	0.63	
Avail Cap(c_a), veh/h	0	3017	2100	0	507	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.0	5.7	0.0	17.1	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	1.9	0.0	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.7	6.2	0.0	19.0	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		1912	1217		227	A
Approach Delay, s/veh		6.7	6.2		19.0	
Approach LOS		A	A		B	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		30.4		10.1		30.4
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		26.2		6.5		26.2
Max Q Clear Time (g_c+I1), s		13.8		4.8		12.2
Green Ext Time (p_c), s		9.8		0.1		7.5

Intersection Summary

HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.  
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour Improvements



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	537	1526	154	420	776	432
Future Volume (veh/h)	537	1526	154	420	776	432
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	577	1637	166	452	834	249
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1703	1916	152	2941	783	348
Arrive On Green	0.53	0.53	0.05	0.63	0.24	0.24
Sat Flow, veh/h	3329	2480	3155	4815	3252	1447
Grp Volume(v), veh/h	577	1637	166	452	834	249
Grp Sat Flow(s),veh/h/ln	1622	1240	1577	1554	1626	1447
Q Serve(g_s), s	10.7	47.2	5.0	4.1	25.0	16.4
Cycle Q Clear(g_c), s	10.7	47.2	5.0	4.1	25.0	16.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1703	1916	152	2941	783	348
V/C Ratio(X)	0.34	0.85	1.09	0.15	1.06	0.71
Avail Cap(c_a), veh/h	1741	1944	152	2995	783	348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	8.4	49.4	7.8	39.4	36.1
Incr Delay (d2), s/veh	0.1	3.9	99.9	0.0	50.9	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	22.3	4.1	1.3	15.3	6.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	12.3	149.3	7.8	90.3	42.9
LnGrp LOS	B	B	F	A	F	D
Approach Vol, veh/h	2214			618	1083	
Approach Delay, s/veh	12.8			45.9	79.4	
Approach LOS	B			D	E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.0	61.8			72.8	31.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	5.0	55.7			66.7	25.0
Max Q Clear Time (g_c+I1), s	7.0	49.2			6.1	27.0
Green Ext Time (p_c), s	0.0	5.3			3.6	0.0

Intersection Summary
























HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	118	5	48	39	14	124	34	1689	17	60	1268	85	
Future Volume (veh/h)	118	5	48	39	14	124	34	1689	17	60	1268	85	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811	
Adj Flow Rate, veh/h	124	5	11	41	15	26	36	1778	10	63	1335	46	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6	
Cap, veh/h	300	89	195	323	105	182	120	2264	684	166	2394	723	
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.07	0.46	0.46	0.10	0.48	0.48	
Sat Flow, veh/h	1356	511	1125	1386	605	1048	1725	4944	1493	1725	4944	1494	
Grp Volume(v), veh/h	124	0	16	41	0	41	36	1778	10	63	1335	46	
Grp Sat Flow(s),veh/h/ln	1356	0	1637	1386	0	1653	1725	1648	1493	1725	1648	1494	
Q Serve(g_s), s	6.6	0.0	0.6	2.0	0.0	1.6	1.5	23.5	0.3	2.6	14.7	1.3	
Cycle Q Clear(g_c), s	8.2	0.0	0.6	2.6	0.0	1.6	1.5	23.5	0.3	2.6	14.7	1.3	
Prop In Lane	1.00		0.69	1.00		0.63	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	300	0	284	323	0	287	120	2264	684	166	2394	723	
V/C Ratio(X)	0.41	0.00	0.06	0.13	0.00	0.14	0.30	0.79	0.01	0.38	0.56	0.06	
Avail Cap(c_a), veh/h	716	0	786	747	0	793	224	2374	717	224	2394	723	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	30.5	0.0	26.6	27.7	0.0	27.0	34.1	17.7	11.4	32.7	14.0	10.6	
Incr Delay (d2), s/veh	1.1	0.0	0.1	0.2	0.0	0.3	1.7	1.9	0.0	1.7	0.4	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.2	0.7	0.0	0.6	0.7	8.5	0.1	1.2	5.1	0.4	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	31.6	0.0	26.7	27.9	0.0	27.3	35.7	19.5	11.4	34.4	14.4	10.6	
LnGrp LOS	C	A	C	C	A	C	D	B	B	C	B	B	
Approach Vol, veh/h		140			82			1824			1444		
Approach Delay, s/veh		31.0			27.6			19.8			15.2		
Approach LOS		C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	14.9	42.8		19.4	12.9	44.8		19.4					
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0					
Max Green Setting (Gmax), s	10.0	37.0		37.0	10.0	37.0		37.0					
Max Q Clear Time (g_c+I1), s	4.6	25.5		10.2	3.5	16.7		4.6					
Green Ext Time (p_c), s	0.1	9.8		0.5	0.0	12.8		0.4					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay				18.5									
HCM 6th LOS				B									

HCM 6th Signalized Intersection Summary  
 33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour Improvements



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	429	106	236	695	274	111	433	361	147	451	61
Future Volume (veh/h)	72	429	106	236	695	274	111	433	361	147	451	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	79	471	96	259	764	266	122	476	254	162	496	57
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	845	171	326	816	284	147	584	309	194	924	106
Arrive On Green	0.06	0.29	0.29	0.10	0.32	0.32	0.08	0.26	0.26	0.11	0.29	0.29
Sat Flow, veh/h	1781	2933	594	3428	2555	889	1767	2214	1174	1767	3181	364
Grp Volume(v), veh/h	79	284	283	259	527	503	122	378	352	162	274	279
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	1714	1763	1681	1767	1763	1625	1767	1763	1782
Q Serve(g_s), s	4.2	13.1	13.3	7.1	28.0	28.0	6.6	19.4	19.6	8.7	12.6	12.7
Cycle Q Clear(g_c), s	4.2	13.1	13.3	7.1	28.0	28.0	6.6	19.4	19.6	8.7	12.6	12.7
Prop In Lane	1.00		0.34	1.00		0.53	1.00		0.72	1.00		0.20
Lane Grp Cap(c), veh/h	114	512	504	326	563	537	147	465	428	194	512	518
V/C Ratio(X)	0.69	0.56	0.56	0.79	0.94	0.94	0.83	0.81	0.82	0.83	0.54	0.54
Avail Cap(c_a), veh/h	129	525	517	355	575	549	147	621	573	256	731	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	29.1	29.2	42.7	31.9	31.9	43.6	33.3	33.4	42.1	28.8	28.8
Incr Delay (d2), s/veh	9.6	0.7	0.8	9.7	22.4	23.2	30.2	6.1	7.0	12.9	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.6	5.6	3.4	15.0	14.5	4.1	8.9	8.4	4.4	5.4	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	29.8	29.9	52.4	54.3	55.1	73.8	39.5	40.4	55.0	29.6	29.7
LnGrp LOS	D	C	C	D	D	E	E	D	D	D	C	C
Approach Vol, veh/h		646			1289			852			715	
Approach Delay, s/veh		32.8			54.2			44.8			35.4	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	32.4	14.2	34.3	13.0	35.0	11.2	37.3				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	14.0	34.0	10.0	28.5	8.0	40.0	7.0	31.5				
Max Q Clear Time (g_c+I1), s	10.7	21.6	9.1	15.3	8.6	14.7	6.2	30.0				
Green Ext Time (p_c), s	0.1	3.8	0.1	2.0	0.0	3.5	0.0	0.8				

Intersection Summary


































HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

























HCM 6th Signalized Intersection Summary  
42: Archibald Ave & Schleisman Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	  		 		
Traffic Volume (veh/h)	619	591	127	226	686	162	346	957	181	69	676	634
Future Volume (veh/h)	619	591	127	226	686	162	346	957	181	69	676	634
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1856	1856	1856	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	688	657	42	251	762	37	384	1063	78	77	751	441
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	10	10	10	3	3	3	6	6	6	6	6	6
Cap, veh/h	696	1440	445	312	897	272	458	1822	563	179	1410	435
Arrive On Green	0.21	0.30	0.30	0.09	0.18	0.18	0.14	0.37	0.37	0.05	0.29	0.29
Sat Flow, veh/h	3237	4782	1477	3428	5066	1537	3346	4944	1529	3346	4944	1527
Grp Volume(v), veh/h	688	657	42	251	762	37	384	1063	78	77	751	441
Grp Sat Flow(s),veh/h/ln	1618	1594	1477	1714	1689	1537	1673	1648	1529	1673	1648	1527
Q Serve(g_s), s	25.6	13.5	2.5	8.7	17.6	2.5	13.5	20.9	4.1	2.7	15.5	34.5
Cycle Q Clear(g_c), s	25.6	13.5	2.5	8.7	17.6	2.5	13.5	20.9	4.1	2.7	15.5	34.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	696	1440	445	312	897	272	458	1822	563	179	1410	435
V/C Ratio(X)	0.99	0.46	0.09	0.81	0.85	0.14	0.84	0.58	0.14	0.43	0.53	1.01
Avail Cap(c_a), veh/h	696	1440	445	453	963	292	1079	1822	563	802	1410	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	34.3	30.4	53.9	48.2	42.0	50.9	30.7	25.4	55.5	36.4	43.2
Incr Delay (d2), s/veh	31.3	0.2	0.1	5.6	6.9	0.2	3.1	0.5	0.1	1.2	0.4	46.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	5.3	0.9	4.0	8.0	1.0	5.9	8.3	1.5	1.2	6.3	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.6	34.5	30.5	59.6	55.1	42.2	54.0	31.2	25.5	56.7	36.8	89.7
LnGrp LOS	E	C	C	E	E	D	D	C	C	E	D	F
Approach Vol, veh/h		1387			1050			1525			1269	
Approach Delay, s/veh		56.3			55.7			36.7			56.4	
Approach LOS		E			E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	43.4	11.5	50.1	31.0	28.4	21.6	40.0				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.5	5.0	7.0	5.0	5.5				
Max Green Setting (Gmax), s	16.0	33.0	29.0	44.5	26.0	23.0	39.0	34.5				
Max Q Clear Time (g_c+I1), s	10.7	15.5	4.7	22.9	27.6	19.6	15.5	36.5				
Green Ext Time (p_c), s	0.3	4.5	0.2	8.3	0.0	1.7	1.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			50.5									
HCM 6th LOS			D									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary  
46: Hamner Ave & Norco Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	192	55	495	122	292	64	239	284	504	494	55
Future Volume (veh/h)	42	192	55	495	122	292	64	239	284	504	494	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	44	200	6	322	399	89	67	249	62	525	515	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	10	10	2	2	2	4	4	4	4	4	4
Cap, veh/h	149	296	130	523	549	456	94	548	239	638	934	90
Arrive On Green	0.09	0.09	0.09	0.29	0.29	0.29	0.05	0.16	0.16	0.19	0.29	0.29
Sat Flow, veh/h	1668	3328	1459	1781	1870	1556	1753	3497	1522	3401	3211	311
Grp Volume(v), veh/h	44	200	6	322	399	89	67	249	62	525	280	285
Grp Sat Flow(s),veh/h/ln	1668	1664	1459	1781	1870	1556	1753	1749	1522	1700	1749	1773
Q Serve(g_s), s	1.6	3.8	0.2	10.3	12.6	2.8	2.5	4.3	2.4	9.8	8.9	9.0
Cycle Q Clear(g_c), s	1.6	3.8	0.2	10.3	12.6	2.8	2.5	4.3	2.4	9.8	8.9	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	149	296	130	523	549	456	94	548	239	638	509	516
V/C Ratio(X)	0.30	0.68	0.05	0.62	0.73	0.20	0.71	0.45	0.26	0.82	0.55	0.55
Avail Cap(c_a), veh/h	165	328	144	1000	1050	874	263	1805	785	748	1024	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	29.1	27.5	20.1	20.9	17.5	30.7	25.2	24.4	25.7	19.7	19.7
Incr Delay (d2), s/veh	1.1	4.7	0.1	1.2	1.9	0.2	9.6	0.6	0.6	6.4	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	0.1	4.1	5.4	1.0	1.3	1.7	0.8	4.3	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	33.8	27.6	21.3	22.8	17.7	40.2	25.8	25.0	32.1	20.7	20.7
LnGrp LOS	C	C	C	C	C	B	D	C	C	C	C	C
Approach Vol, veh/h		250			810			378			1090	
Approach Delay, s/veh		32.9			21.6			28.2			26.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.9	14.8		10.4	8.0	23.7		23.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	14.5	34.0		6.5	9.9	38.6		37.0				
Max Q Clear Time (g_c+I1), s	11.8	6.3		5.8	4.5	11.0		14.6				
Green Ext Time (p_c), s	0.6	1.9		0.1	0.0	3.7		3.9				

Intersection Summary
























HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

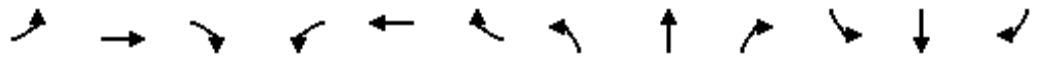
HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	365	124	115	467	125	245	964	171	249	1501	168
Future Volume (veh/h)	62	365	124	115	467	125	245	964	171	249	1501	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	66	388	39	122	497	126	261	1026	111	265	1597	127
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	58	497	414	130	381	97	204	1298	563	289	1467	644
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.12	0.39	0.39	0.17	0.44	0.44
Sat Flow, veh/h	732	1707	1420	875	1308	332	1668	3328	1443	1668	3328	1460
Grp Volume(v), veh/h	66	388	39	122	0	623	261	1026	111	265	1597	127
Grp Sat Flow(s),veh/h/ln	732	1707	1420	875	0	1640	1668	1664	1443	1668	1664	1460
Q Serve(g_s), s	0.0	26.1	2.5	10.3	0.0	36.4	15.3	34.0	6.4	19.5	55.1	6.7
Cycle Q Clear(g_c), s	36.4	26.1	2.5	36.4	0.0	36.4	15.3	34.0	6.4	19.5	55.1	6.7
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	497	414	130	0	478	204	1298	563	289	1467	644
V/C Ratio(X)	1.15	0.78	0.09	0.94	0.00	1.30	1.28	0.79	0.20	0.92	1.09	0.20
Avail Cap(c_a), veh/h	58	497	414	130	0	478	204	1298	563	324	1467	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	40.6	32.3	59.4	0.0	44.3	54.8	33.6	25.2	50.8	35.0	21.4
Incr Delay (d2), s/veh	163.9	7.8	0.1	60.1	0.0	151.6	157.4	3.4	0.2	26.7	51.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	12.0	0.9	6.1	0.0	34.7	15.3	14.2	2.2	10.3	32.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	226.4	48.5	32.4	119.5	0.0	195.9	212.2	37.0	25.4	77.5	86.4	21.6
LnGrp LOS	F	D	C	F	A	F	F	D	C	E	F	C
Approach Vol, veh/h		493			745			1398			1989	
Approach Delay, s/veh		71.0			183.4			68.8			81.1	
Approach LOS		E			F			E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.3	55.3		43.4	20.0	61.6		43.4				
Change Period (Y+Rc), s	* 4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	* 24	46.1		36.4	* 15	55.1		36.4				
Max Q Clear Time (g_c+I1), s	21.5	36.0		38.4	17.3	57.1		38.4				
Green Ext Time (p_c), s	0.1	5.4		0.0	0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	92.8											
HCM 6th LOS	F											
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
 54: Grove Ave & Edison Ave/Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project AM Peak Hour Improvements

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘		↗	↘		↗	↘	
Traffic Volume (veh/h)	96	586	15	44	640	110	156	366	10	163	444	96
Future Volume (veh/h)	96	586	15	44	640	110	156	366	10	163	444	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	598	15	45	653	105	159	373	10	166	453	89
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	13	13	13	13	13	13	3	3	3	3	3	3
Cap, veh/h	156	834	21	263	722	116	188	671	18	307	562	110
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	645	1658	42	738	1435	231	857	1799	48	992	1506	296
Grp Volume(v), veh/h	98	0	613	45	0	758	159	0	383	166	0	542
Grp Sat Flow(s),veh/h/ln	645	0	1700	738	0	1666	857	0	1847	992	0	1802
Q Serve(g_s), s	6.4	0.0	20.4	3.7	0.0	30.1	7.5	0.0	11.9	11.5	0.0	19.6
Cycle Q Clear(g_c), s	36.5	0.0	20.4	24.0	0.0	30.1	27.1	0.0	11.9	23.4	0.0	19.6
Prop In Lane	1.00		0.02	1.00		0.14	1.00		0.03	1.00		0.16
Lane Grp Cap(c), veh/h	156	0	855	263	0	838	188	0	689	307	0	673
V/C Ratio(X)	0.63	0.00	0.72	0.17	0.00	0.91	0.85	0.00	0.56	0.54	0.00	0.81
Avail Cap(c_a), veh/h	156	0	855	263	0	838	216	0	750	340	0	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.5	0.0	14.0	23.4	0.0	16.5	34.2	0.0	18.0	27.3	0.0	20.4
Incr Delay (d2), s/veh	7.9	0.0	2.9	0.3	0.0	13.3	23.0	0.0	0.8	1.5	0.0	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	7.5	0.6	0.0	13.0	3.9	0.0	4.8	2.7	0.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	0.0	16.9	23.7	0.0	29.8	57.2	0.0	18.7	28.7	0.0	26.5
LnGrp LOS	D	A	B	C	A	C	E	A	B	C	A	C
Approach Vol, veh/h		711			803			542			708	
Approach Delay, s/veh		20.4			29.4			30.0			27.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.6		41.0		31.6		41.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.5		36.5		29.5		36.5				
Max Q Clear Time (g_c+I1), s		13.9		38.5		25.4		32.1				
Green Ext Time (p_c), s		1.5		0.0		1.7		2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.6								
HCM 6th LOS				C								



HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave





















Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	4	2	361	38	568	5	982	224	504	1313	39
Future Volume (veh/h)	6	4	2	361	38	568	5	982	224	504	1313	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	7	4	1	392	41	238	5	1067	145	548	1427	24
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
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	15	9	20	388	51	296	21	1046	452	449	1900	826
Arrive On Green	0.01	0.01	0.01	0.23	0.23	0.23	0.01	0.31	0.31	0.27	0.57	0.57
Sat Flow, veh/h	1144	654	1472	1668	219	1273	1668	3328	1440	1668	3328	1447
Grp Volume(v), veh/h	11	0	1	392	0	279	5	1067	145	548	1427	24
Grp Sat Flow(s),veh/h/ln	1798	0	1472	1668	0	1492	1668	1664	1440	1668	1664	1447
Q Serve(g_s), s	0.8	0.0	0.1	32.2	0.0	24.4	0.4	43.5	10.6	37.3	44.6	1.0
Cycle Q Clear(g_c), s	0.8	0.0	0.1	32.2	0.0	24.4	0.4	43.5	10.6	37.3	44.6	1.0
Prop In Lane	0.64		1.00	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	24	0	20	388	0	347	21	1046	452	449	1900	826
V/C Ratio(X)	0.46	0.00	0.05	1.01	0.00	0.80	0.24	1.02	0.32	1.22	0.75	0.03
Avail Cap(c_a), veh/h	109	0	89	388	0	347	121	1046	452	449	1900	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	0.0	67.4	53.1	0.0	50.1	67.7	47.5	36.2	50.6	22.3	13.0
Incr Delay (d2), s/veh	5.0	0.0	0.4	48.3	0.0	12.9	2.1	33.0	0.4	117.3	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	18.7	0.0	10.4	0.2	22.7	3.8	30.2	17.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	0.0	67.8	101.4	0.0	63.0	69.8	80.5	36.6	167.9	24.0	13.0
LnGrp LOS	E	A	E	F	A	E	E	F	D	F	C	B
Approach Vol, veh/h		12			671			1217			1999	
Approach Delay, s/veh		72.4			85.4			75.2			63.3	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.0	50.0		8.0	6.4	85.6		38.4				
Change Period (Y+Rc), s	* 4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	* 37	43.5		8.4	* 10	70.8		32.2				
Max Q Clear Time (g_c+I1), s	39.3	45.5		2.8	2.4	46.6		34.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	12.6		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				70.9								
HCM 6th LOS				E								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

# HCM 6th Signalized Intersection Summary

























## 4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	0	895	0	0	0	0	1292	287	730	1359	0
Future Volume (veh/h)	299	0	895	0	0	0	0	1292	287	730	1359	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	229	0	1035				0	1485	292	839	1562	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0				0	3	3	3	3	0
Cap, veh/h	487	0	866				0	1473	289	724	3056	0
Arrive On Green	0.27	0.00	0.27				0.00	0.35	0.35	0.14	0.40	0.00
Sat Flow, veh/h	1810	0	3220				0	4403	830	3428	5233	0
Grp Volume(v), veh/h	229	0	1035				0	1183	594	839	1562	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1689	1689	1714	1689	0
Q Serve(g_s), s	9.5	0.0	24.2				0.0	31.3	31.3	19.0	20.8	0.0
Cycle Q Clear(g_c), s	9.5	0.0	24.2				0.0	31.3	31.3	19.0	20.8	0.0
Prop In Lane	1.00		1.00				0.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	487	0	866				0	1174	587	724	3056	0
V/C Ratio(X)	0.47	0.00	1.20				0.00	1.01	1.01	1.16	0.51	0.00
Avail Cap(c_a), veh/h	487	0	866				0	1174	587	724	3056	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.21	0.21	0.00
Uniform Delay (d), s/veh	27.5	0.0	32.9				0.0	29.3	29.4	38.6	16.8	0.0
Incr Delay (d2), s/veh	0.7	0.0	99.1				0.0	28.0	40.0	75.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	20.6				0.0	16.0	18.0	15.5	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	0.0	132.0				0.0	57.4	69.4	113.9	17.0	0.0
LnGrp LOS	C	A	F				A	F	F	F	B	A
Approach Vol, veh/h		1264						1777			2401	
Approach Delay, s/veh		113.2						61.4			50.8	
Approach LOS		F						E			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	23.0	37.0	30.0	60.0								
Change Period (Y+Rc), s	4.0	5.7	5.8	5.7								
Max Green Setting (Gmax), s	19.0	31.3	24.2	54.3								
Max Q Clear Time (g_c+I1), s	21.0	33.3	26.2	22.8								
Green Ext Time (p_c), s	0.0	0.0	0.0	8.1								
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			68.8									
HCM 6th LOS			E									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												























HCM 6th Signalized Intersection Summary  
5: Archibald Ave & E Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	756	339	175	593	178	352	1214	114	326	1230	364
Future Volume (veh/h)	290	756	339	175	593	178	352	1214	114	326	1230	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	302	788	235	182	618	99	367	1265	112	340	1281	338
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	287	882	386	191	691	302	355	1499	133	355	1260	332
Arrive On Green	0.16	0.25	0.25	0.11	0.20	0.20	0.20	0.32	0.32	0.20	0.32	0.32
Sat Flow, veh/h	1767	3526	1542	1767	3526	1538	1767	4729	419	1767	3974	1047
Grp Volume(v), veh/h	302	788	235	182	618	99	367	903	474	340	1088	531
Grp Sat Flow(s),veh/h/ln	1767	1763	1542	1767	1763	1538	1767	1689	1771	1767	1689	1644
Q Serve(g_s), s	21.0	27.9	17.4	13.2	22.1	7.2	26.0	32.3	32.3	24.6	41.0	41.0
Cycle Q Clear(g_c), s	21.0	27.9	17.4	13.2	22.1	7.2	26.0	32.3	32.3	24.6	41.0	41.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.64
Lane Grp Cap(c), veh/h	287	882	386	191	691	302	355	1070	561	355	1070	521
V/C Ratio(X)	1.05	0.89	0.61	0.95	0.89	0.33	1.03	0.84	0.84	0.96	1.02	1.02
Avail Cap(c_a), veh/h	287	899	393	191	709	309	355	1070	561	355	1070	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	46.8	42.9	57.3	50.7	44.7	51.7	41.2	41.2	51.1	44.2	44.2
Incr Delay (d2), s/veh	67.6	11.9	4.0	51.9	14.5	1.3	56.6	6.9	12.3	37.0	31.8	44.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	13.2	6.9	8.5	10.8	2.8	16.7	13.8	15.3	14.1	21.0	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.8	58.7	46.9	109.2	65.2	46.0	108.3	48.1	53.5	88.1	76.0	88.3
LnGrp LOS	F	E	D	F	E	D	F	D	D	F	F	F
Approach Vol, veh/h		1325			899			1744			1959	
Approach Delay, s/veh		71.0			72.0			62.2			81.4	
Approach LOS		E			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	45.0	18.0	36.4	30.0	45.0	25.0	29.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	26.0	41.0	14.0	33.0	26.0	41.0	21.0	26.0				
Max Q Clear Time (g_c+I1), s	26.6	34.3	15.2	29.9	28.0	43.0	23.0	24.1				
Green Ext Time (p_c), s	0.0	5.5	0.0	2.2	0.0	0.0	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				72.0								
HCM 6th LOS				E								
























HCM 6th Signalized Intersection Summary  
6: Haven Ave & Riverside Dr

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	476	205	266	464	95	167	919	185	173	1401	424
Future Volume (veh/h)	298	476	205	266	464	95	167	919	185	173	1401	424
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	301	481	197	269	469	86	169	928	87	175	1415	411
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	160	327	134	160	781	142	199	1303	565	279	1003	280
Arrive On Green	0.09	0.26	0.26	0.09	0.26	0.26	0.08	0.37	0.37	0.08	0.37	0.37
Sat Flow, veh/h	1767	1243	509	1767	2968	541	1767	3526	1527	1767	2711	755
Grp Volume(v), veh/h	301	0	678	269	277	278	169	928	87	175	899	927
Grp Sat Flow(s),veh/h/ln	1767	0	1752	1767	1763	1746	1767	1763	1527	1767	1763	1704
Q Serve(g_s), s	11.0	0.0	32.0	11.0	16.7	16.9	7.3	27.4	4.6	7.4	45.0	45.0
Cycle Q Clear(g_c), s	11.0	0.0	32.0	11.0	16.7	16.9	7.3	27.4	4.6	7.4	45.0	45.0
Prop In Lane	1.00		0.29	1.00		0.31	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	160	0	461	160	464	459	199	1303	565	279	652	631
V/C Ratio(X)	1.88	0.00	1.47	1.68	0.60	0.60	0.85	0.71	0.15	0.63	1.38	1.47
Avail Cap(c_a), veh/h	160	0	461	160	464	459	539	1305	565	618	652	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.3	0.0	44.8	55.3	39.2	39.3	30.2	32.8	25.6	25.0	38.3	38.3
Incr Delay (d2), s/veh	420.1	0.0	223.3	332.9	2.1	2.2	7.4	1.7	0.1	1.7	179.6	220.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.4	0.0	41.8	19.5	7.2	7.3	3.3	11.5	1.6	3.1	50.9	56.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	475.4	0.0	268.1	388.2	41.3	41.5	37.6	34.5	25.7	26.7	217.9	258.5
LnGrp LOS	F	A	F	F	D	D	D	C	C	C	F	F
Approach Vol, veh/h		979			824			1184			2001	
Approach Delay, s/veh		331.8			154.6			34.3			220.0	
Approach LOS		F			F			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	50.0	18.0	39.0	14.6	50.0	18.0	39.0				
Change Period (Y+Rc), s	5.0	5.0	7.0	7.0	5.0	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	45.0	11.0	32.0	33.0	45.0	11.0	32.0				
Max Q Clear Time (g_c+I1), s	9.4	29.4	13.0	34.0	9.3	47.0	13.0	18.9				
Green Ext Time (p_c), s	0.3	4.1	0.0	0.0	0.3	0.0	0.0	2.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	187.1											
HCM 6th LOS	F											
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

























HCM 6th Signalized Intersection Summary  
7: Archibald Ave & Chino Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	383	174	13	193	128	162	1260	21	164	1346	133
Future Volume (veh/h)	147	383	174	13	193	128	162	1260	21	164	1346	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	155	403	172	14	203	30	171	1326	22	173	1417	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	178	351	150	73	421	352	152	1892	31	195	1276	122
Arrive On Green	0.10	0.29	0.29	0.04	0.23	0.23	0.09	0.37	0.37	0.11	0.39	0.39
Sat Flow, veh/h	1767	1226	523	1767	1856	1551	1767	5130	85	1767	3245	309
Grp Volume(v), veh/h	155	0	575	14	203	30	171	873	475	173	765	788
Grp Sat Flow(s),veh/h/ln	1767	0	1750	1767	1856	1551	1767	1689	1838	1767	1763	1792
Q Serve(g_s), s	12.5	0.0	41.5	1.1	13.8	2.2	12.5	31.9	31.9	14.0	57.0	57.0
Cycle Q Clear(g_c), s	12.5	0.0	41.5	1.1	13.8	2.2	12.5	31.9	31.9	14.0	57.0	57.0
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.05	1.00		0.17
Lane Grp Cap(c), veh/h	178	0	501	73	421	352	152	1245	678	195	693	704
V/C Ratio(X)	0.87	0.00	1.15	0.19	0.48	0.09	1.12	0.70	0.70	0.89	1.10	1.12
Avail Cap(c_a), veh/h	264	0	501	73	421	352	152	1245	678	229	693	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.3	0.0	51.8	67.2	48.7	44.2	66.3	39.0	39.0	63.6	44.0	44.0
Incr Delay (d2), s/veh	13.2	0.0	87.9	5.7	1.2	0.1	109.6	2.0	3.6	25.9	66.5	71.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	30.0	0.6	6.5	0.9	10.1	13.1	14.5	7.6	36.4	37.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	0.0	139.6	72.9	49.9	44.3	175.8	40.9	42.5	89.5	110.5	115.3
LnGrp LOS	E	A	F	E	D	D	F	D	D	F	F	F
Approach Vol, veh/h		730			247			1519			1726	
Approach Delay, s/veh		126.4			50.5			56.6			110.6	
Approach LOS		F			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	61.0	12.5	48.0	20.0	64.5	21.1	39.4				
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5				
Max Green Setting (Gmax), s	18.8	50.7	6.0	41.5	12.5	57.0	21.7	25.8				
Max Q Clear Time (g_c+I1), s	16.0	33.9	3.1	43.5	14.5	59.0	14.5	15.8				
Green Ext Time (p_c), s	0.1	9.9	0.0	0.0	0.0	0.0	0.1	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			90.4									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary  
 11: Archibald Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	1074	299	706	645	244	145	1012	741	234	1137	93
Future Volume (veh/h)	161	1074	299	706	645	244	145	1012	741	234	1137	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1119	0	735	672	154	151	1054	0	244	1184	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	197	993		636	760	634	130	1034		200	1175	509
Arrive On Green	0.06	0.29	0.00	0.19	0.43	0.43	0.07	0.29	0.00	0.11	0.33	0.33
Sat Flow, veh/h	3291	3385	1510	3291	1781	1485	1767	3526	1572	1767	3526	1526
Grp Volume(v), veh/h	168	1119	0	735	672	154	151	1054	0	244	1184	35
Grp Sat Flow(s),veh/h/ln	1646	1692	1510	1646	1781	1485	1767	1763	1572	1767	1763	1526
Q Serve(g_s), s	7.6	44.0	0.0	29.0	52.1	10.0	11.0	44.0	0.0	17.0	50.0	2.3
Cycle Q Clear(g_c), s	7.6	44.0	0.0	29.0	52.1	10.0	11.0	44.0	0.0	17.0	50.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	993		636	760	634	130	1034		200	1175	509
V/C Ratio(X)	0.85	1.13		1.16	0.88	0.24	1.17	1.02		1.22	1.01	0.07
Avail Cap(c_a), veh/h	197	993		636	760	634	130	1034		200	1175	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	53.0	0.0	60.5	39.6	27.5	69.5	53.0	0.0	66.5	50.0	34.1
Incr Delay (d2), s/veh	30.1	70.3	0.0	86.7	12.7	0.4	130.2	32.9	0.0	134.8	28.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	27.7	0.0	19.4	24.4	3.5	9.5	23.3	0.0	14.9	25.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.9	123.3	0.0	147.2	52.3	27.9	199.7	85.9	0.0	201.3	78.1	34.2
LnGrp LOS	F	F		F	D	C	F	F		F	F	C
Approach Vol, veh/h		1287	A		1561			1205	A		1463	
Approach Delay, s/veh		120.2			94.6			100.2			97.6	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	48.0	33.0	48.0	15.0	54.0	13.0	68.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	17.0	44.0	29.0	44.0	11.0	50.0	9.0	64.0				
Max Q Clear Time (g_c+I1), s	19.0	46.0	31.0	46.0	13.0	52.0	9.6	54.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4				

Intersection Summary

HCM 6th Ctrl Delay	102.6
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
12: Haven Ave & Ontario Ranch Rd


































Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	291	1851	56	346	1491	662	35	627	149	587	865	192
Future Volume (veh/h)	291	1851	56	346	1491	662	35	627	149	587	865	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	297	1889	17	353	1521	453	36	640	138	599	883	184
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	179	1431	436	251	1625	393	67	754	162	315	1165	243
Arrive On Green	0.11	0.29	0.29	0.08	0.27	0.27	0.04	0.26	0.26	0.18	0.40	0.40
Sat Flow, veh/h	1697	4863	1482	3291	6128	1481	1767	2874	619	1767	2895	603
Grp Volume(v), veh/h	297	1889	17	353	1521	453	36	392	386	599	538	529
Grp Sat Flow(s),veh/h/ln	1697	1621	1482	1646	1532	1481	1767	1763	1730	1767	1763	1735
Q Serve(g_s), s	14.5	40.5	1.1	10.5	33.4	36.5	2.8	29.0	29.1	24.5	36.1	36.1
Cycle Q Clear(g_c), s	14.5	40.5	1.1	10.5	33.4	36.5	2.8	29.0	29.1	24.5	36.1	36.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		0.35
Lane Grp Cap(c), veh/h	179	1431	436	251	1625	393	67	463	454	315	709	698
V/C Ratio(X)	1.66	1.32	0.04	1.41	0.94	1.15	0.54	0.85	0.85	1.90	0.76	0.76
Avail Cap(c_a), veh/h	179	1431	436	251	1625	393	112	621	610	315	824	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	48.6	34.7	63.6	49.4	50.6	65.0	48.1	48.2	56.6	35.4	35.4
Incr Delay (d2), s/veh	321.0	148.9	0.1	204.7	10.7	94.3	2.5	6.4	6.6	418.4	2.8	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.0	35.4	0.4	11.4	13.4	23.2	1.3	13.2	13.1	47.2	15.5	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	382.6	197.5	34.7	268.2	60.1	144.8	67.4	54.5	54.8	475.0	38.1	38.2
LnGrp LOS	F	F	C	F	E	F	E	D	D	F	D	D
Approach Vol, veh/h		2203			2327			814			1666	
Approach Delay, s/veh		221.2			108.2			55.2			195.2	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	42.6	17.0	47.0	11.7	61.9	21.0	43.0				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	24.5	48.5	10.5	40.5	8.7	64.3	14.5	36.5				
Max Q Clear Time (g_c+I1), s	26.5	31.1	12.5	42.5	4.8	38.1	16.5	38.5				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	4.2	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			158.2									
HCM 6th LOS			F									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												



HCM 6th Signalized Intersection Summary  
 13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	  		 	 	
Traffic Volume (veh/h)	195	1879	285	903	1907	321	342	734	571	395	913	214
Future Volume (veh/h)	195	1879	285	903	1907	321	342	734	571	395	913	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	203	1957	279	941	1986	250	356	765	377	411	951	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	187	1688	240	603	1478	648	244	1184	360	267	848	371
Arrive On Green	0.06	0.31	0.31	0.18	0.44	0.44	0.07	0.23	0.23	0.08	0.24	0.24
Sat Flow, veh/h	3291	5446	775	3291	3385	1485	3483	5147	1565	3483	3582	1566
Grp Volume(v), veh/h	203	1651	585	941	1986	250	356	765	377	411	951	73
Grp Sat Flow(s),veh/h/ln	1646	1532	1625	1646	1692	1485	1742	1716	1565	1742	1791	1566
Q Serve(g_s), s	8.5	46.5	46.5	27.5	65.5	17.1	10.5	20.2	34.5	11.5	35.5	5.6
Cycle Q Clear(g_c), s	8.5	46.5	46.5	27.5	65.5	17.1	10.5	20.2	34.5	11.5	35.5	5.6
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	1425	504	603	1478	648	244	1184	360	267	848	371
V/C Ratio(X)	1.09	1.16	1.16	1.56	1.34	0.39	1.46	0.65	1.05	1.54	1.12	0.20
Avail Cap(c_a), veh/h	187	1425	504	603	1478	648	244	1184	360	267	848	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	51.8	51.8	61.2	42.3	28.6	69.8	52.2	57.8	69.3	57.3	45.8
Incr Delay (d2), s/veh	91.5	79.7	92.6	259.8	159.3	0.5	228.3	1.3	60.3	260.5	70.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	27.5	31.0	32.9	58.2	6.0	12.3	8.6	19.3	14.7	23.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	162.2	131.5	144.4	321.0	201.5	29.1	298.0	53.5	118.1	329.8	127.4	46.1
LnGrp LOS	F	F	F	F	F	C	F	D	F	F	F	D
Approach Vol, veh/h		2439			3177			1498			1435	
Approach Delay, s/veh		137.1			223.4			127.9			181.2	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.0	54.0	18.0	43.0	16.0	73.0	19.0	42.0				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	27.5	46.5	10.5	35.5	8.5	65.5	11.5	34.5				
Max Q Clear Time (g_c+I1), s	29.5	48.5	12.5	37.5	10.5	67.5	13.5	36.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				175.0								
HCM 6th LOS				F								

HCM 6th Signalized Intersection Summary  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour Improvements



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	2445	1415	0	232	2355
Future Volume (veh/h)	0	2445	1415	0	232	2355
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	2601	1505	0	247	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	3272	2277	0	355	
Arrive On Green	0.00	0.67	0.67	0.00	0.11	0.00
Sat Flow, veh/h	0	5184	3563	0	3291	1510
Grp Volume(v), veh/h	0	2601	1505	0	247	0
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1646	1510
Q Serve(g_s), s	0.0	21.1	14.7	0.0	4.1	0.0
Cycle Q Clear(g_c), s	0.0	21.1	14.7	0.0	4.1	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	3272	2277	0	355	
V/C Ratio(X)	0.00	0.80	0.66	0.00	0.70	
Avail Cap(c_a), veh/h	0	3486	2426	0	440	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.5	5.4	0.0	24.1	0.0
Incr Delay (d2), s/veh	0.0	1.3	0.6	0.0	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	1.7	0.0	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.7	6.0	0.0	27.6	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		2601	1505		247	A
Approach Delay, s/veh		7.7	6.0		27.6	
Approach LOS		A	A		C	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		44.5		11.6		44.5
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		40.2		7.5		40.2
Max Q Clear Time (g_c+I1), s		23.1		6.1		16.7
Green Ext Time (p_c), s		14.6		0.1		11.1

Intersection Summary

HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour Improvements



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑↑	↑↑↑	↑
Traffic Volume (veh/h)	785	1888	171	510	1017	124
Future Volume (veh/h)	785	1888	171	510	1017	124
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	826	1986	180	537	1071	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1639	2061	143	2821	1033	459
Arrive On Green	0.48	0.48	0.04	0.58	0.30	0.30
Sat Flow, veh/h	3474	2586	3291	5024	3393	1510
Grp Volume(v), veh/h	826	1986	180	537	1071	58
Grp Sat Flow(s),veh/h/ln	1692	1293	1646	1621	1697	1510
Q Serve(g_s), s	19.1	55.7	5.0	6.0	35.0	3.2
Cycle Q Clear(g_c), s	19.1	55.7	5.0	6.0	35.0	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1639	2061	143	2821	1033	459
V/C Ratio(X)	0.50	0.96	1.26	0.19	1.04	0.13
Avail Cap(c_a), veh/h	1639	2061	143	2821	1033	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	8.5	55.0	11.4	40.0	28.9
Incr Delay (d2), s/veh	0.2	12.4	160.4	0.0	38.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	31.3	5.2	1.9	19.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.5	20.8	215.4	11.4	78.1	29.1
LnGrp LOS	C	C	F	B	F	C
Approach Vol, veh/h	2812			717	1129	
Approach Delay, s/veh	20.7			62.6	75.5	
Approach LOS	C			E	E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.0	63.0			74.0	41.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	5.0	55.7			66.7	35.0
Max Q Clear Time (g_c+I1), s	7.0	57.7			8.0	37.0
Green Ext Time (p_c), s	0.0	0.0			3.5	0.0

Intersection Summary

HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary  
25: Archibald Ave & Parkview St

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	4	45	27	4	58	36	1671	40	65	1681	90
Future Volume (veh/h)	73	4	45	27	4	58	36	1671	40	65	1681	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	78	4	7	29	4	9	39	1797	23	70	1808	54
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	310	97	169	312	81	182	131	2321	701	180	2463	744
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.07	0.46	0.46	0.10	0.49	0.49
Sat Flow, veh/h	1388	600	1051	1391	503	1131	1767	5066	1530	1767	5066	1531
Grp Volume(v), veh/h	78	0	11	29	0	13	39	1797	23	70	1808	54
Grp Sat Flow(s),veh/h/ln	1388	0	1651	1391	0	1634	1767	1689	1530	1767	1689	1531
Q Serve(g_s), s	3.8	0.0	0.4	1.4	0.0	0.5	1.6	22.5	0.6	2.8	21.5	1.4
Cycle Q Clear(g_c), s	4.3	0.0	0.4	1.8	0.0	0.5	1.6	22.5	0.6	2.8	21.5	1.4
Prop In Lane	1.00		0.64	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	0	266	312	0	263	131	2321	701	180	2463	744
V/C Ratio(X)	0.25	0.00	0.04	0.09	0.00	0.05	0.30	0.77	0.03	0.39	0.73	0.07
Avail Cap(c_a), veh/h	767	0	810	770	0	802	234	2486	751	234	2486	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	26.7	27.5	0.0	26.7	33.1	17.1	11.2	31.7	15.5	10.3
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.2	0.0	0.1	1.5	1.6	0.0	1.6	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.2	0.5	0.0	0.2	0.7	7.2	0.2	1.2	6.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	0.0	26.8	27.6	0.0	26.8	34.6	18.8	11.3	33.3	16.7	10.4
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		89			42			1859			1932	
Approach Delay, s/veh		28.8			27.4			19.0			17.1	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	42.1		18.2	13.1	44.2		18.2				
Change Period (Y+Rc), s	7.5	7.5		6.0	7.5	7.5		6.0				
Max Green Setting (Gmax), s	10.0	37.0		37.0	10.0	37.0		37.0				
Max Q Clear Time (g_c+I1), s	4.8	24.5		6.3	3.6	23.5		3.8				
Green Ext Time (p_c), s	0.1	10.1		0.3	0.0	10.9		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary  
 28: Hamner Ave/Hamner Ave & Bellgrave Ave

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour Improvements



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖	↖↗	↕	↖	↖	↕↖↗	↖	↖	↕↖↗	↖
Traffic Volume (veh/h)	533	513	128	264	329	153	90	919	223	138	973	727
Future Volume (veh/h)	533	513	128	264	329	153	90	919	223	138	973	727
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	544	523	39	269	336	60	92	938	142	141	993	442
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	592	1058	463	324	412	342	101	1549	472	166	1737	530
Arrive On Green	0.17	0.30	0.30	0.09	0.22	0.22	0.06	0.30	0.30	0.09	0.34	0.34
Sat Flow, veh/h	3428	3526	1544	3428	1856	1540	1795	5147	1568	1795	5147	1569
Grp Volume(v), veh/h	544	523	39	269	336	60	92	938	142	141	993	442
Grp Sat Flow(s),veh/h/ln	1714	1763	1544	1714	1856	1540	1795	1716	1568	1795	1716	1569
Q Serve(g_s), s	19.5	15.2	2.3	9.6	21.5	3.9	6.4	19.4	8.7	9.6	19.7	32.4
Cycle Q Clear(g_c), s	19.5	15.2	2.3	9.6	21.5	3.9	6.4	19.4	8.7	9.6	19.7	32.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	592	1058	463	324	412	342	101	1549	472	166	1737	530
V/C Ratio(X)	0.92	0.49	0.08	0.83	0.82	0.18	0.91	0.61	0.30	0.85	0.57	0.83
Avail Cap(c_a), veh/h	605	1357	594	495	655	543	101	1676	511	173	1882	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	35.9	31.3	55.5	46.1	39.3	58.5	37.2	33.5	55.7	33.9	38.1
Incr Delay (d2), s/veh	18.7	0.5	0.1	4.1	5.9	0.3	61.2	0.7	0.5	28.2	0.5	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	6.4	0.8	4.2	10.2	1.5	4.5	8.0	3.3	5.5	7.9	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	36.4	31.4	59.6	52.0	39.6	119.8	37.9	34.0	83.8	34.4	48.3
LnGrp LOS	E	D	C	E	D	D	F	D	C	F	C	D
Approach Vol, veh/h		1106			665			1172			1576	
Approach Delay, s/veh		52.4			53.9			43.9			42.7	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	44.7	17.8	44.6	13.0	49.3	27.5	34.9				
Change Period (Y+Rc), s	6.0	7.2	6.0	7.2	6.0	7.2	6.0	7.2				
Max Green Setting (Gmax), s	12.0	40.6	18.0	48.0	7.0	45.6	22.0	44.0				
Max Q Clear Time (g_c+I1), s	11.6	21.4	11.6	17.2	8.4	34.4	21.5	23.5				
Green Ext Time (p_c), s	0.0	8.6	0.2	5.0	0.0	7.3	0.1	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				47.1								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary  
33: Sumner Ave & Merrill Ave/Bellegrave Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	685	173	384	444	130	89	535	299	191	597	57
Future Volume (veh/h)	46	685	173	384	444	130	89	535	299	191	597	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	47	706	158	396	458	110	92	552	238	197	615	53
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	765	171	370	911	217	116	636	274	228	1081	93
Arrive On Green	0.05	0.27	0.27	0.11	0.32	0.32	0.07	0.27	0.27	0.13	0.33	0.33
Sat Flow, veh/h	1781	2874	643	3428	2816	671	1767	2389	1027	1767	3279	282
Grp Volume(v), veh/h	47	436	428	396	285	283	92	407	383	197	330	338
Grp Sat Flow(s),veh/h/ln	1781	1777	1740	1714	1763	1724	1767	1763	1654	1767	1763	1799
Q Serve(g_s), s	2.6	24.4	24.4	11.0	13.3	13.5	5.2	22.4	22.6	11.1	15.7	15.8
Cycle Q Clear(g_c), s	2.6	24.4	24.4	11.0	13.3	13.5	5.2	22.4	22.6	11.1	15.7	15.8
Prop In Lane	1.00		0.37	1.00		0.39	1.00		0.62	1.00		0.16
Lane Grp Cap(c), veh/h	90	473	463	370	570	558	116	470	441	228	581	593
V/C Ratio(X)	0.52	0.92	0.92	1.07	0.50	0.51	0.79	0.87	0.87	0.86	0.57	0.57
Avail Cap(c_a), veh/h	122	488	478	370	570	558	121	545	511	277	700	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	36.4	36.4	45.5	27.8	27.9	46.9	35.7	35.7	43.5	28.2	28.2
Incr Delay (d2), s/veh	1.7	22.3	22.8	66.8	0.3	0.3	25.8	12.4	13.5	18.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	13.2	13.0	7.9	5.3	5.2	3.1	10.7	10.2	5.8	6.4	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	58.7	59.2	112.3	28.1	28.2	72.7	48.1	49.2	61.5	29.0	29.1
LnGrp LOS	D	E	E	F	C	C	E	D	D	E	C	C
Approach Vol, veh/h		911			964			882			865	
Approach Delay, s/veh		58.4			62.7			51.1			36.4	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.2	34.2	16.0	33.6	11.7	40.6	10.2	39.5				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	16.0	31.5	11.0	28.0	7.0	40.5	7.0	32.0				
Max Q Clear Time (g_c+I1), s	13.1	24.6	13.0	26.4	7.2	17.8	4.6	15.5				
Green Ext Time (p_c), s	0.1	2.6	0.0	0.7	0.0	3.7	0.0	1.7				

Intersection Summary

























HCM 6th Ctrl Delay	52.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
36: Archibald Ave & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	155	27	705	39	360	11	762	668	704	1072	9
Future Volume (veh/h)	78	155	27	705	39	360	11	762	668	704	1072	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1885	1885	1885	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	160	1	727	40	267	11	786	644	726	1105	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	1	1	1	3	3	3	3	3	3
Cap, veh/h	99	138	62	771	383	850	26	927	759	581	2034	907
Arrive On Green	0.06	0.04	0.04	0.22	0.20	0.20	0.01	0.26	0.26	0.33	0.58	0.58
Sat Flow, veh/h	1668	3328	1485	3483	1885	1598	1767	3526	1564	1767	3526	1572
Grp Volume(v), veh/h	80	160	1	727	40	267	11	786	644	726	1105	6
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1742	1885	1598	1767	1763	1564	1767	1763	1572
Q Serve(g_s), s	6.8	6.0	0.1	29.7	2.5	13.6	0.9	30.5	38.0	47.5	27.9	0.2
Cycle Q Clear(g_c), s	6.8	6.0	0.1	29.7	2.5	13.6	0.9	30.5	38.0	47.5	27.9	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	138	62	771	383	850	26	927	759	581	2034	907
V/C Ratio(X)	0.80	1.16	0.02	0.94	0.10	0.31	0.42	0.85	0.85	1.25	0.54	0.01
Avail Cap(c_a), veh/h	255	138	62	784	383	850	73	927	759	581	2034	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.1	69.2	66.4	55.4	46.9	19.0	70.5	50.5	32.7	48.5	18.8	13.0
Incr Delay (d2), s/veh	13.9	125.1	0.1	19.5	0.1	0.2	10.3	7.4	8.9	126.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	5.0	0.0	14.7	1.2	4.9	0.5	13.9	20.4	40.2	10.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.0	194.3	66.5	74.9	47.0	19.2	80.9	57.9	41.6	174.5	19.1	13.0
LnGrp LOS	F	F	E	E	D	B	F	E	D	F	B	B
Approach Vol, veh/h		241			1034			1441			1837	
Approach Delay, s/veh		156.1			59.4			50.8			80.5	
Approach LOS		F			E			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	52.0	44.0	36.5	12.0	6.6	89.4	13.1	35.4				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	47.5	38.0	32.5	6.0	6.0	79.5	22.1	16.4				
Max Q Clear Time (g_c+I1), s	49.5	40.0	31.7	8.0	2.9	29.9	8.8	15.6				
Green Ext Time (p_c), s	0.0	0.0	0.3	0.0	0.0	8.6	0.1	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				70.3								
HCM 6th LOS				E								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												



HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	463	318	195	417	251	178	1723	163	134	1187	119
Future Volume (veh/h)	154	463	318	195	417	251	178	1723	163	134	1187	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	160	482	109	203	434	243	185	1795	122	140	1236	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	67	555	462	111	332	186	215	1422	617	168	1330	583
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.42	0.42	0.10	0.39	0.39
Sat Flow, veh/h	726	1781	1482	785	1065	596	1697	3385	1468	1697	3385	1484
Grp Volume(v), veh/h	160	482	109	203	0	677	185	1795	122	140	1236	55
Grp Sat Flow(s),veh/h/ln	726	1781	1482	785	0	1661	1697	1692	1468	1697	1692	1484
Q Serve(g_s), s	0.0	27.5	5.9	6.0	0.0	33.5	11.5	45.2	5.7	8.7	37.6	2.5
Cycle Q Clear(g_c), s	33.5	27.5	5.9	33.5	0.0	33.5	11.5	45.2	5.7	8.7	37.6	2.5
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	555	462	111	0	517	215	1422	617	168	1330	583
V/C Ratio(X)	2.39	0.87	0.24	1.83	0.00	1.31	0.86	1.26	0.20	0.83	0.93	0.09
Avail Cap(c_a), veh/h	67	555	462	111	0	517	368	1422	617	336	1359	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	35.0	27.5	52.6	0.0	37.0	46.1	31.2	19.7	47.6	31.2	20.6
Incr Delay (d2), s/veh	668.8	13.8	0.3	406.2	0.0	152.3	4.3	123.7	0.2	4.1	11.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	13.4	2.0	15.4	0.0	34.7	4.8	40.8	1.8	3.7	15.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	722.6	48.8	27.8	458.7	0.0	189.3	50.3	154.9	19.9	51.6	42.5	20.7
LnGrp LOS	F	D	C	F	A	F	D	F	B	D	D	C
Approach Vol, veh/h		751			880			2102			1431	
Approach Delay, s/veh		189.3			251.5			137.8			42.6	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	51.7		40.5	18.3	48.8		40.5				
Change Period (Y+Rc), s	* 4.7	6.5		7.0	* 4.7	6.5		7.0				
Max Green Setting (Gmax), s	* 21	45.2		33.5	* 23	43.2		33.5				
Max Q Clear Time (g_c+I1), s	10.7	47.2		35.5	13.5	39.6		35.5				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.2	2.4		0.0				

Intersection Summary

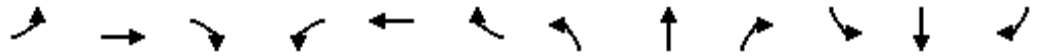
HCM 6th Ctrl Delay	138.3
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
 54: Grove Ave & Edison Ave/Ontario Ranch Rd























Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Plus Project PM Peak Hour Improvements



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	706	51	18	659	152	52	598	29	162	340	54
Future Volume (veh/h)	108	706	51	18	659	152	52	598	29	162	340	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	115	751	52	19	701	153	55	636	30	172	362	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	3	3	3
Cap, veh/h	80	759	53	86	653	143	343	771	36	172	696	100
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	615	1647	114	646	1417	309	964	1758	83	764	1587	228
Grp Volume(v), veh/h	115	0	803	19	0	854	55	0	666	172	0	414
Grp Sat Flow(s),veh/h/ln	615	0	1761	646	0	1726	964	0	1841	764	0	1815
Q Serve(g_s), s	0.0	0.0	40.7	0.8	0.0	41.5	4.0	0.0	28.6	10.9	0.0	14.9
Cycle Q Clear(g_c), s	41.5	0.0	40.7	41.5	0.0	41.5	18.9	0.0	28.6	39.5	0.0	14.9
Prop In Lane	1.00		0.06	1.00		0.18	1.00		0.05	1.00		0.13
Lane Grp Cap(c), veh/h	80	0	812	86	0	796	343	0	808	172	0	796
V/C Ratio(X)	1.44	0.00	0.99	0.22	0.00	1.07	0.16	0.00	0.82	1.00	0.00	0.52
Avail Cap(c_a), veh/h	80	0	812	86	0	796	343	0	808	172	0	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.0	0.0	24.0	44.9	0.0	24.3	25.2	0.0	22.2	42.1	0.0	18.4
Incr Delay (d2), s/veh	254.1	0.0	28.7	1.3	0.0	53.4	0.2	0.0	7.0	68.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	22.1	0.5	0.0	27.4	0.9	0.0	13.2	7.1	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	299.1	0.0	52.8	46.1	0.0	77.6	25.4	0.0	29.2	110.2	0.0	19.0
LnGrp LOS	F	A	D	D	A	F	C	A	C	F	A	B
Approach Vol, veh/h		918			873			721				586
Approach Delay, s/veh		83.6			76.9			28.9				45.7
Approach LOS		F			E			C				D
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		46.0		44.0		46.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		39.5		41.5		39.5		41.5				
Max Q Clear Time (g_c+I1), s		30.6		43.5		41.5		43.5				
Green Ext Time (p_c), s		2.9		0.0		0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				61.8								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	42	8	343	1	598	3	1515	394	593	1409	26
Future Volume (veh/h)	6	42	8	343	1	598	3	1515	394	593	1409	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	6	44	1	361	1	263	3	1595	332	624	1483	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	8	58	53	297	1	258	13	1358	589	368	2066	898
Arrive On Green	0.04	0.04	0.04	0.17	0.17	0.17	0.01	0.40	0.40	0.22	0.61	0.61
Sat Flow, veh/h	221	1623	1474	1739	6	1507	1697	3385	1468	1697	3385	1472
Grp Volume(v), veh/h	50	0	1	361	0	264	3	1595	332	624	1483	16
Grp Sat Flow(s),veh/h/ln	1844	0	1474	1739	0	1513	1697	1692	1468	1697	1692	1472
Q Serve(g_s), s	3.6	0.0	0.1	23.1	0.0	23.1	0.2	54.2	23.6	29.3	41.0	0.6
Cycle Q Clear(g_c), s	3.6	0.0	0.1	23.1	0.0	23.1	0.2	54.2	23.6	29.3	41.0	0.6
Prop In Lane	0.12		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	0	53	297	0	259	13	1358	589	368	2066	898
V/C Ratio(X)	0.76	0.00	0.02	1.21	0.00	1.02	0.22	1.17	0.56	1.70	0.72	0.02
Avail Cap(c_a), veh/h	202	0	162	297	0	259	155	1358	589	368	2066	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.5	0.0	62.8	56.0	0.0	56.0	66.6	40.4	31.3	52.9	18.2	10.4
Incr Delay (d2), s/veh	6.4	0.0	0.1	123.0	0.0	61.3	3.1	86.4	1.2	324.3	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	20.0	0.0	13.0	0.1	37.2	8.1	45.1	14.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	0.0	62.9	179.0	0.0	117.3	69.7	126.9	32.5	377.2	19.5	10.4
LnGrp LOS	E	A	E	F	A	F	E	F	C	F	B	B
Approach Vol, veh/h		51			625			1930			2123	
Approach Delay, s/veh		70.8			152.9			110.5			124.5	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.0	60.7		11.0	5.8	88.9		29.3				
Change Period (Y+Rc), s	* 4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	* 29	54.2		14.8	* 12	71.2		23.1				
Max Q Clear Time (g_c+I1), s	31.3	56.2		5.6	2.2	43.0		25.1				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	11.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	122.0
HCM 6th LOS	F

Notes





























- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# HCM 6th Signalized Intersection Summary

## 6: Haven Ave & Riverside Dr

# Subarea 29 Specific Plan Amendment

## CY (2040) PP AM Peak Hour Improvements for Ontario LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 			 	
Traffic Volume (veh/h)	370	1050	32	297	900	260	34	717	135	350	460	370
Future Volume (veh/h)	370	1050	32	297	900	260	34	717	135	350	460	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	389	1105	34	313	947	256	36	755	35	368	484	181
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	394	1276	39	359	971	262	195	818	357	297	744	620
Arrive On Green	0.12	0.37	0.37	0.10	0.36	0.36	0.00	0.23	0.23	0.13	0.40	0.40
Sat Flow, veh/h	3428	3489	107	3428	2733	737	1767	3526	1541	1767	1856	1546
Grp Volume(v), veh/h	389	558	581	313	610	593	36	755	35	368	484	181
Grp Sat Flow(s),veh/h/ln	1714	1763	1834	1714	1763	1708	1767	1763	1541	1767	1856	1546
Q Serve(g_s), s	16.7	43.4	43.5	13.3	50.4	50.7	0.1	30.9	2.6	19.5	31.2	11.7
Cycle Q Clear(g_c), s	16.7	43.4	43.5	13.3	50.4	50.7	0.1	30.9	2.6	19.5	31.2	11.7
Prop In Lane	1.00		0.06	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	645	671	359	626	607	195	818	357	297	744	620
V/C Ratio(X)	0.99	0.87	0.87	0.87	0.97	0.98	0.18	0.92	0.10	1.24	0.65	0.29
Avail Cap(c_a), veh/h	394	645	671	418	626	607	283	871	381	297	744	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	43.5	43.5	65.2	47.0	47.1	50.5	55.5	44.6	42.1	35.9	30.0
Incr Delay (d2), s/veh	41.5	11.9	11.5	14.7	29.3	30.9	0.2	14.5	0.1	132.4	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	20.3	21.1	6.4	26.3	25.8	1.1	15.1	1.0	19.2	14.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.8	55.4	55.0	79.9	76.3	78.0	50.7	69.9	44.7	174.5	37.7	30.2
LnGrp LOS	F	E	E	E	E	E	D	E	D	F	D	C
Approach Vol, veh/h		1528			1516			826			1033	
Approach Delay, s/veh		68.3			77.7			68.0			85.1	
Approach LOS		E			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	39.3	22.5	61.0	0.0	64.3	24.0	59.5				
Change Period (Y+Rc), s	5.5	5.0	7.0	7.0	5.5	5.0	7.0	7.0				
Max Green Setting (Gmax), s	19.5	36.5	18.0	51.5	7.5	48.5	17.0	52.5				
Max Q Clear Time (g_c+I1), s	21.5	32.9	15.3	45.5	0.0	33.2	18.7	52.7				
Green Ext Time (p_c), s	0.0	1.4	0.2	3.2	0.0	1.4	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			74.7									
HCM 6th LOS			E									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary  
 13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 CY (2040) PP AM Peak Hour Improvements for Ontario LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	1057	150	373	1156	270	170	1184	508	280	407	191
Future Volume (veh/h)	316	1057	150	373	1156	270	170	1184	508	280	407	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	333	1113	138	393	1217	250	179	1246	472	295	428	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	4	4	4	4	4	4
Cap, veh/h	357	1304	160	445	1339	273	234	1355	632	316	1477	626
Arrive On Green	0.11	0.24	0.24	0.14	0.27	0.27	0.07	0.27	0.27	0.09	0.29	0.29
Sat Flow, veh/h	3155	5324	655	3155	4908	1002	3401	5025	1530	3401	5025	1531
Grp Volume(v), veh/h	333	919	332	393	1092	375	179	1246	472	295	428	136
Grp Sat Flow(s),veh/h/ln	1577	1468	1574	1577	1468	1504	1700	1675	1530	1700	1675	1531
Q Serve(g_s), s	12.5	23.8	24.1	14.6	28.6	28.9	6.2	28.7	16.4	10.3	7.8	6.9
Cycle Q Clear(g_c), s	12.5	23.8	24.1	14.6	28.6	28.9	6.2	28.7	16.4	10.3	7.8	6.9
Prop In Lane	1.00		0.42	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	1079	386	445	1201	410	234	1355	632	316	1477	626
V/C Ratio(X)	0.93	0.85	0.86	0.88	0.91	0.92	0.77	0.92	0.75	0.93	0.29	0.22
Avail Cap(c_a), veh/h	357	1079	386	489	1215	415	274	1369	637	316	1477	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	43.0	43.1	50.3	41.9	42.0	54.6	42.3	10.3	53.7	32.5	23.0
Incr Delay (d2), s/veh	30.8	6.8	17.8	15.8	10.1	24.7	9.6	10.2	4.8	33.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	8.8	10.7	6.5	10.8	12.9	2.9	12.6	5.2	5.7	3.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.3	49.8	60.9	66.1	52.1	66.7	64.2	52.5	15.1	87.0	32.6	23.2
LnGrp LOS	F	D	E	E	D	E	E	D	B	F	C	C
Approach Vol, veh/h		1584			1860			1897			859	
Approach Delay, s/veh		59.2			58.0			44.3			49.8	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.3	36.7	15.7	42.6	21.0	40.0	18.6	39.7				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	18.5	27.9	9.6	34.0	13.5	32.9	11.1	32.5				
Max Q Clear Time (g_c+I1), s	16.6	26.1	8.2	9.8	14.5	30.9	12.3	30.7				
Green Ext Time (p_c), s	0.2	1.3	0.1	3.7	0.0	1.6	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D























Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

33: Sumner Ave & Merrill Ave/Bellegrave Ave CY (2040) PP AM Peak Hour Improvements for Ontario LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	424	60	224	509	293	120	366	330	137	390	94
Future Volume (veh/h)	59	424	60	224	509	293	120	366	330	137	390	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	62	446	14	236	536	239	126	385	195	144	411	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	123	653	285	280	645	287	160	520	259	180	708	137
Arrive On Green	0.07	0.18	0.18	0.16	0.27	0.27	0.09	0.23	0.23	0.10	0.24	0.24
Sat Flow, veh/h	1781	3554	1550	1767	2362	1050	1767	2266	1130	1767	2936	566
Grp Volume(v), veh/h	62	446	14	236	399	376	126	298	282	144	245	246
Grp Sat Flow(s),veh/h/ln	1781	1777	1550	1767	1763	1649	1767	1763	1633	1767	1763	1740
Q Serve(g_s), s	2.4	8.4	0.5	9.3	15.3	15.4	5.0	11.3	11.6	5.7	8.8	9.0
Cycle Q Clear(g_c), s	2.4	8.4	0.5	9.3	15.3	15.4	5.0	11.3	11.6	5.7	8.8	9.0
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.69	1.00		0.33
Lane Grp Cap(c), veh/h	123	653	285	280	481	450	160	405	375	180	425	420
V/C Ratio(X)	0.50	0.68	0.05	0.84	0.83	0.83	0.79	0.74	0.75	0.80	0.58	0.59
Avail Cap(c_a), veh/h	408	1382	602	429	710	664	294	734	680	270	710	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	27.4	24.2	29.4	24.6	24.6	32.1	25.7	25.8	31.6	24.1	24.1
Incr Delay (d2), s/veh	1.2	0.5	0.0	5.5	3.4	3.8	3.2	2.6	3.1	5.3	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.4	0.2	4.0	6.0	5.7	2.1	4.5	4.3	2.5	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	27.9	24.2	34.9	28.0	28.5	35.3	28.4	28.9	36.9	25.3	25.5
LnGrp LOS	C	C	C	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		522			1011			706			635	
Approach Delay, s/veh		28.5			29.8			29.8			28.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	23.5	16.4	19.7	11.5	24.4	10.0	26.2				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	11.0	30.0	17.5	28.0	12.0	29.0	16.5	29.0				
Max Q Clear Time (g_c+I1), s	7.7	13.6	11.3	10.4	7.0	11.0	4.4	17.4				
Green Ext Time (p_c), s	0.1	3.0	0.2	1.7	0.1	2.5	0.0	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											29.2	
HCM 6th LOS											C	
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												



HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP AM Peak Hour Improvements for Ontario LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	70	705	210	290	1192	378	250	1278	180	498	1242	170
Future Volume (veh/h)	70	705	210	290	1192	378	250	1278	180	498	1242	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	74	742	183	305	1255	167	263	1345	86	524	1307	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	92	1053	251	283	1582	482	251	1365	416	487	1365	416
Arrive On Green	0.06	0.22	0.22	0.17	0.34	0.34	0.15	0.29	0.29	0.15	0.29	0.29
Sat Flow, veh/h	1626	4750	1131	1626	4661	1421	1668	4782	1457	3237	4782	1457
Grp Volume(v), veh/h	74	686	239	305	1255	167	263	1345	86	524	1307	65
Grp Sat Flow(s),veh/h/ln	1626	1468	1476	1626	1554	1421	1668	1594	1457	1618	1594	1457
Q Serve(g_s), s	6.1	19.4	20.3	23.5	32.8	11.9	20.3	37.7	6.0	20.3	36.3	4.5
Cycle Q Clear(g_c), s	6.1	19.4	20.3	23.5	32.8	11.9	20.3	37.7	6.0	20.3	36.3	4.5
Prop In Lane	1.00		0.77	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	977	327	283	1582	482	251	1365	416	487	1365	416
V/C Ratio(X)	0.81	0.70	0.73	1.08	0.79	0.35	1.05	0.99	0.21	1.08	0.96	0.16
Avail Cap(c_a), veh/h	168	1306	438	283	1714	523	251	1365	416	487	1365	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	48.4	48.7	55.7	40.3	33.4	57.3	47.9	36.6	57.3	47.4	36.1
Incr Delay (d2), s/veh	15.0	1.1	4.1	75.4	2.5	0.4	69.8	20.9	0.2	62.7	15.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.0	7.7	15.3	12.5	4.1	13.1	16.8	2.1	12.2	15.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	49.5	52.9	131.1	42.8	33.8	127.1	68.8	36.9	120.0	62.8	36.2
LnGrp LOS	E	D	D	F	D	C	F	E	D	F	E	D
Approach Vol, veh/h		999			1727			1694			1896	
Approach Delay, s/veh		52.4			57.5			76.2			77.7	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	45.0	28.0	36.9	25.0	45.0	12.1	52.8				
Change Period (Y+Rc), s	* 4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	* 20	38.5	23.5	40.0	* 20	38.5	13.9	49.6				
Max Q Clear Time (g_c+I1), s	22.3	39.7	25.5	22.3	22.3	38.3	8.1	34.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	5.5	0.0	0.2	0.1	6.6				

Intersection Summary

HCM 6th Ctrl Delay	67.8
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



# HCM 6th Signalized Intersection Summary

## 55: Euclid Ave & Merrill Ave

# Subarea 29 Specific Plan Amendment

## CY (2040) PP AM Peak Hour Improvements for Ontario LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↘		↖	↕↕↕	↗	↖	↕↕↕	
Traffic Volume (veh/h)	10	10	10	560	40	366	10	1350	410	312	1210	40
Future Volume (veh/h)	10	10	10	560	40	366	10	1350	410	312	1210	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	11	0	589	42	166	11	1421	220	328	1274	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	37	37	64	558	102	403	41	1354	412	301	2086	67
Arrive On Green	0.04	0.04	0.00	0.33	0.33	0.33	0.02	0.28	0.28	0.18	0.44	0.44
Sat Flow, veh/h	905	905	1572	1668	305	1205	1668	4782	1457	1668	4754	153
Grp Volume(v), veh/h	22	0	0	589	0	208	11	1421	220	328	854	461
Grp Sat Flow(s),veh/h/ln	1810	0	1572	1668	0	1509	1668	1594	1457	1668	1594	1719
Q Serve(g_s), s	1.7	0.0	0.0	48.8	0.0	15.5	0.9	41.3	18.6	26.3	30.0	30.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	48.8	0.0	15.5	0.9	41.3	18.6	26.3	30.0	30.0
Prop In Lane	0.50		1.00	1.00		0.80	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	73	0	64	558	0	505	41	1354	412	301	1399	754
V/C Ratio(X)	0.30	0.00	0.00	1.06	0.00	0.41	0.27	1.05	0.53	1.09	0.61	0.61
Avail Cap(c_a), veh/h	124	0	108	558	0	505	114	1354	412	301	1399	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	0.0	0.0	48.6	0.0	37.5	69.9	52.3	44.2	59.8	31.4	31.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	53.6	0.0	0.5	1.3	38.6	1.3	78.3	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	28.0	0.0	5.7	0.4	20.6	6.6	17.3	11.1	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.8	0.0	0.0	102.1	0.0	38.0	71.1	90.9	45.5	138.1	32.2	32.8
LnGrp LOS	E	A	A	F	A	D	E	F	D	F	C	C
Approach Vol, veh/h		22			797			1652			1643	
Approach Delay, s/veh		68.8			85.4			84.7			53.5	
Approach LOS		E			F			F			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.0	47.8		12.1	8.3	70.5		55.0				
Change Period (Y+Rc), s	* 4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	* 26	41.3		10.0	* 10	57.6		48.8				
Max Q Clear Time (g_c+I1), s	28.3	43.3		3.7	2.9	32.0		50.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.7		0.0				

### Intersection Summary

HCM 6th Ctrl Delay	72.3
HCM 6th LOS	E

### Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

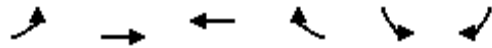
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

14: Ontario Ranch Rd & I-15 SB Ramps

CY (2040) PP AM Peak Hour Improvements for Non-Ontrio LOS Standards



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1414	943	0	220	1156
Future Volume (veh/h)	0	1414	943	0	220	1156
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1707	1707	0	1707	1707
Adj Flow Rate, veh/h	0	1488	993	0	232	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	13	13	0	13	13
Cap, veh/h	0	2300	1601	0	421	
Arrive On Green	0.00	0.49	0.49	0.00	0.13	0.00
Sat Flow, veh/h	0	4968	3415	0	3155	1447
Grp Volume(v), veh/h	0	1488	993	0	232	0
Grp Sat Flow(s),veh/h/ln	0	1554	1622	0	1577	1447
Q Serve(g_s), s	0.0	7.8	7.4	0.0	2.3	0.0
Cycle Q Clear(g_c), s	0.0	7.8	7.4	0.0	2.3	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2300	1601	0	421	
V/C Ratio(X)	0.00	0.65	0.62	0.00	0.55	
Avail Cap(c_a), veh/h	0	2883	2007	0	698	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.2	6.1	0.0	13.4	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.4	0.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.5	0.0	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.6	6.5	0.0	14.5	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		1488	993		232	A
Approach Delay, s/veh		6.6	6.5		14.5	
Approach LOS		A	A		B	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		23.1		9.9		23.1
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		20.4		7.3		20.4
Max Q Clear Time (g_c+I1), s		9.8		4.3		9.4
Green Ext Time (p_c), s		6.4		0.2		4.6

Intersection Summary

HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

15: I-15 NB Ramps & Ontario Ranch Rd CY (2040) PP AM Peak Hour Improvements for Non-Onrto LOS Standards



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	599	1025	160	357	585	640
Future Volume (veh/h)	599	1025	160	357	585	640
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	631	1075	168	376	699	352
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13
Cap, veh/h	1343	1739	198	2574	912	406
Arrive On Green	0.41	0.41	0.06	0.55	0.28	0.28
Sat Flow, veh/h	3329	2476	3155	4815	3252	1447
Grp Volume(v), veh/h	631	1075	168	376	699	352
Grp Sat Flow(s),veh/h/ln	1622	1238	1577	1554	1626	1447
Q Serve(g_s), s	11.3	18.6	4.2	3.1	15.7	18.4
Cycle Q Clear(g_c), s	11.3	18.6	4.2	3.1	15.7	18.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1343	1739	198	2574	912	406
V/C Ratio(X)	0.47	0.62	0.85	0.15	0.77	0.87
Avail Cap(c_a), veh/h	2272	2449	198	3909	1022	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	6.6	36.9	8.7	26.2	27.2
Incr Delay (d2), s/veh	0.3	0.4	27.3	0.0	3.2	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	8.6	2.2	0.8	6.2	7.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.2	6.9	64.2	8.7	29.4	42.2
LnGrp LOS	B	A	E	A	C	D
Approach Vol, veh/h	1706			544	1051	
Approach Delay, s/veh	10.7			25.8	33.7	
Approach LOS	B			C	C	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.0	40.2			51.2	28.3
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	5.0	55.7			66.7	25.0
Max Q Clear Time (g_c+I1), s	6.2	20.6			5.1	20.4
Green Ext Time (p_c), s	0.0	11.0			2.4	1.9

Intersection Summary

HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

33: Sumner Ave & Merrill Ave/Bellegrave Ave (2040) PP AM Peak Hour Improvements for Non-Onrto LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	424	60	224	509	293	120	366	330	137	390	94
Future Volume (veh/h)	59	424	60	224	509	293	120	366	330	137	390	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	62	446	54	236	536	239	126	385	186	144	411	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	123	783	94	330	645	287	159	528	251	181	713	134
Arrive On Green	0.07	0.25	0.25	0.10	0.27	0.27	0.09	0.23	0.23	0.10	0.24	0.24
Sat Flow, veh/h	1781	3185	384	3428	2362	1050	1767	2306	1097	1767	2950	555
Grp Volume(v), veh/h	62	248	252	236	399	376	126	293	278	144	244	245
Grp Sat Flow(s),veh/h/ln	1781	1777	1792	1714	1763	1649	1767	1763	1640	1767	1763	1742
Q Serve(g_s), s	2.4	8.8	8.9	4.8	15.3	15.4	5.0	11.1	11.3	5.7	8.8	8.9
Cycle Q Clear(g_c), s	2.4	8.8	8.9	4.8	15.3	15.4	5.0	11.1	11.3	5.7	8.8	8.9
Prop In Lane	1.00		0.21	1.00		0.64	1.00		0.67	1.00		0.32
Lane Grp Cap(c), veh/h	123	437	441	330	481	450	159	404	375	181	426	421
V/C Ratio(X)	0.50	0.57	0.57	0.71	0.83	0.83	0.79	0.73	0.74	0.79	0.57	0.58
Avail Cap(c_a), veh/h	173	693	699	381	712	666	221	842	783	392	1013	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	23.8	23.8	31.6	24.6	24.6	32.1	25.7	25.8	31.6	24.1	24.1
Incr Delay (d2), s/veh	1.2	0.4	0.4	4.0	3.4	3.8	8.3	2.5	2.9	3.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.5	3.6	2.0	6.0	5.7	2.4	4.4	4.3	2.4	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	24.2	24.3	35.6	28.0	28.4	40.4	28.2	28.7	34.5	25.3	25.4
LnGrp LOS	C	C	C	D	C	C	D	C	C	C	C	C
Approach Vol, veh/h		562			1011			697			633	
Approach Delay, s/veh		25.3			29.9			30.6			27.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	23.5	11.9	24.2	11.5	24.4	10.0	26.2				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	16.0	34.4	8.0	28.1	9.0	41.4	7.0	29.1				
Max Q Clear Time (g_c+I1), s	7.7	13.3	6.8	10.9	7.0	10.9	4.4	17.4				
Green Ext Time (p_c), s	0.1	3.2	0.1	1.7	0.0	2.8	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP AM Peak Hour Improvements for Non-Onrto LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	70	705	210	290	1192	378	250	1278	180	498	1242	170
Future Volume (veh/h)	70	705	210	290	1192	378	250	1278	180	498	1242	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	74	742	117	305	1255	175	263	1345	89	524	1307	70
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	13	13	13	13	13	13	10	10	10	10	10	10
Cap, veh/h	93	1332	321	363	1327	404	287	1436	438	576	1464	446
Arrive On Green	0.06	0.23	0.23	0.12	0.28	0.28	0.17	0.30	0.30	0.18	0.31	0.31
Sat Flow, veh/h	1626	5873	1417	3155	4661	1420	1668	4782	1457	3237	4782	1457
Grp Volume(v), veh/h	74	742	117	305	1255	175	263	1345	89	524	1307	70
Grp Sat Flow(s),veh/h/ln	1626	1468	1417	1577	1554	1420	1668	1594	1457	1618	1594	1457
Q Serve(g_s), s	5.7	14.1	8.8	11.9	33.2	12.7	19.5	34.5	5.7	20.0	32.9	4.4
Cycle Q Clear(g_c), s	5.7	14.1	8.8	11.9	33.2	12.7	19.5	34.5	5.7	20.0	32.9	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	1332	321	363	1327	404	287	1436	438	576	1464	446
V/C Ratio(X)	0.80	0.56	0.36	0.84	0.95	0.43	0.92	0.94	0.20	0.91	0.89	0.16
Avail Cap(c_a), veh/h	290	1775	428	513	1334	406	348	1456	444	649	1464	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.7	43.1	41.1	54.7	44.1	36.8	51.3	42.9	32.9	50.8	41.8	31.9
Incr Delay (d2), s/veh	14.2	0.4	0.7	8.5	13.7	0.7	23.3	11.6	0.2	14.9	7.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	5.0	3.1	5.1	14.0	4.4	9.7	14.3	2.0	8.9	13.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.9	43.5	41.8	63.1	57.9	37.5	74.6	54.5	33.1	65.8	49.2	32.1
LnGrp LOS	E	D	D	E	E	D	E	D	C	E	D	C
Approach Vol, veh/h		933			1735			1697			1901	
Approach Delay, s/veh		45.6			56.7			56.5			53.1	
Approach LOS		D			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.1	44.4	19.0	35.6	26.4	45.1	11.7	42.9				
Change Period (Y+Rc), s	* 4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	* 25	38.4	20.5	38.1	* 26	37.4	22.5	36.1				
Max Q Clear Time (g_c+I1), s	22.0	36.5	13.9	16.1	21.5	34.9	7.7	35.2				
Green Ext Time (p_c), s	0.4	1.3	0.6	4.2	0.2	1.8	0.1	0.6				

Intersection Summary
























HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP AM Peak Hour Improvements for Non-Onrtio LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	560	40	366	10	1350	410	312	1210	40
Future Volume (veh/h)	10	10	10	560	40	366	10	1350	410	312	1210	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	11	0	619	0	234	11	1421	226	328	1274	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	10	10	10	10	10	10
Cap, veh/h	39	39	67	721	0	314	42	1622	495	352	2495	80
Arrive On Green	0.04	0.04	0.00	0.22	0.00	0.22	0.03	0.34	0.34	0.21	0.52	0.52
Sat Flow, veh/h	905	905	1572	3337	0	1454	1668	4782	1458	1668	4755	153
Grp Volume(v), veh/h	22	0	0	619	0	234	11	1421	226	328	854	461
Grp Sat Flow(s),veh/h/ln	1810	0	1572	1668	0	1454	1668	1594	1458	1668	1594	1719
Q Serve(g_s), s	1.5	0.0	0.0	22.1	0.0	18.6	0.8	34.5	15.0	23.9	21.5	21.5
Cycle Q Clear(g_c), s	1.5	0.0	0.0	22.1	0.0	18.6	0.8	34.5	15.0	23.9	21.5	21.5
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	78	0	67	721	0	314	42	1622	495	352	1673	902
V/C Ratio(X)	0.28	0.00	0.00	0.86	0.00	0.75	0.26	0.88	0.46	0.93	0.51	0.51
Avail Cap(c_a), veh/h	147	0	127	1080	0	471	135	1785	544	409	1714	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	0.0	0.0	46.6	0.0	45.3	59.1	38.4	31.9	47.9	19.1	19.1
Incr Delay (d2), s/veh	0.7	0.0	0.0	4.7	0.0	3.5	1.2	4.9	0.7	24.6	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	9.3	0.0	6.8	0.3	13.3	5.1	11.8	7.2	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	0.0	0.0	51.3	0.0	48.8	60.2	43.3	32.6	72.5	19.3	19.5
LnGrp LOS	E	A	A	D	A	D	E	D	C	E	B	B
Approach Vol, veh/h		22			853			1658			1643	
Approach Delay, s/veh		58.0			50.6			41.9			30.0	
Approach LOS		E			D			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.8	48.4		11.5	7.8	71.3		32.9				
Change Period (Y+Rc), s	* 4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	* 30	46.1		10.0	* 10	66.4		40.0				
Max Q Clear Time (g_c+I1), s	25.9	36.5		3.5	2.8	23.5		24.1				
Green Ext Time (p_c), s	0.2	5.4		0.0	0.0	9.8		1.4				

Intersection Summary

HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP AM Peak Hour Improvements for Non-Onrto LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑	↘	↗↘	↑↑		↗	↑↑↑	↘	↗	↑↑↑	
Traffic Volume (veh/h)	80	450	30	1340	930	200	40	940	680	130	770	40
Future Volume (veh/h)	80	450	30	1340	930	200	40	940	680	130	770	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	82	464	0	1381	959	193	41	969	0	134	794	36
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	132	555		1403	1061	213	105	1126		142	1533	69
Arrive On Green	0.08	0.17	0.00	0.30	0.39	0.39	0.06	0.24	0.00	0.09	0.26	0.26
Sat Flow, veh/h	1668	3328	1485	4705	2752	553	1668	4782	1485	1668	5949	268
Grp Volume(v), veh/h	82	464	0	1381	579	573	41	969	0	134	602	228
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1568	1664	1641	1668	1594	1485	1668	1507	1697
Q Serve(g_s), s	5.6	15.8	0.0	34.2	38.5	38.7	2.8	22.8	0.0	9.4	13.4	13.5
Cycle Q Clear(g_c), s	5.6	15.8	0.0	34.2	38.5	38.7	2.8	22.8	0.0	9.4	13.4	13.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	132	555		1403	642	633	105	1126		142	1165	437
V/C Ratio(X)	0.62	0.84		0.98	0.90	0.91	0.39	0.86		0.94	0.52	0.52
Avail Cap(c_a), veh/h	142	632		1403	670	661	142	1324		142	1251	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	47.4	0.0	40.9	34.0	34.0	52.9	43.0	0.0	53.4	37.3	37.4
Incr Delay (d2), s/veh	8.7	9.3	0.0	20.4	15.6	16.1	0.9	4.7	0.0	57.7	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	7.1	0.0	15.2	17.4	17.3	1.1	9.0	0.0	6.0	4.7	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	56.7	0.0	61.3	49.6	50.1	53.7	47.7	0.0	111.1	37.4	37.7
LnGrp LOS	E	E		E	D	D	D	D		F	D	D
Approach Vol, veh/h		546	A		2533			1010	A		964	
Approach Delay, s/veh		57.3			56.1			48.0			47.8	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	34.1	42.0	26.6	12.1	36.8	16.3	52.3				
Change Period (Y+Rc), s	* 4.7	6.5	7.0	7.0	* 4.7	6.5	7.0	7.0				
Max Green Setting (Gmax), s	* 10	32.5	35.0	22.3	* 10	32.5	10.0	47.3				
Max Q Clear Time (g_c+I1), s	11.4	24.8	36.2	17.8	4.8	15.5	7.6	40.7				
Green Ext Time (p_c), s	0.0	2.5	0.0	1.4	0.0	2.8	0.0	4.4				

Intersection Summary

HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.































# HCM 6th Signalized Intersection Summary

## 6: Haven Ave & Riverside Dr

# Subarea 29 Specific Plan Amendment

## CY (2040) PP PM Peak Hour Improvements for Ontario LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 			 	
Traffic Volume (veh/h)	390	880	41	162	910	160	31	598	101	410	795	430
Future Volume (veh/h)	390	880	41	162	910	160	31	598	101	410	795	430
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	394	889	40	164	919	153	31	604	25	414	803	290
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	391	1196	54	214	895	149	67	713	311	439	825	688
Arrive On Green	0.11	0.35	0.35	0.06	0.30	0.30	0.00	0.20	0.20	0.20	0.44	0.44
Sat Flow, veh/h	3428	3433	154	3428	3015	502	1767	3526	1539	1767	1856	1547
Grp Volume(v), veh/h	394	456	473	164	537	535	31	604	25	414	803	290
Grp Sat Flow(s),veh/h/ln	1714	1763	1824	1714	1763	1754	1767	1763	1539	1767	1856	1547
Q Serve(g_s), s	15.0	29.9	29.9	6.2	39.0	39.0	0.1	21.7	1.7	24.0	55.7	16.8
Cycle Q Clear(g_c), s	15.0	29.9	29.9	6.2	39.0	39.0	0.1	21.7	1.7	24.0	55.7	16.8
Prop In Lane	1.00		0.08	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	614	636	214	523	520	67	713	311	439	825	688
V/C Ratio(X)	1.01	0.74	0.74	0.77	1.03	1.03	0.46	0.85	0.08	0.94	0.97	0.42
Avail Cap(c_a), veh/h	391	614	636	235	523	520	160	899	392	528	840	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	37.6	37.6	60.7	46.2	46.2	64.1	50.5	42.5	33.4	35.7	24.9
Incr Delay (d2), s/veh	47.3	4.9	4.7	11.2	46.4	46.7	1.9	5.8	0.1	22.2	24.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	13.1	13.6	3.0	23.0	22.9	1.0	9.9	0.7	12.5	29.2	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.5	42.5	42.3	71.9	92.6	92.9	66.0	56.3	42.6	55.6	60.1	25.3
LnGrp LOS	F	D	D	E	F	F	E	E	D	E	E	C
Approach Vol, veh/h		1323			1236			660			1507	
Approach Delay, s/veh		61.2			90.0			56.2			52.1	
Approach LOS		E			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.9	31.6	15.2	52.8	0.0	63.4	22.0	46.0				
Change Period (Y+Rc), s	5.5	5.0	7.0	7.0	5.5	5.0	7.0	7.0				
Max Green Setting (Gmax), s	33.0	33.5	9.0	45.0	7.0	59.5	15.0	39.0				
Max Q Clear Time (g_c+I1), s	26.0	23.7	8.2	31.9	0.0	57.7	17.0	41.0				
Green Ext Time (p_c), s	0.4	2.1	0.0	4.3	0.0	0.7	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			65.2									
HCM 6th LOS			E									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary  
 13: Hamner Ave & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
 CY (2040) PP PM Peak Hour Improvements for Ontario LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	1328	270	713	1702	300	320	658	478	500	1170	285
Future Volume (veh/h)	385	1328	270	713	1702	300	320	658	478	500	1170	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	401	1383	256	743	1773	291	333	685	406	521	1219	207
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	1	1	1	1	1	1
Cap, veh/h	406	1443	266	669	1899	312	290	800	567	573	1218	568
Arrive On Green	0.12	0.28	0.28	0.20	0.36	0.36	0.08	0.16	0.16	0.16	0.24	0.24
Sat Flow, veh/h	3291	5219	964	3291	5328	874	3483	5147	1559	3483	5147	1566
Grp Volume(v), veh/h	401	1218	421	743	1529	535	333	685	406	521	1219	207
Grp Sat Flow(s),veh/h/ln	1646	1532	1586	1646	1532	1606	1742	1716	1559	1742	1716	1566
Q Serve(g_s), s	18.2	39.1	39.3	30.5	48.1	48.2	12.5	19.4	23.3	22.0	35.5	14.6
Cycle Q Clear(g_c), s	18.2	39.1	39.3	30.5	48.1	48.2	12.5	19.4	23.3	22.0	35.5	14.6
Prop In Lane	1.00		0.61	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	406	1271	439	669	1639	573	290	800	567	573	1218	568
V/C Ratio(X)	0.99	0.96	0.96	1.11	0.93	0.93	1.15	0.86	0.72	0.91	1.00	0.36
Avail Cap(c_a), veh/h	406	1272	439	669	1640	573	290	800	567	662	1218	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.6	53.4	53.4	59.7	46.5	46.5	68.7	61.7	41.7	61.5	57.2	35.4
Incr Delay (d2), s/veh	41.2	16.3	33.0	69.0	10.3	22.7	98.6	9.2	4.4	14.7	25.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	16.3	19.0	18.7	19.0	21.9	9.4	8.9	13.2	10.7	17.8	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.8	69.7	86.4	128.7	56.8	69.2	167.3	70.9	46.0	76.3	83.2	35.9
LnGrp LOS	F	E	F	F	E	E	F	E	D	E	F	D
Approach Vol, veh/h		2040			2807			1424			1947	
Approach Delay, s/veh		80.4			78.2			86.3			76.3	
Approach LOS		F			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.0	49.0	20.0	43.0	26.0	61.0	32.2	30.8				
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5				
Max Green Setting (Gmax), s	30.5	41.5	12.5	35.5	18.5	53.5	28.5	19.5				
Max Q Clear Time (g_c+I1), s	32.5	41.3	14.5	37.5	20.2	50.2	24.0	25.3				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	3.0	0.7	0.0				

Intersection Summary

HCM 6th Ctrl Delay	79.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

# HCM 6th Signalized Intersection Summary

# Subarea 29 Specific Plan Amendment

## 33: Sumner Ave & Merrill Ave/Bellegrave Ave CY (2040) PP PM Peak Hour Improvements for Ontario LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	801	170	508	399	157	90	331	339	188	462	77
Future Volume (veh/h)	43	801	170	508	399	157	90	331	339	188	462	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	826	71	524	411	136	93	341	219	194	476	71
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	74	901	394	449	1213	397	115	406	255	217	782	116
Arrive On Green	0.04	0.25	0.25	0.25	0.47	0.47	0.06	0.20	0.20	0.12	0.25	0.25
Sat Flow, veh/h	1781	3554	1554	1767	2601	851	1767	2065	1298	1767	3070	455
Grp Volume(v), veh/h	44	826	71	524	277	270	93	290	270	194	272	275
Grp Sat Flow(s),veh/h/ln	1781	1777	1554	1767	1763	1689	1767	1763	1600	1767	1763	1763
Q Serve(g_s), s	3.3	30.8	4.9	34.6	13.5	13.8	7.1	21.5	22.2	14.7	18.5	18.7
Cycle Q Clear(g_c), s	3.3	30.8	4.9	34.6	13.5	13.8	7.1	21.5	22.2	14.7	18.5	18.7
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.81	1.00		0.26
Lane Grp Cap(c), veh/h	74	901	394	449	822	787	115	347	315	217	449	449
V/C Ratio(X)	0.59	0.92	0.18	1.17	0.34	0.34	0.81	0.84	0.86	0.89	0.61	0.61
Avail Cap(c_a), veh/h	131	989	433	449	822	787	182	479	435	221	518	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	49.4	39.7	50.8	23.0	23.1	62.8	52.6	52.8	58.8	44.7	44.8
Incr Delay (d2), s/veh	2.8	11.6	0.1	96.7	0.1	0.1	6.4	9.0	11.8	32.3	1.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	15.0	1.8	26.8	5.4	5.3	3.3	10.2	9.7	8.4	8.1	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	61.0	39.8	147.5	23.1	23.2	69.2	61.6	64.7	91.2	46.3	46.5
LnGrp LOS	E	E	D	F	C	C	E	E	E	F	D	D
Approach Vol, veh/h		941			1071			653			741	
Approach Delay, s/veh		59.7			84.0			63.9			58.1	
Approach LOS		E			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.7	33.8	39.6	41.0	13.8	41.7	10.7	70.0				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	17.0	37.0	34.6	37.9	14.0	40.0	10.0	62.5				
Max Q Clear Time (g_c+I1), s	16.7	24.2	36.6	32.8	9.1	20.7	5.3	15.8				
Green Ext Time (p_c), s	0.0	2.6	0.0	1.8	0.0	2.8	0.0	1.8				

### Intersection Summary
























HCM 6th Ctrl Delay	67.8
HCM 6th LOS	E

### Notes

User approved pedestrian interval to be less than phase max green.























HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP PM Peak Hour Improvements for Ontario LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1192	300	210	900	452	180	1275	330	415	1356	120
Future Volume (veh/h)	190	1192	300	210	900	452	180	1275	330	415	1356	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	198	1242	279	219	938	285	188	1328	155	432	1412	46
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	216	1445	323	223	1416	431	187	1368	417	427	1463	446
Arrive On Green	0.13	0.29	0.29	0.13	0.29	0.29	0.11	0.28	0.28	0.13	0.30	0.30
Sat Flow, veh/h	1697	5027	1123	1697	4863	1482	1697	4863	1481	3291	4863	1482
Grp Volume(v), veh/h	198	1135	386	219	938	285	188	1328	155	432	1412	46
Grp Sat Flow(s),veh/h/ln	1697	1532	1554	1697	1621	1482	1697	1621	1481	1646	1621	1482
Q Serve(g_s), s	15.4	31.1	31.4	17.2	22.6	22.5	14.7	36.0	11.2	17.3	38.1	3.0
Cycle Q Clear(g_c), s	15.4	31.1	31.4	17.2	22.6	22.5	14.7	36.0	11.2	17.3	38.1	3.0
Prop In Lane	1.00		0.72	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	1321	447	223	1416	431	187	1368	417	427	1463	446
V/C Ratio(X)	0.92	0.86	0.86	0.98	0.66	0.66	1.00	0.97	0.37	1.01	0.97	0.10
Avail Cap(c_a), veh/h	216	1379	466	223	1477	450	187	1368	417	427	1463	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	44.9	45.0	57.8	41.5	41.5	59.3	47.4	38.5	58.0	45.9	33.6
Incr Delay (d2), s/veh	38.7	5.5	15.1	55.4	1.1	3.4	67.1	17.7	0.6	46.4	16.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	12.1	13.6	10.6	8.9	8.4	9.6	16.0	4.1	9.7	16.7	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.1	50.5	60.1	113.1	42.6	44.8	126.4	65.1	39.0	104.4	61.9	33.7
LnGrp LOS	F	D	E	F	D	D	F	E	D	F	E	C
Approach Vol, veh/h		1719			1442			1671			1890	
Approach Delay, s/veh		57.9			53.7			69.6			70.9	
Approach LOS		E			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	44.0	22.0	45.3	19.4	46.6	21.5	45.8				
Change Period (Y+Rc), s	* 4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	* 17	37.5	17.5	40.0	* 15	40.1	17.0	40.5				
Max Q Clear Time (g_c+I1), s	19.3	38.0	19.2	33.4	16.7	40.1	17.4	24.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	4.6	0.0	0.0	0.0	4.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			63.6									
HCM 6th LOS			E									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP PM Peak Hour Improvements for Ontario LOS Standards

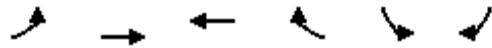
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	40	10	590	10	283	10	1310	660	363	1660	30
Future Volume (veh/h)	10	40	10	590	10	283	10	1310	660	363	1660	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	11	42	2	621	11	91	11	1379	343	382	1747	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	23	89	92	533	51	423	42	1315	400	340	2193	40
Arrive On Green	0.06	0.06	0.06	0.31	0.31	0.31	0.02	0.27	0.27	0.20	0.45	0.45
Sat Flow, veh/h	381	1455	1510	1739	167	1380	1697	4863	1481	1697	4915	90
Grp Volume(v), veh/h	53	0	2	621	0	102	11	1379	343	382	1152	627
Grp Sat Flow(s),veh/h/ln	1836	0	1510	1739	0	1547	1697	1621	1481	1697	1621	1762
Q Serve(g_s), s	4.1	0.0	0.2	44.8	0.0	7.2	0.9	39.5	32.1	29.3	44.6	44.7
Cycle Q Clear(g_c), s	4.1	0.0	0.2	44.8	0.0	7.2	0.9	39.5	32.1	29.3	44.6	44.7
Prop In Lane	0.21		1.00	1.00		0.89	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	112	0	92	533	0	474	42	1315	400	340	1447	786
V/C Ratio(X)	0.47	0.00	0.02	1.16	0.00	0.22	0.26	1.05	0.86	1.12	0.80	0.80
Avail Cap(c_a), veh/h	161	0	132	533	0	474	116	1315	400	340	1447	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	0.0	64.5	50.7	0.0	37.6	70.0	53.3	50.6	58.4	34.8	34.8
Incr Delay (d2), s/veh	1.1	0.0	0.0	93.2	0.0	0.2	1.2	38.7	16.6	86.3	3.2	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.1	32.7	0.0	2.7	0.4	20.1	13.3	20.3	17.2	19.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	0.0	64.5	143.8	0.0	37.8	71.2	92.0	67.2	144.7	38.0	40.5
LnGrp LOS	E	A	E	F	A	D	E	F	E	F	D	D
Approach Vol, veh/h		55			723			1733			2161	
Approach Delay, s/veh		67.4			128.9			87.0			57.6	
Approach LOS		E			F			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.0	46.0		15.1	8.3	71.7		51.0				
Change Period (Y+Rc), s	* 4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	* 29	39.5		12.8	* 10	58.8		44.8				
Max Q Clear Time (g_c+I1), s	31.3	41.5		6.1	2.9	46.7		46.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				79.6								
HCM 6th LOS				E								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

14: Ontario Ranch Rd & I-15 SB Ramps

CY (2040) PP PM Peak Hour Improvements for Non-Ontrio LOS Standards



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1900	1394	0	260	1721
Future Volume (veh/h)	0	1900	1394	0	260	1721
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1781	1781	0	1781	1781
Adj Flow Rate, veh/h	0	2000	1467	0	274	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	8	8	0	8	8
Cap, veh/h	0	2873	1999	0	413	
Arrive On Green	0.00	0.59	0.59	0.00	0.13	0.00
Sat Flow, veh/h	0	5184	3563	0	3291	1510
Grp Volume(v), veh/h	0	2000	1467	0	274	0
Grp Sat Flow(s),veh/h/ln	0	1621	1692	0	1646	1510
Q Serve(g_s), s	0.0	12.4	13.6	0.0	3.4	0.0
Cycle Q Clear(g_c), s	0.0	12.4	13.6	0.0	3.4	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2873	1999	0	413	
V/C Ratio(X)	0.00	0.70	0.73	0.00	0.66	
Avail Cap(c_a), veh/h	0	3389	2359	0	570	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.2	6.4	0.0	18.1	0.0
Incr Delay (d2), s/veh	0.0	0.5	1.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.5	0.0	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.7	7.4	0.0	19.9	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		2000	1467		274	A
Approach Delay, s/veh		6.7	7.4		19.9	
Approach LOS		A	A		B	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		32.4		10.9		32.4
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.2		7.5		30.2
Max Q Clear Time (g_c+I1), s		14.4		5.4		15.6
Green Ext Time (p_c), s		11.2		0.2		8.2

Intersection Summary

HCM 6th Ctrl Delay			7.9			
HCM 6th LOS			A			

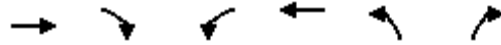
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

15: I-15 NB Ramps & Ontario Ranch Rd CY (2040) PP PM Peak Hour Improvements for Non-Ontario LOS Standards



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑↑	↑↑↑	↑
Traffic Volume (veh/h)	771	1389	170	590	803	170
Future Volume (veh/h)	771	1389	170	590	803	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	812	1460	179	621	845	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8
Cap, veh/h	1656	1954	170	2934	879	391
Arrive On Green	0.49	0.49	0.05	0.60	0.26	0.26
Sat Flow, veh/h	3474	2587	3291	5024	3393	1510
Grp Volume(v), veh/h	812	1460	179	621	845	71
Grp Sat Flow(s),veh/h/ln	1692	1293	1646	1621	1697	1510
Q Serve(g_s), s	15.6	31.5	5.0	5.6	23.7	3.5
Cycle Q Clear(g_c), s	15.6	31.5	5.0	5.6	23.7	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1656	1954	170	2934	879	391
V/C Ratio(X)	0.49	0.75	1.05	0.21	0.96	0.18
Avail Cap(c_a), veh/h	1953	2180	170	3360	879	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	7.0	45.8	8.7	35.3	27.8
Incr Delay (d2), s/veh	0.2	1.3	82.8	0.0	21.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	16.6	3.9	1.6	12.2	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.8	8.3	128.6	8.7	56.8	28.0
LnGrp LOS	B	A	F	A	E	C
Approach Vol, veh/h	2272			800	916	
Approach Delay, s/veh	11.3			35.6	54.6	
Approach LOS	B			D	D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.0	54.5			65.5	31.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	5.0	55.7			66.7	25.0
Max Q Clear Time (g_c+I1), s	7.0	33.5			7.6	25.7
Green Ext Time (p_c), s	0.0	13.3			4.1	0.0

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.



HCM 6th Signalized Intersection Summary

Subarea 29 Specific Plan Amendment

33: Sumner Ave & Merrill Ave/Bellegrave Ave (2040) PP PM Peak Hour Improvements for Non-Onorio LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	801	170	508	399	157	90	331	339	188	462	77
Future Volume (veh/h)	43	801	170	508	399	157	90	331	339	188	462	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	826	162	524	411	130	93	341	187	194	476	68
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	882	173	550	1083	339	117	424	227	224	783	111
Arrive On Green	0.05	0.30	0.30	0.16	0.41	0.41	0.07	0.19	0.19	0.13	0.25	0.25
Sat Flow, veh/h	1781	2951	579	3428	2634	823	1767	2203	1183	1767	3090	439
Grp Volume(v), veh/h	44	497	491	524	274	267	93	271	257	194	270	274
Grp Sat Flow(s),veh/h/ln	1781	1777	1753	1714	1763	1694	1767	1763	1622	1767	1763	1766
Q Serve(g_s), s	2.6	28.9	28.9	16.1	11.5	11.7	5.5	15.6	16.1	11.4	14.3	14.5
Cycle Q Clear(g_c), s	2.6	28.9	28.9	16.1	11.5	11.7	5.5	15.6	16.1	11.4	14.3	14.5
Prop In Lane	1.00		0.33	1.00		0.49	1.00		0.73	1.00		0.25
Lane Grp Cap(c), veh/h	85	531	524	550	725	697	117	339	312	224	446	447
V/C Ratio(X)	0.52	0.94	0.94	0.95	0.38	0.38	0.80	0.80	0.82	0.86	0.61	0.61
Avail Cap(c_a), veh/h	118	545	538	550	725	697	117	499	459	283	665	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	36.2	36.2	44.1	21.8	21.8	48.8	40.9	41.1	45.4	34.9	35.0
Incr Delay (d2), s/veh	1.8	23.3	23.5	26.8	0.1	0.1	28.9	5.7	7.5	16.9	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	15.5	15.4	8.5	4.4	4.3	3.3	7.0	6.8	5.9	6.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	59.5	59.7	70.9	21.9	22.0	77.7	46.6	48.6	62.3	36.2	36.3
LnGrp LOS	D	E	E	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1032			1065			621			738	
Approach Delay, s/veh		59.2			46.0			52.1			43.1	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	27.4	22.0	38.2	12.0	33.9	10.1	50.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	6.5	5.0	7.0	5.0	6.5				
Max Green Setting (Gmax), s	17.0	30.0	17.0	32.5	7.0	40.0	7.0	42.5				
Max Q Clear Time (g_c+I1), s	13.4	18.1	18.1	30.9	7.5	16.5	4.6	13.7				
Green Ext Time (p_c), s	0.1	2.3	0.0	0.8	0.0	3.0	0.0	1.8				

Intersection Summary

























HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
























HCM 6th Signalized Intersection Summary  
53: Euclid Ave & Edison Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP PM Peak Hour Improvements for Non-Ontrio LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1192	300	210	900	452	180	1275	330	415	1356	120
Future Volume (veh/h)	190	1192	300	210	900	452	180	1275	330	415	1356	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	198	1242	218	219	938	269	188	1328	200	432	1412	47
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	222	1803	436	271	1196	364	210	1438	438	479	1543	470
Arrive On Green	0.13	0.29	0.29	0.08	0.25	0.25	0.12	0.30	0.30	0.15	0.32	0.32
Sat Flow, veh/h	1697	6128	1482	3291	4863	1480	1697	4863	1482	3291	4863	1482
Grp Volume(v), veh/h	198	1242	218	219	938	269	188	1328	200	432	1412	47
Grp Sat Flow(s),veh/h/ln	1697	1532	1482	1646	1621	1480	1697	1621	1482	1646	1621	1482
Q Serve(g_s), s	14.3	22.3	15.2	8.1	22.4	20.9	13.6	32.9	13.7	16.1	34.8	2.8
Cycle Q Clear(g_c), s	14.3	22.3	15.2	8.1	22.4	20.9	13.6	32.9	13.7	16.1	34.8	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	1803	436	271	1196	364	210	1438	438	479	1543	470
V/C Ratio(X)	0.89	0.69	0.50	0.81	0.78	0.74	0.90	0.92	0.46	0.90	0.91	0.10
Avail Cap(c_a), veh/h	222	2180	527	317	1562	475	210	1472	449	484	1586	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	38.9	36.4	56.2	43.9	43.3	53.8	42.5	35.7	52.3	40.9	30.0
Incr Delay (d2), s/veh	33.2	0.7	0.9	12.5	2.0	4.3	34.4	9.9	0.7	19.4	8.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	8.2	5.4	3.8	8.9	7.8	7.6	13.7	4.9	7.6	14.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.4	39.6	37.3	68.6	45.9	47.6	88.2	52.4	36.5	71.8	49.4	30.1
LnGrp LOS	F	D	D	E	D	D	F	D	D	E	D	C
Approach Vol, veh/h		1658			1426			1716			1891	
Approach Delay, s/veh		44.9			49.7			54.5			54.0	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.8	43.3	14.8	43.6	20.1	46.0	20.8	37.6				
Change Period (Y+Rc), s	* 4.7	6.5	4.5	7.0	* 4.7	6.5	4.5	7.0				
Max Green Setting (Gmax), s	* 18	37.7	12.0	44.3	* 15	40.6	16.3	40.0				
Max Q Clear Time (g_c+I1), s	18.1	34.9	10.1	24.3	15.6	36.8	16.3	24.4				
Green Ext Time (p_c), s	0.0	1.9	0.1	7.3	0.0	2.7	0.0	4.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
55: Euclid Ave & Merrill Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP PM Peak Hour Improvements for Non-Onorio LOS Standards

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	40	10	590	10	283	10	1310	660	363	1660	30
Future Volume (veh/h)	10	40	10	590	10	283	10	1310	660	363	1660	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	11	42	2	629	0	178	11	1379	347	382	1747	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	8	8	8	8	8	8
Cap, veh/h	26	100	104	740	0	322	43	1622	495	332	2475	45
Arrive On Green	0.07	0.07	0.07	0.21	0.00	0.21	0.03	0.33	0.33	0.20	0.50	0.50
Sat Flow, veh/h	381	1455	1516	3478	0	1515	1697	4863	1483	1697	4915	90
Grp Volume(v), veh/h	53	0	2	629	0	178	11	1379	347	382	1152	627
Grp Sat Flow(s),veh/h/ln	1836	0	1516	1739	0	1515	1697	1621	1483	1697	1621	1762
Q Serve(g_s), s	3.4	0.0	0.2	21.6	0.0	13.0	0.8	32.8	25.3	24.3	34.0	34.0
Cycle Q Clear(g_c), s	3.4	0.0	0.2	21.6	0.0	13.0	0.8	32.8	25.3	24.3	34.0	34.0
Prop In Lane	0.21		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	126	0	104	740	0	322	43	1622	495	332	1633	887
V/C Ratio(X)	0.42	0.00	0.02	0.85	0.00	0.55	0.26	0.85	0.70	1.15	0.71	0.71
Avail Cap(c_a), veh/h	148	0	122	1161	0	506	141	1988	606	332	1690	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	0.0	54.0	47.0	0.0	43.6	59.4	38.5	36.0	50.0	23.8	23.8
Incr Delay (d2), s/veh	0.8	0.0	0.0	3.7	0.0	1.5	1.1	3.1	2.8	97.2	1.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	9.4	0.0	4.9	0.3	12.7	9.0	18.7	12.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	0.0	54.0	50.7	0.0	45.1	60.6	41.7	38.8	147.2	25.1	26.2
LnGrp LOS	E	A	D	D	A	D	E	D	D	F	C	C
Approach Vol, veh/h		55			807			1737			2161	
Approach Delay, s/veh		56.3			49.5			41.2			47.0	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	47.9		14.7	7.9	69.1		32.6				
Change Period (Y+Rc), s	* 4.7	6.5		6.2	* 4.7	6.5		6.2				
Max Green Setting (Gmax), s	* 24	50.8		10.0	* 10	64.8		41.5				
Max Q Clear Time (g_c+I1), s	26.3	34.8		5.4	2.8	36.0		23.6				
Green Ext Time (p_c), s	0.0	6.7		0.0	0.0	13.6		1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				45.4								
HCM 6th LOS				D								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
58: Euclid Ave & Pine Ave

Subarea 29 Specific Plan Amendment  
CY (2040) PP PM Peak Hour Improvements for Non-Onorio LOS Standards



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↘↘	↑↑		↘	↑↑↑	↗	↘	↑↑↑	
Traffic Volume (veh/h)	140	760	50	830	630	110	30	750	1310	300	1010	120
Future Volume (veh/h)	140	760	50	830	630	110	30	750	1310	300	1010	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	147	800	0	874	663	105	32	789	0	316	1063	112
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	173	863		994	1052	166	92	871		295	1694	177
Arrive On Green	0.10	0.25	0.00	0.20	0.35	0.35	0.05	0.18	0.00	0.17	0.30	0.30
Sat Flow, veh/h	1739	3469	1547	4904	2992	473	1697	4863	1510	1697	5666	592
Grp Volume(v), veh/h	147	800	0	874	384	384	32	789	0	316	861	314
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1635	1735	1731	1697	1621	1510	1697	1532	1662
Q Serve(g_s), s	10.2	27.5	0.0	21.2	22.5	22.6	2.2	19.4	0.0	21.3	19.8	20.0
Cycle Q Clear(g_c), s	10.2	27.5	0.0	21.2	22.5	22.6	2.2	19.4	0.0	21.3	19.8	20.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	173	863		994	610	609	92	871		295	1374	497
V/C Ratio(X)	0.85	0.93		0.88	0.63	0.63	0.35	0.91		1.07	0.63	0.63
Avail Cap(c_a), veh/h	303	879		1455	652	651	139	895		295	1374	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	44.9	0.0	47.3	33.0	33.0	55.8	49.2	0.0	50.5	37.0	37.1
Incr Delay (d2), s/veh	4.4	15.7	0.0	3.3	2.1	2.2	0.8	12.1	0.0	72.0	0.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	13.3	0.0	8.6	9.5	9.5	0.9	8.5	0.0	14.5	7.1	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	60.6	0.0	50.6	35.1	35.2	56.6	61.3	0.0	122.5	37.7	39.1
LnGrp LOS	E	E		D	D	D	E	E		F	D	D
Approach Vol, veh/h		947	A		1642			821	A		1491	
Approach Delay, s/veh		60.3			43.4			61.1			55.9	
Approach LOS		E			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	28.4	30.5	37.4	11.3	43.1	17.9	50.0				
Change Period (Y+Rc), s	* 4.7	6.5	* 5.7	7.0	* 4.7	6.5	* 5.7	7.0				
Max Green Setting (Gmax), s	* 21	22.5	* 36	31.0	* 10	33.8	* 21	46.0				
Max Q Clear Time (g_c+I1), s	23.3	21.4	23.2	29.5	4.2	22.0	12.2	24.6				
Green Ext Time (p_c), s	0.0	0.4	1.6	0.9	0.0	3.7	0.1	6.3				

Intersection Summary

HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

# Appendix D: Detailed Specific Plan Trip Generation Estimates

**Subarea 29 Approved Specific Plan Trip Generation Estimates**

Proposed Use	ITE Land Use	Quantity	Units	Daily Rate	AM Avg. Rate	AM In (%)	AM Out (%)	PM Avg. Rate	PM In (%)	PM Out (%)	AM Pass By Rates	PM Pass By Rates (%)	Daily Total	AM In	Am Out	AM Total	PM In	PM Out	PM Total
Residential	(210) Single Family Detached Housing	2,418	Dwelling Units	9.43	0.7	26%	74%	0.94	63%	37%	0%	0%	22,802	440	1,253	1,693	1,432	841	2,273
	Total Internalized Trips <sup>1</sup>												(1,917)	(75)	(213)	(288)	(140)	(83)	(223)
	Internalized Active Transportation Trips <sup>6</sup>												(1,072)	(23)	(67)	(90)	(66)	(39)	(105)
	Internalized Vehicle Trips												(845)	(52)	(146)	(198)	(75)	(44)	(118)
	Total External Vehicle Trips												20,885	365	1,040	1,405	1,292	758	2,050
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												20,885	365	1,040	1,405	1,292	758	2,050
Commecrial	(821) Shopping Plaza (40-150k)	87	KSF	67.52	1.73	62%	38%	5.19	49%	51%	0%	34%	5,874	94	57	151	221	231	452
	Total Internalized Trips <sup>2</sup>												(959)	(11)	(4)	(15)	(54)	(91)	(145)
	Internalized Active Transportation Trips <sup>6</sup>												(276)	(5)	(3)	(8)	(10)	(11)	(21)
	Internalized Vehicle Trips												(683)	(6)	(1)	(7)	(44)	(80)	(124)
	Total External Vehicle Trips												4,915	83	53	136	167	140	307
	Less Pass-by Trips (Daily = 0% / AM = 0% / PM = 34%)												-	-	-	-	(57)	(48)	(105)
	Net External Trips												4,915	83	53	136	110	92	202
Recreational Facility	(495) Recreational Community Center	14.6	KSF	28.82	1.91	66%	34%	2.5	47%	53%	0%	0%	421	18	10	28	17	20	37
	Total Internalized Trips <sup>3</sup>												-	-	-	-	(4)	(7)	(11)
	Internalized Active Transportation Trips <sup>6</sup>												-	-	-	-	(1)	(1)	(2)
	Internalized Vehicle Trips												-	-	-	-	(3)	(6)	(9)
	Total External Vehicle Trips												421	18	10	28	13	13	26
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												421	18	10	28	13	13	26
Recreational Parks	(411) Public Park	12	Acres	0.78	0.02	59%	41%	0.11	55%	45%	0%	0%	9	-	-	-	1	-	1
	Total Internalized Trips <sup>4</sup>												-	-	-	-	-	-	-
	Internalized Active Transportation Trips <sup>6</sup>												-	-	-	-	-	-	-
	Internalized Vehicle Trips												-	-	-	-	-	-	-
	Total External Vehicle Trips												9	-	-	-	1	-	1
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												9	-	-	-	1	-	1
Schools	(520) Elementary School	800	Students	2.27	0.74	54%	46%	0.16	46%	54%	0%	0%	1,816	320	272	592	59	69	128
	Total Internalized Trips <sup>5</sup>												(959)	(202)	(71)	(273)	(25)	(42)	(67)
	Internalized Active Transportation Trips <sup>6</sup>												(85)	(17)	(14)	(31)	(3)	(3)	(6)
	Internalized Vehicle Trips												(874)	(185)	(57)	(242)	(22)	(39)	(61)
	Total External Vehicle Trips												857	118	201	319	34	27	61
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												857	118	201	319	34	27	61
Total Project Trips													30,922	872	1,592	2,464	1,730	1,161	2,891
Total Internalized Trips													(3,835)	(288)	(288)	(576)	(223)	(223)	(446)
Total External Vehicle Trips													27,087	584	1,304	1,888	1,507	938	2,445
Pass-by													-	-	-	-	(57)	(48)	(105)
Net External Vehicle Trips													27,087	584	1,304	1,888	1,450	890	2,340

Notes

- MXD+ total internalization reduction rates; Daily = 6% / AM = 12% / PM = 8%. These rates were applied directly to the residential land use's trip generation estimates.
- Portion of residential land use's total internalization that travels to/from the commercial use; Daily = 50% / AM = 5% / PM = 65%.
- Portion of residential land use's total internalization that travels to/from the recreational facility; Daily = 0% / AM = 0% / PM = 5%.
- Portion of residential land use's total internalization that travels to/from the recreational park; Daily = 0% / AM = 0% / PM = 0%.
- Portion of residential land use's total internalization that travels to/from the elementary school; Daily = 50% / AM = 95% / PM = 30%.
- MXD + active transportation reduction rates; Daily = 5% / AM = 5% / PM = 5%. These rates were applied directly to each land uses' trip generation estimates.

Sources:

- Trip Generation, 10th Edition (Institute of Transportation Engineers, 2017), unless otherwise noted
- Trip Generation Handbook 3<sup>rd</sup> Edition (Institute of Transportation Engineers, 2017)
- MXD +, Fehr & Peers, 2022

Subarea 29 Proposed Specific Plan Trip Generation Estimates																			
Proposed Use	ITE Land Use	Quantity	Units	Daily Rate	AM Avg. Rate	AM In (%)	AM Out (%)	PM Avg. Rate	PM In (%)	PM Out (%)	AM Pass By Rates (%)	PM Pass By Rates (%)	Daily Total	AM In	Am Out	AM Total	PM In	PM Out	PM Total
Residential	(210) Single Family Detached Housing	3,888	Dwelling Units	9.43	0.7	26%	74%	0.94	63%	37%	0%	0%	36,664	708	2,014	2,722	2,303	1,352	3,655
	Total Internalized Trips <sup>1</sup>												(2,980)	(142)	(404)	(546)	(213)	(125)	(338)
	Internalized Active Transportation Trips <sup>7</sup>												(1,833)	(37)	(105)	(142)	(113)	(66)	(179)
	Internalized Vehicle Trips												(1,147)	(105)	(299)	(404)	(100)	(59)	(159)
	Total External Vehicle Trips												33,684	566	1,610	2,176	2,090	1,227	3,317
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												33,684	566	1,610	2,176	2,090	1,227	3,317
Commercial	(821) Shopping Plaza (40-150k)	87	KSF	67.52	1.73	62%	38%	5.19	49%	51%	0%	34%	5,874	94	57	151	221	231	452
	Total Internalized Trips <sup>2</sup>												(1,490)	(20)	(7)	(27)	(81)	(138)	(219)
	Internalized Active Transportation Trips <sup>7</sup>												(294)	(5)	(3)	(8)	(11)	(11)	(22)
	Internalized Vehicle Trips												(1,196)	(15)	(4)	(19)	(70)	(127)	(197)
	Total External Vehicle Trips												4,384	74	50	124	140	93	233
	Less Pass-by Trips												-	-	-	-	(48)	(32)	(80)
	Net External Trips												4,384	74	50	124	92	61	153
Recreational Facility	(495) Recreational Community Center	14.6	KSF	28.82	1.91	66%	34%	2.5	47%	53%	0%	0%	421	18	10	28	17	20	37
	Total Internalized Trips <sup>3</sup>												-	-	-	-	(6)	(11)	(17)
	Internalized Active Transportation Trips <sup>7</sup>												-	-	-	-	(1)	(1)	(2)
	Internalized Vehicle Trips												-	-	-	-	(5)	(10)	(15)
	Total External Vehicle Trips												421	18	10	28	11	9	20
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												421	18	10	28	11	9	20
Recreational Parks	(411) Public Park	12	Acres	0.78	0.02	59%	41%	0.11	55%	45%	0%	0%	9	-	-	-	1	-	1
	Total Internalized Trips <sup>4</sup>												-	-	-	-	-	-	-
	Internalized Active Transportation Trips <sup>7</sup>												-	-	-	-	-	-	-
	Internalized Vehicle Trips												-	-	-	-	-	-	-
	Total External Vehicle Trips												9	-	-	-	1	-	1
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												9	-	-	-	1	-	1
Schools	(520) Elementary School	800	Students	2.27	0.74	54%	46%	0.16	46%	54%	0%	0%	1,816	320	272	592	59	69	128
	Total Internalized Trips <sup>5</sup>												(596)	(154)	(54)	(208)	(15)	(26)	(41)
	Internalized Active Transportation Trips <sup>7</sup>												(91)	(17)	(14)	(31)	(3)	(3)	(6)
	Internalized Vehicle Trips												(505)	(137)	(40)	(177)	(12)	(23)	(35)
	Total External Vehicle Trips												1,220	166	218	384	44	43	87
	Less Pass-by Trips												-	-	-	-	-	-	-
	Net External Trips												1,220	166	218	384	44	43	87
	(522) Middle School/Junior High School	1200	Students	2.1	0.67	54%	46%	0.15	48%	52%	0%	0%	2,520	434	370	804	86	94	180
	Total Internalized Trips <sup>6</sup>												(894)	(230)	(81)	(311)	(23)	(38)	(61)
	Internalized Active Transportation Trips <sup>7</sup>												(126)	(23)	(19)	(42)	(4)	(5)	(9)
	Internalized Vehicle Trips												(768)	(207)	(62)	(269)	(19)	(33)	(52)
Total External Vehicle Trips												1,626	204	289	493	63	56	119	
Less Pass-by Trips												-	-	-	-	-	-	-	
Net External Trips												1,626	204	289	493	63	56	119	
Total Project Trips													47,304	1,574	2,723	4,297	2,687	1,766	4,453
Total Internalized Trips													(5,960)	(546)	(546)	(1,092)	(338)	(338)	(676)
Total External Vehicle Trips													41,344	1,028	2,177	3,205	2,349	1,428	3,777
Pass-by													-	-	-	-	(48)	(32)	(80)
Net External Vehicle Trips													41,344	1,028	2,177	3,205	2,301	1,396	3,697

Notes

1. MXD+ total internalization reduction rates; Daily = 6% / AM = 13% / PM = 8%. These rates were applied directly to the residential land use's trip generation estimates.
2. Portion of residential land use's total internalization that travels to/from the commercial use; Daily = 50% / AM = 5% / PM = 65%.
3. Portion of residential land use's total internalization that travels to/from the recreational facility; Daily = 0% / AM = 0% / PM = 5%.
4. Portion of residential land use's total internalization that travels to/from the recreational park; Daily = 0% / AM = 0% / PM = 0%.
5. Portion of residential land use's total internalization that travels to/from the elementary school; Daily = 20% / AM = 38% / PM = 12%.
6. Portion of residential land use's total internalization that travels to/from the middle school; Daily = 30% / AM = 57% / PM = 18%.
7. MXD + active transportation reduction rates; Daily = 5% / AM = 5% / PM = 5%. These rates were applied directly to each land uses' trip generation estimates.

Sources:

1. *Trip Generation, 10th Edition (Institute of Transportation Engineers, 2017)*, unless otherwise noted
2. *Trip Generation Handbook 3<sup>rd</sup> Edition (Institute of Transportation Engineers, 2017)*
3. *MXD +, Fehr & Peers, 2022*



# Appendix E: Census Longitudinal Employer- Household Dynamics Home-To- Work Data

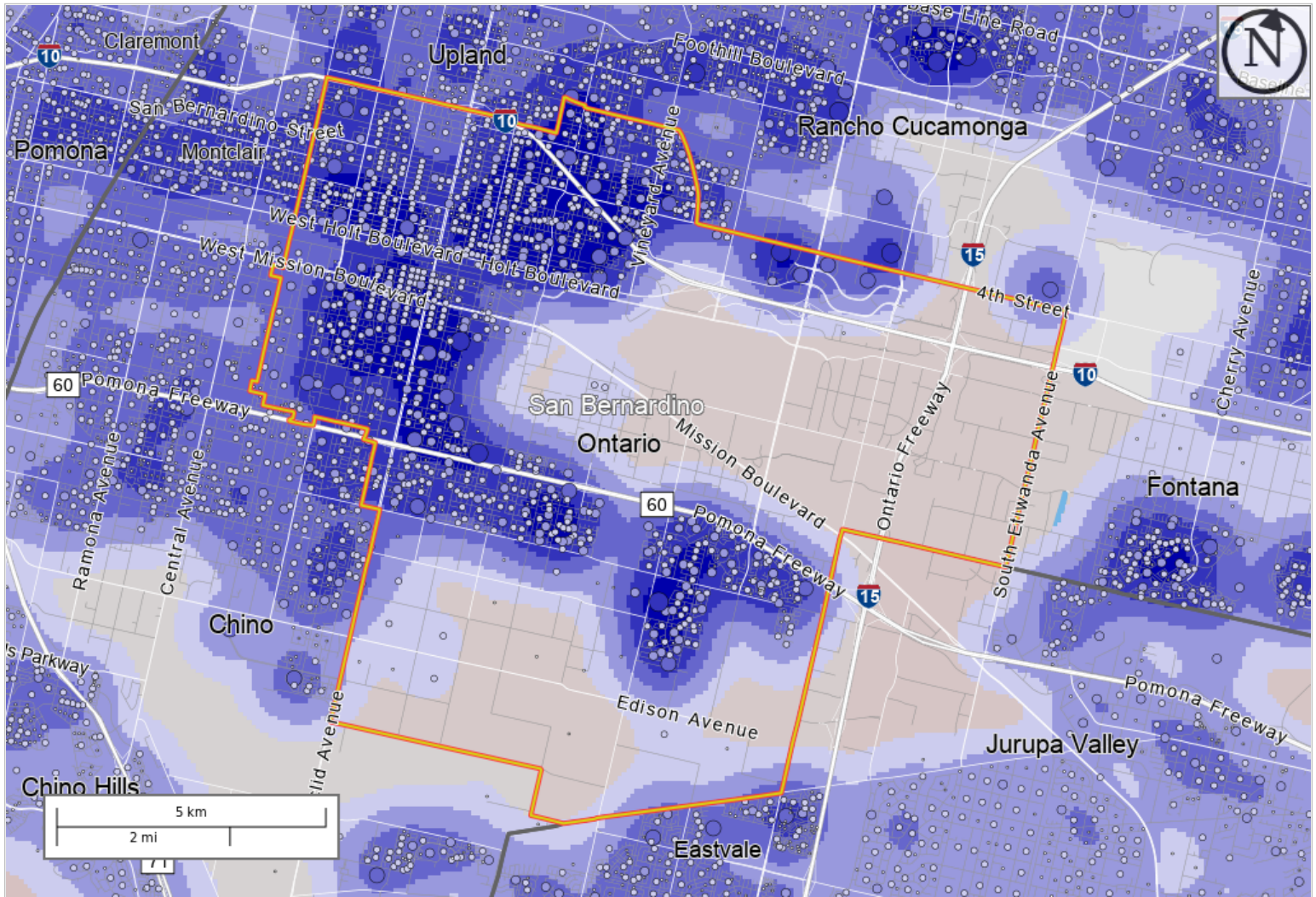
## Distance/Direction Report - Work to Home

### Private Primary Jobs for All Workers in 2019

Created by the U.S. Census Bureau's OnTheMap <https://onthemap.ces.census.gov> on 11/10/2021

## Counts and Density of Home Locations for Private Primary Jobs in Work Selection Area in 2019

All Workers



### Map Legend

#### Job Density [Jobs/Sq. Mile]

- 5 - 34
- 35 - 122
- 123 - 268
- 269 - 473
- 474 - 737

#### Job Count [Jobs/Census Block]

- 1 - 2
- 3 - 11
- 12 - 34
- 35 - 81
- 82 - 158

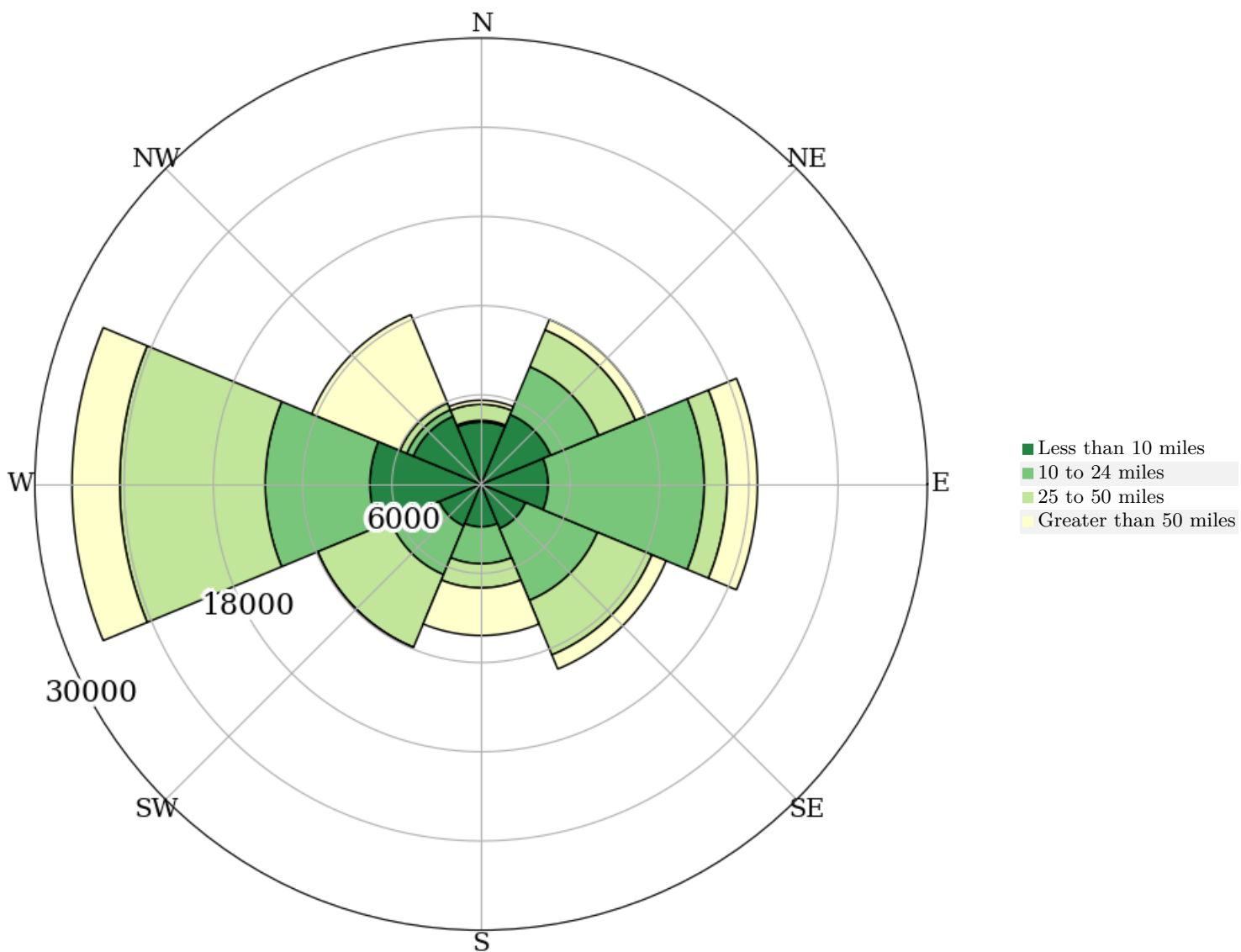
#### Selection Areas

- 🔴 Analysis Selection



## Private Primary Jobs for All Workers in 2019

Distance and Direction from Work Census Block to Home Census Block, Employed in Selection Area



## Private Primary Jobs for All Workers in 2019

Distance from Work Census Block to Home Census Block, Employed in Selection Area

Distance	2019	
	Count	Share
<b>Total Private Primary Jobs</b>	111,586	100.0
Less than 10 miles	35,297	31.6
10 to 24 miles	32,868	29.5
25 to 50 miles	26,445	23.7
Greater than 50 miles	16,976	15.2

## Additional Information

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### Analysis Settings

<b>Analysis Type</b>	Distance/Direction
<b>Selection area as</b>	Work
<b>Year(s)</b>	2019
<b>Job Type</b>	Private Primary Jobs
<b>Selection Area</b>	Ontario city, CA from Places (Cities, CDPs, etc.)
<b>Selected Census Blocks</b>	1,478
<b>Analysis Generation Date</b>	11/10/2021 13:58 - OnTheMap 6.8.1
<b>Code Revision</b>	5a28dab6722a45c1d92e7074a4e03e8be2a8ecad
<b>LODES Data Version</b>	20211018_1647

### Data Sources

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2019).

### Notes

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results for All Private jobs and are not available before 2011.

# Appendix F: Traffic Signal Warrants



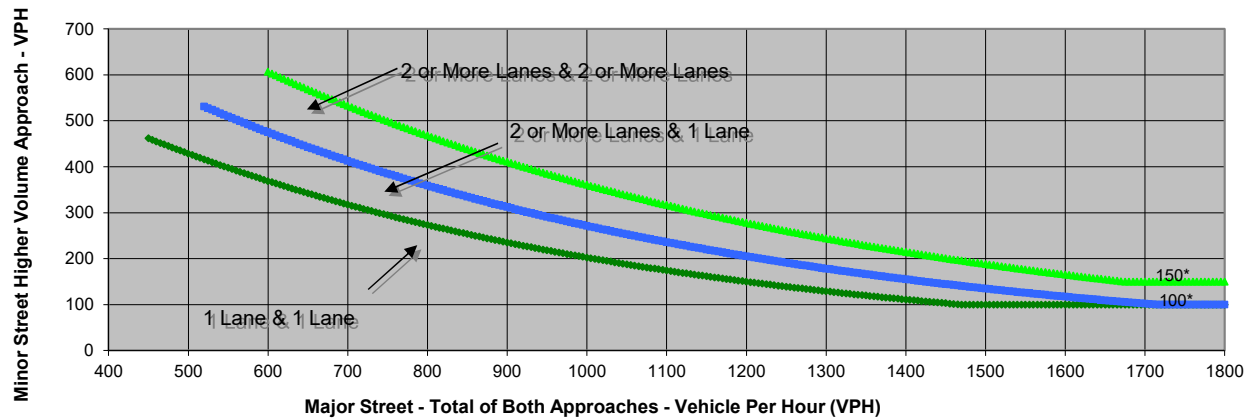
Intersection 8  
 Major Street Haven Ave  
 Minor Street Chino Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Conditions  
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	176	92	92	149
Through	886	609	68	165
Right	61	53	114	225
Total	1,123	754	274	539

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Haven Ave	Chino Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,877	539	

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



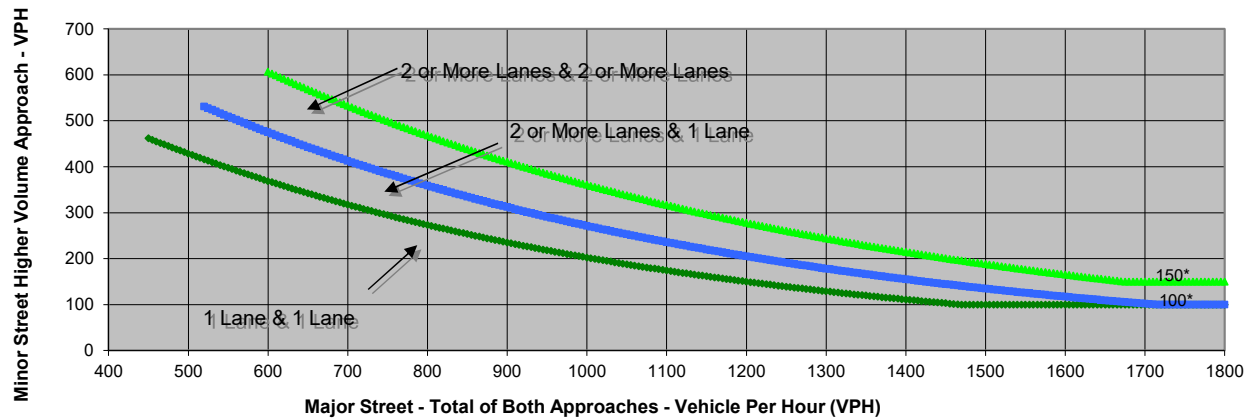
Intersection 8  
 Major Street Haven Ave  
 Minor Street Chino Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	108	278	46	121
Through	826	1025	205	134
Right	184	62	103	182
Total	1,118	1,365	354	437

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Haven Ave	Chino Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	2,483	437	

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





Intersection 21  
 Major Street **Summner Ave**  
 Minor Street **Eucalyptus Ave**

Project **Subare 29 Specific Plan Amendment**  
 Scenario **Opening Year (2025) Plus Project Conditions**  
 Peak Hour **AM**

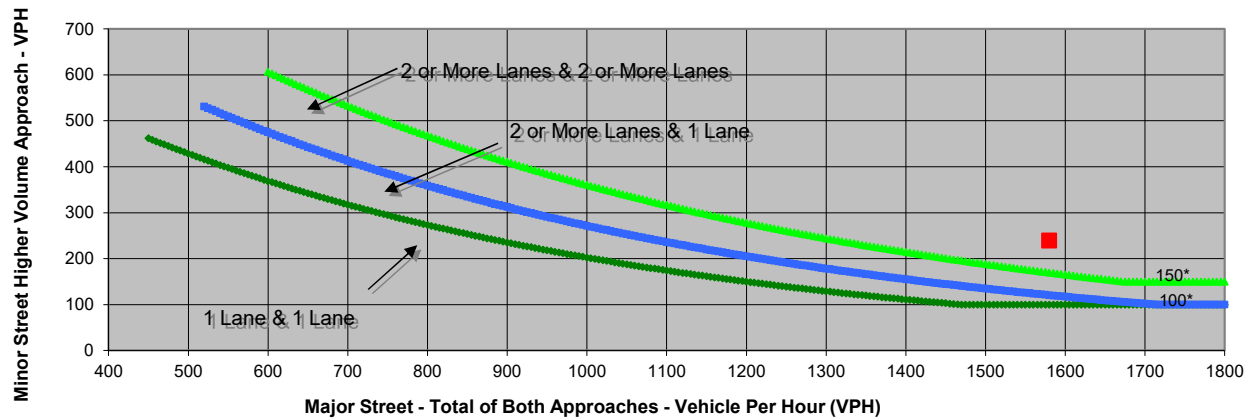
Turn Movement Volumes

	NB	SB	EB	WB
Left	114	16	154	7
Through	849	520	27	18
Right	14	67	58	63
Total	977	603	239	88

Major Street Direction

X	North/South
	East/West

**Figure 4C-3. Warrant 3, Peak Hour**



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Summner Ave	Minor Street Eucalyptus Ave	Warrant Met
Number of Approach Lanes	2	1	<b><u>YES</u></b>
Traffic Volume (VPH) *	1,580	239	

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



Intersection 21  
 Major Street **Summner Ave**  
 Minor Street **Eucalyptus Ave**

Project **Subare 29 Specific Plan Amendment**  
 Scenario **Opening Year (2025) Plus Project Conditions**  
 Peak Hour **PM**

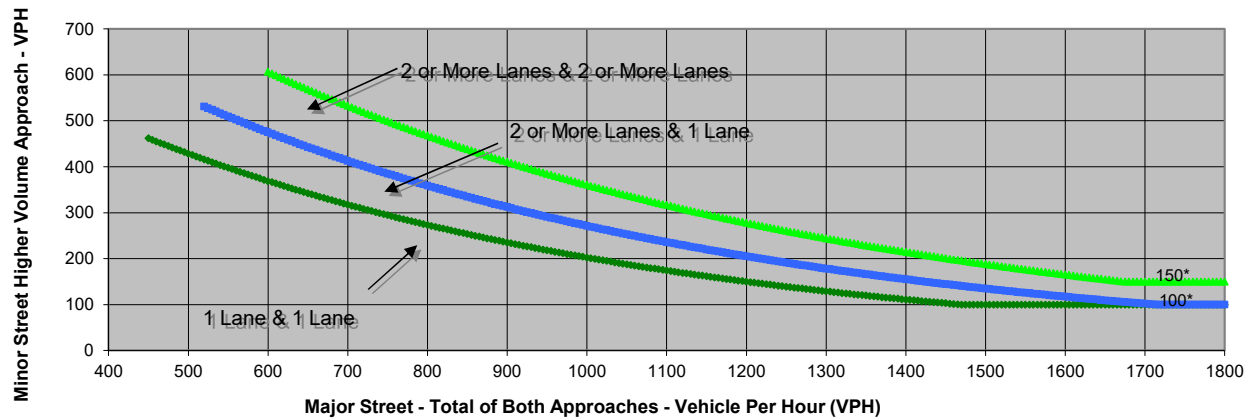
Turn Movement Volumes

	NB	SB	EB	WB
Left	71	110	86	2
Through	727	916	40	57
Right	6	141	113	36
Total	804	1,167	239	95

Major Street Direction

X	North/South
	East/West

**Figure 4C-3. Warrant 3, Peak Hour**



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Summner Ave	Minor Street Eucalyptus Ave	Warrant Met
Number of Approach Lanes	2	1	<b><u>YES</u></b>
Traffic Volume (VPH) *	1,971	239	

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



Intersection 26  
 Major Street **Summner Ave**  
 Minor Street **Parkview St**

Project **Subare 29 Specific Plan Amendment**  
 Scenario **Opening Year (2025) Plus Project Conditions**  
 Peak Hour **AM**

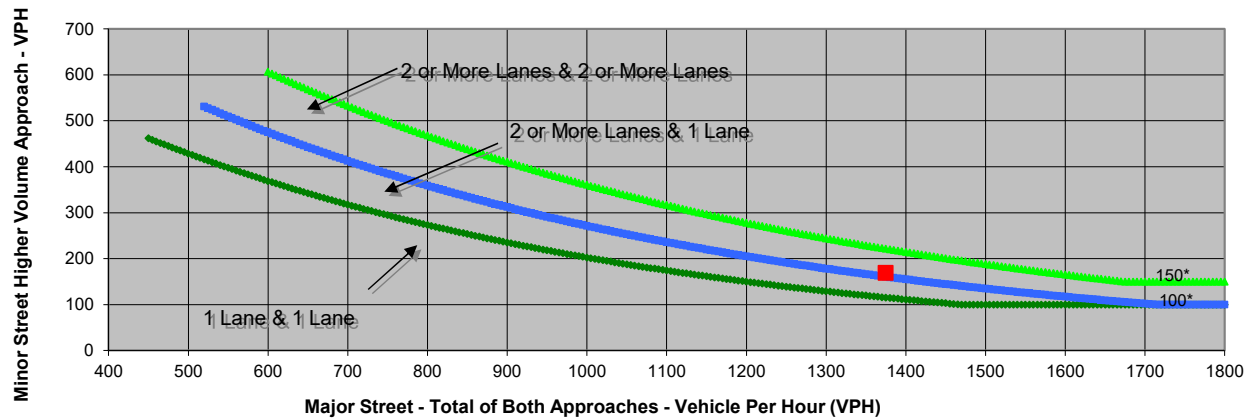
**Turn Movement Volumes**

	NB	SB	EB	WB
Left	42	15	109	34
Through	696	566	24	7
Right	43	13	36	71
Total	781	594	169	112

**Major Street Direction**

X	North/South
	East/West

**Figure 4C-3. Warrant 3, Peak Hour**



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Summner Ave	Parkview St	
<b>Number of Approach Lanes</b>	<b>2</b>	<b>1</b>	<b><u>YES</u></b>
<b>Traffic Volume (VPH) *</b>	<b>1,375</b>	<b>169</b>	

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



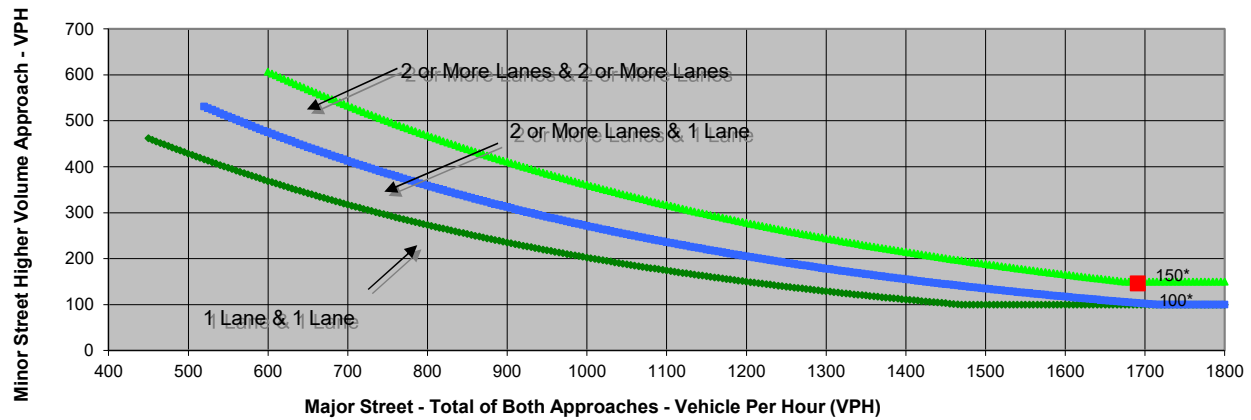
Intersection 26  
 Major Street Summner Ave  
 Minor Street Parkview St

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Plus Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	64	108	80	16
Through	596	806	3	6
Right	55	62	22	124
Total	715	976	105	146

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Summner Ave	Parkview St	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,691	146	

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



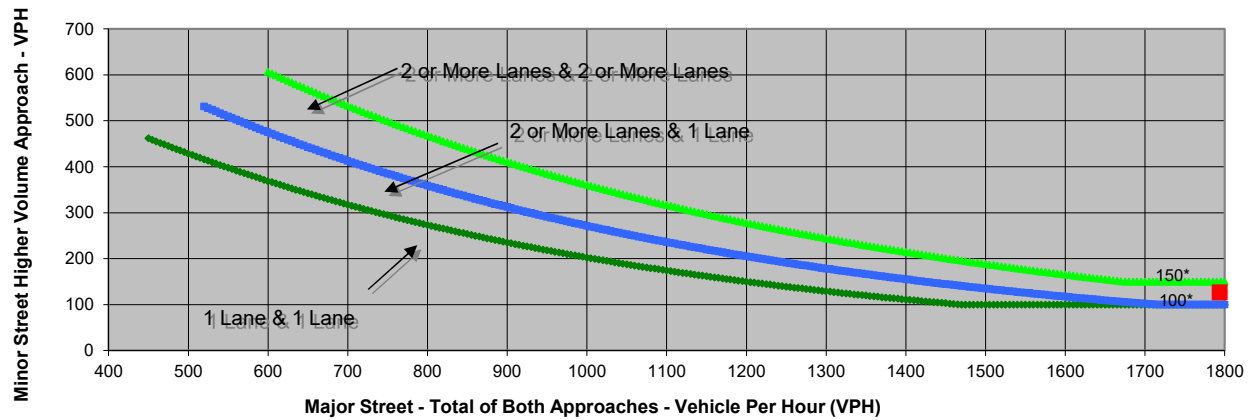
Intersection 34  
 Major Street Bellegrave Ave  
 Minor Street Proposed Driveway

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Plus Project Conditions  
 Peak Hour AM

	NB	SB	EB	WB
Left	0	65	27	0
Through	0	0	913	836
Right	0	61	0	18
Total	0	126	940	854

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street Bellegrave Ave	Minor Street Proposed Driveway	Warrant Met
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,794	126	

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



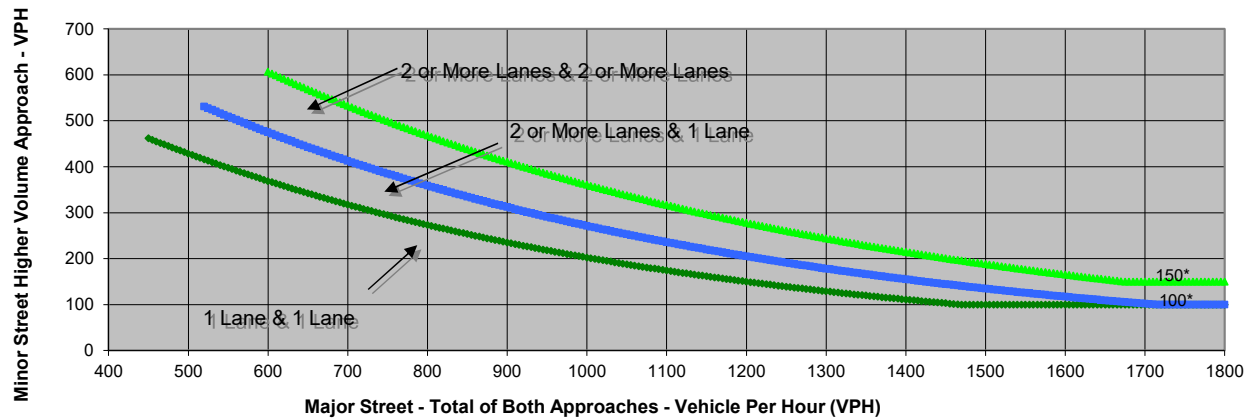
Intersection 34  
 Major Street Bellegrave Ave  
 Minor Street Proposed Driveway

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Plus Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	0	40	13	0
Through	0	0	1144	939
Right	0	38	0	127
Total	0	78	1,157	1,066

Major Street Direction	
	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bellegrave Ave	Proposed Driveway	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,223	78	

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



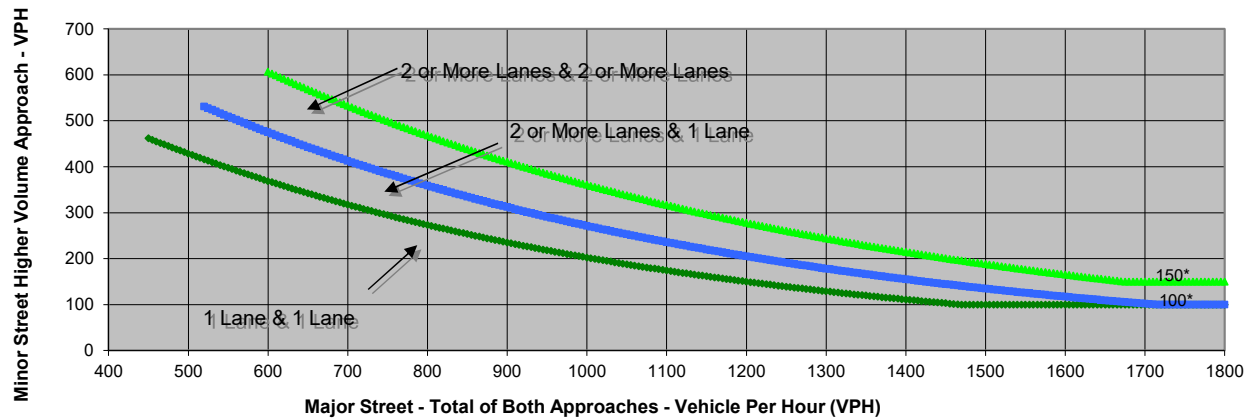
Intersection 54  
 Major Street Edison Ave  
 Minor Street Grove Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Plus Project Conditions  
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	156	163	96	44
Through	366	444	586	640
Right	10	96	15	110
Total	532	703	697	794

Major Street Direction	
	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,491	703	

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





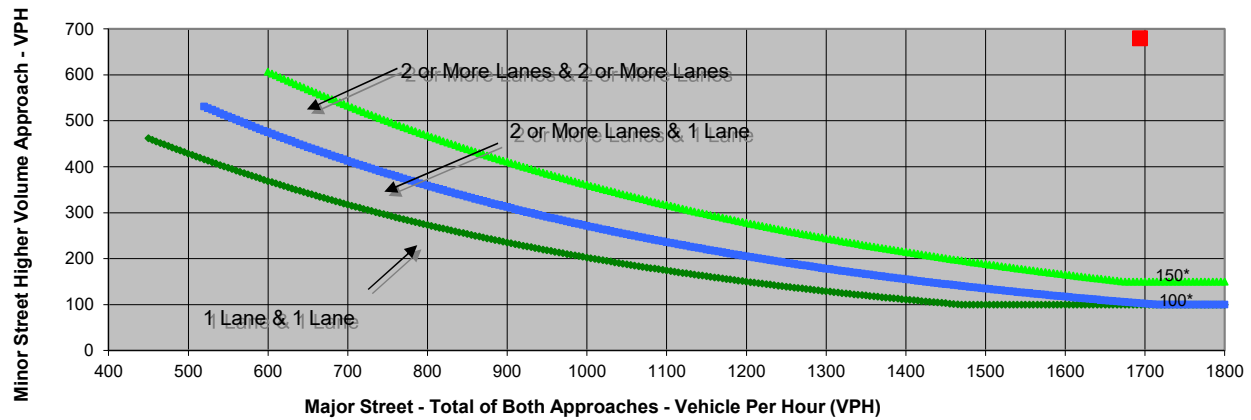
Intersection 54  
 Major Street Edison Ave  
 Minor Street Grove Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Opening Year (2025) Plus Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	52	162	108	18
Through	598	340	706	659
Right	29	54	51	152
Total	679	556	865	829

Major Street Direction	
	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,694	679	

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



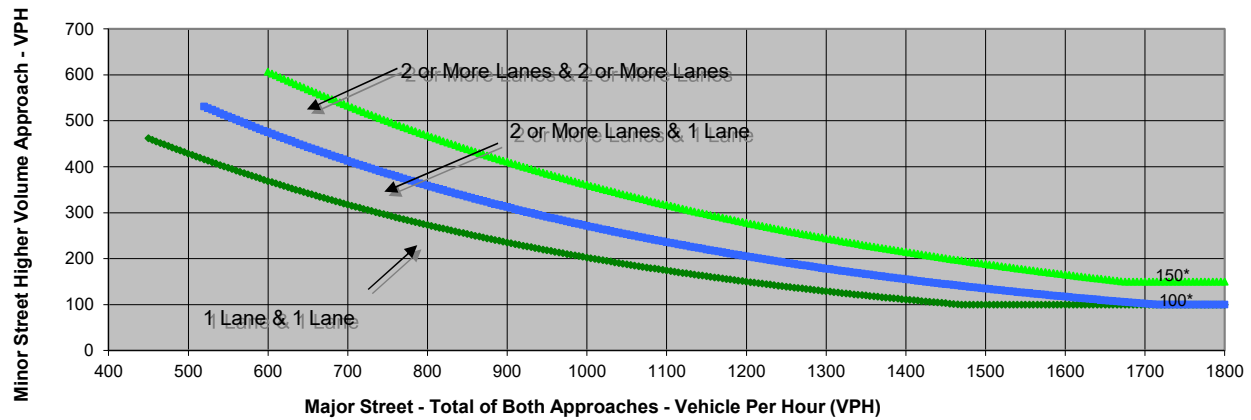
Intersection 8  
 Major Street Chino  
 Minor Street Haven Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) No Project Conditions  
 Peak Hour AM

	NB	SB	EB	WB
Left	160	30	80	60
Through	730	610	240	250
Right	170	120	80	50
Total	1,060	760	400	360

X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Chino	Haven Ave	
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,820	400	

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



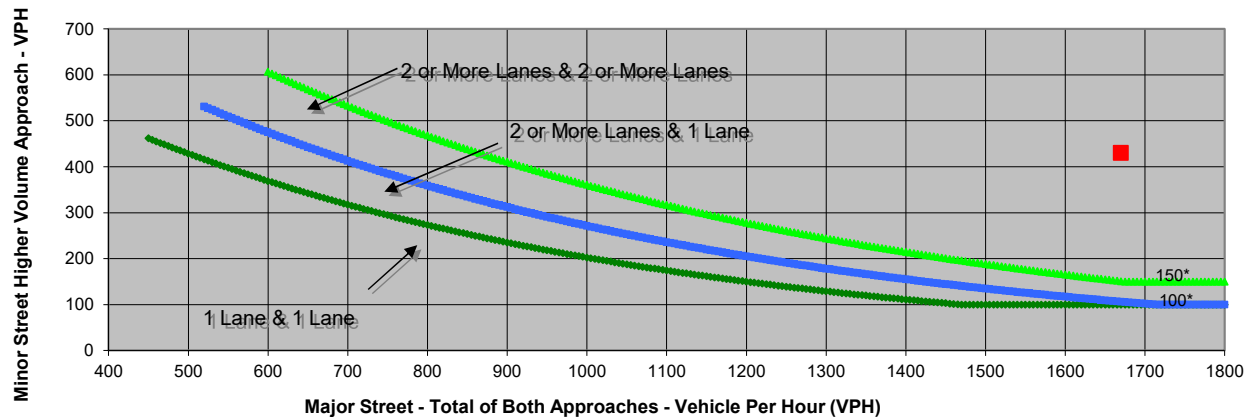
Intersection 8  
 Major Street Chino  
 Minor Street Haven Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) No Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	90	50	70	90
Through	550	780	290	280
Right	100	100	70	30
Total	740	930	430	400

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Chino	Haven Ave	
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,670	430	

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



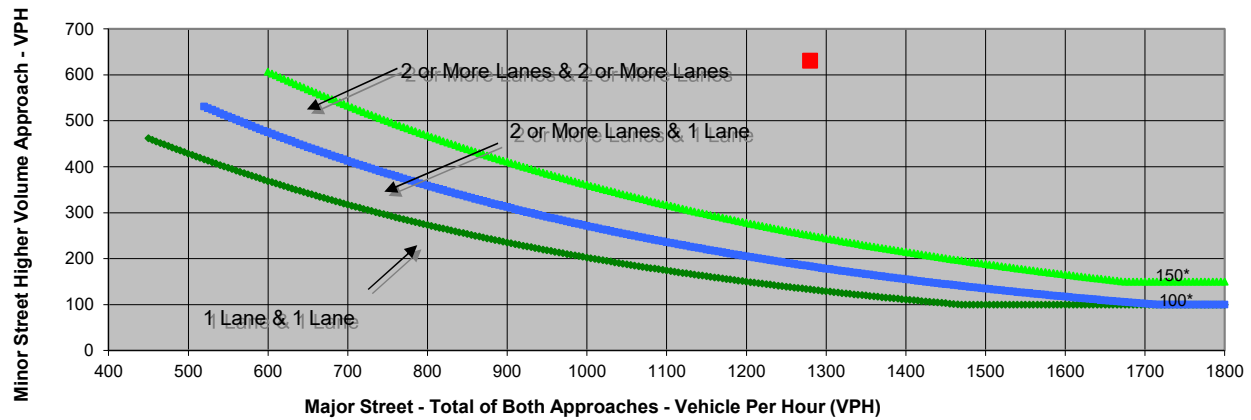
Intersection 21  
 Major Street Eucalyptus Ave  
 Minor Street Sumner Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) No Project Conditions  
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	80	20	130	70
Through	600	450	470	340
Right	30	100	30	40
Total	710	570	630	450

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street Eucalyptus Ave	Minor Street Sumner Ave	Warrant Met
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,280	630	

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



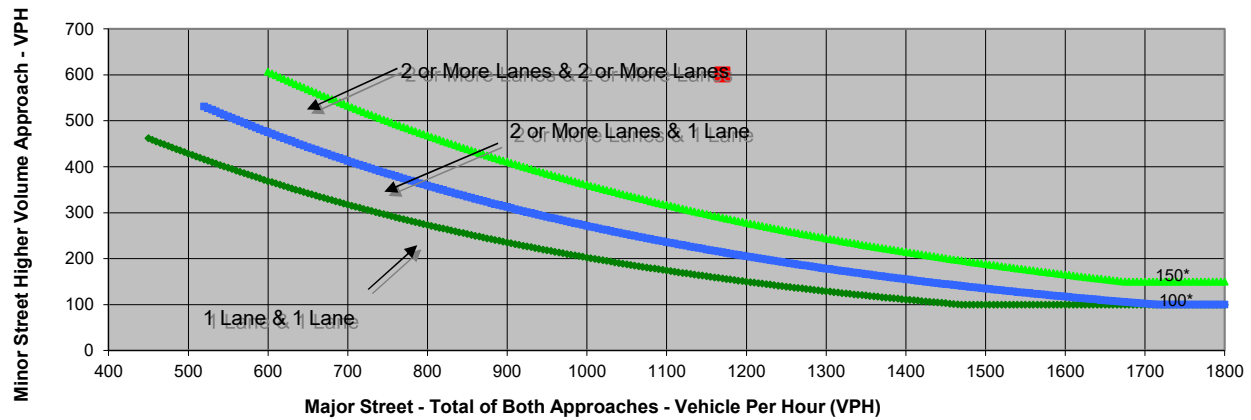
Intersection 21  
 Major Street Eucalyptus Ave  
 Minor Street Sumner Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) No Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	40	20	100	20
Through	370	610	400	220
Right	20	110	100	20
Total	430	740	600	260

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Eucalyptus Ave	Sumner Ave	
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,170	600	

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



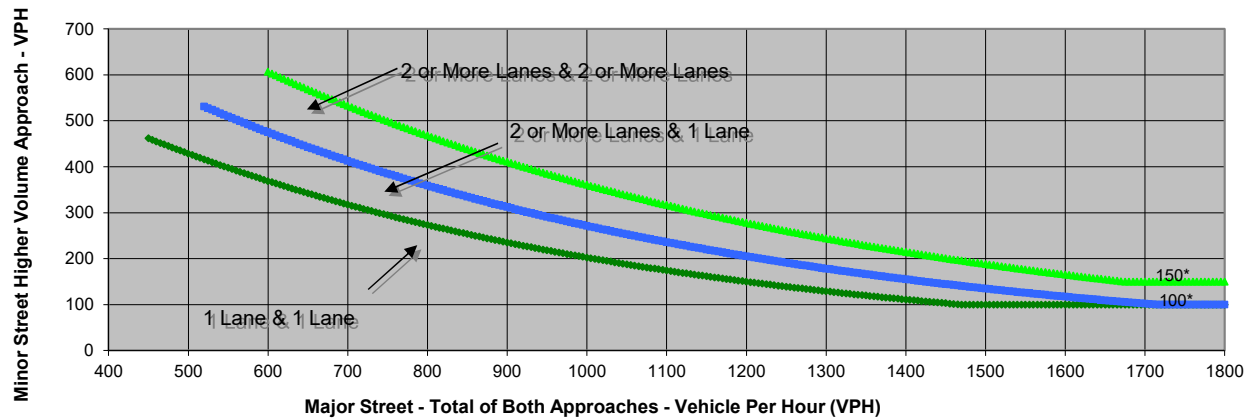
Intersection 54  
 Major Street Edison  
 Minor Street Grove Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) No Project Conditions  
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	160	130	210	190
Through	510	390	1200	1440
Right	80	120	140	60
Total	750	640	1,550	1,690

Major Street Direction	
	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Edison	Grove Ave	
Number of Approach Lanes	4	2	<u>YES</u>
Traffic Volume (VPH) *	3,240	750	

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



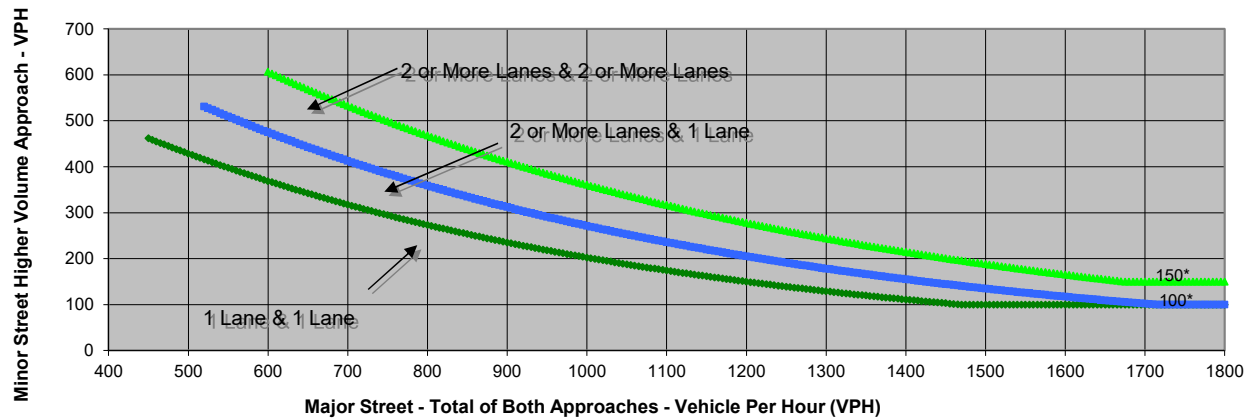
Intersection 54  
 Major Street Edison  
 Minor Street Grove Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) No Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	80	70	150	100
Through	510	460	1550	1370
Right	180	140	90	90
Total	770	670	1,790	1,560

Major Street Direction	
	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Edison	Grove Ave	
Number of Approach Lanes	4	2	<u>YES</u>
Traffic Volume (VPH) *	3,350	770	

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





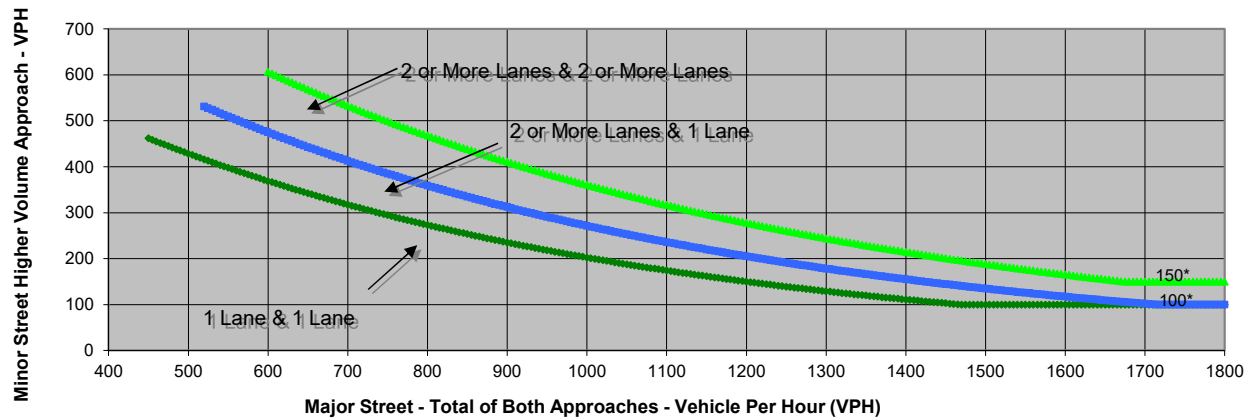
Intersection 8  
 Major Street Chino  
 Minor Street Haven Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	164	30	80	60
Through	826	639	240	250
Right	170	120	82	50
Total	1,160	789	402	360

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Chino	Haven Ave	
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,949	402	

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



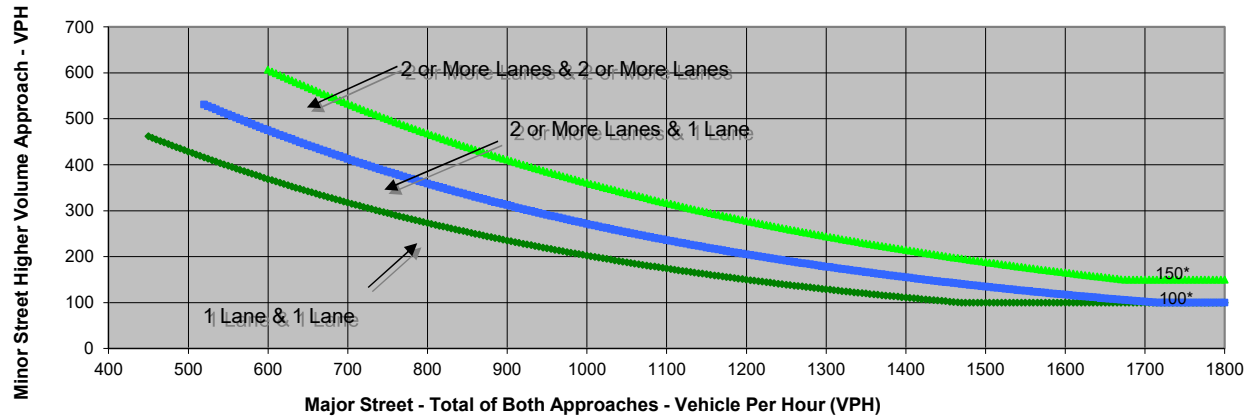
Intersection 8  
 Major Street Chino  
 Minor Street Haven Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	91	50	70	90
Through	601	868	290	280
Right	100	100	71	30
Total	792	1,018	431	400

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Chino	Haven Ave	
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,810	431	

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



Intersection 21  
 Major Street Eucalyptus Ave  
 Minor Street Sumner Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour AM

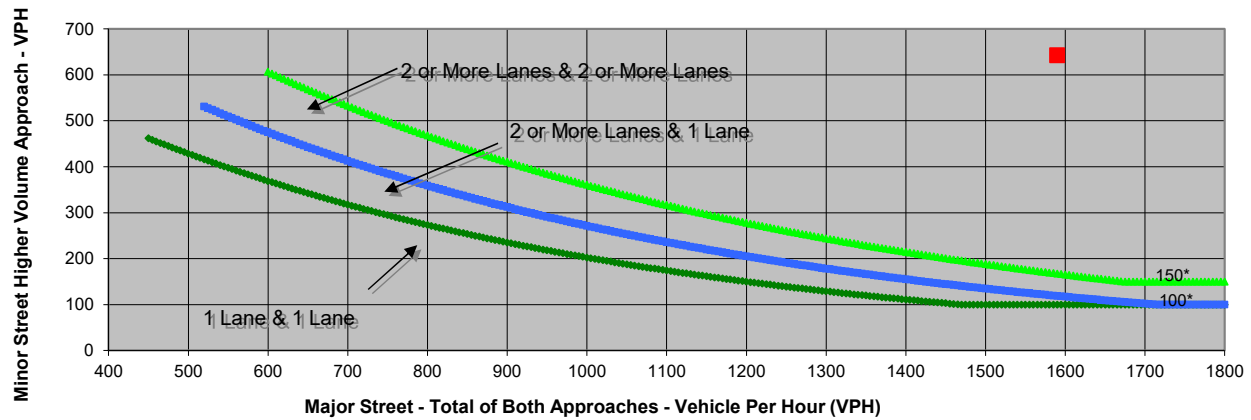
**Turn Movement Volumes**

	NB	SB	EB	WB
Left	108	6	135	7
Through	842	520	466	334
Right	12	102	41	14
Total	962	628	642	355

**Major Street Direction**

X	North/South
	East/West

**Figure 4C-3. Warrant 3, Peak Hour**



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street Eucalyptus Ave	Minor Street Sumner Ave	Warrant Met
Number of Approach Lanes	2	2	<b><u>YES</u></b>
Traffic Volume (VPH) *	1,590	642	

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



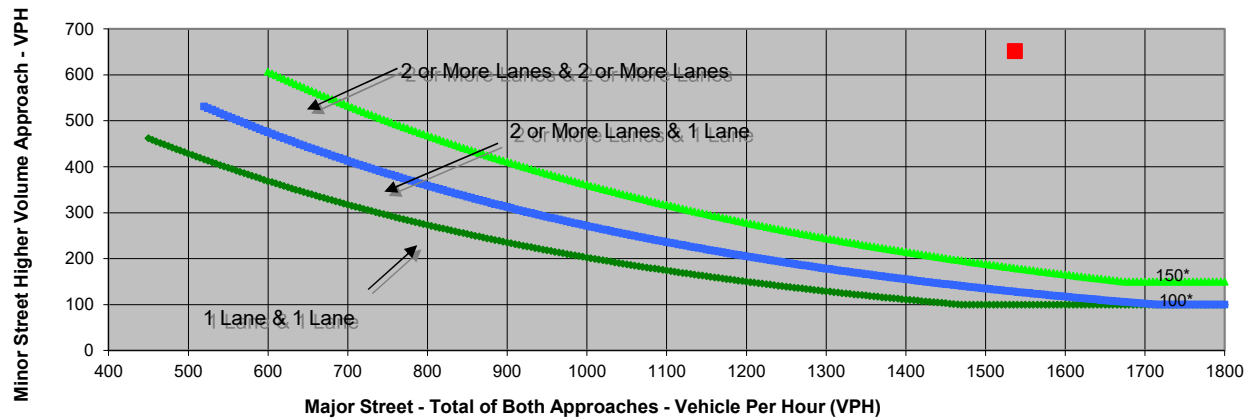
Intersection 21  
 Major Street Eucalyptus Ave  
 Minor Street Sumner Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	47	46	103	13
Through	502	812	442	247
Right	9	121	106	19
Total	558	979	651	279

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Eucalyptus Ave	Sumner Ave	
Number of Approach Lanes	2	2	<u>YES</u>
Traffic Volume (VPH) *	1,537	651	

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



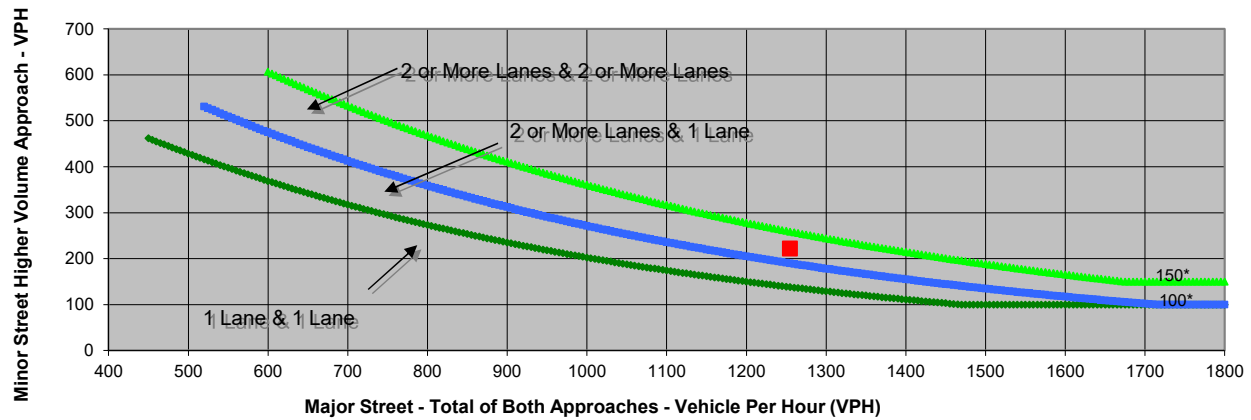
Intersection 26  
 Major Street Parkview  
 Minor Street Sumner Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	43	24	116	34
Through	623	502	10	10
Right	43	20	35	178
Total	709	546	161	222

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Parkview	Sumner Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,255	222	

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



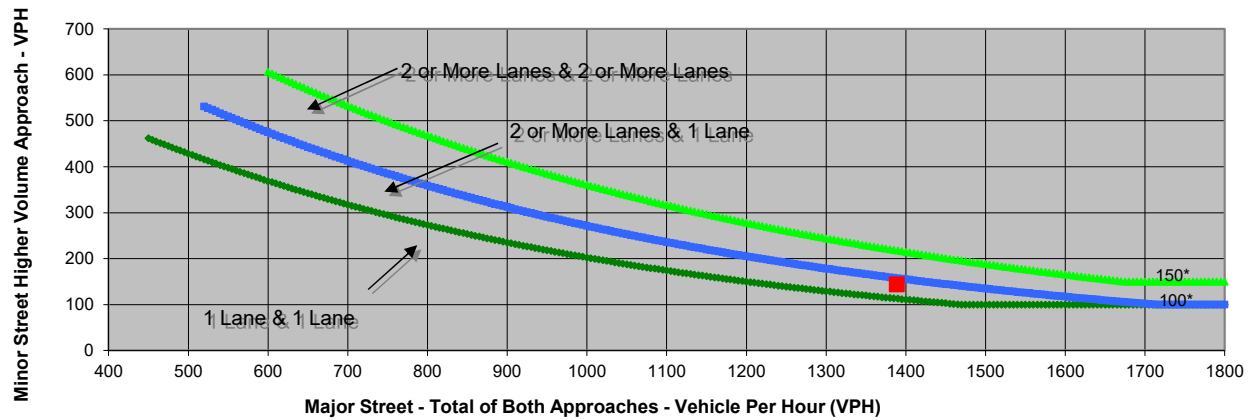
Intersection 26  
 Major Street Parkview  
 Minor Street Sumner Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	70	170	83	16
Through	399	625	10	10
Right	55	70	29	118
Total	524	865	122	144

Major Street Direction	
X	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Parkview	Sumner Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,389	144	

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



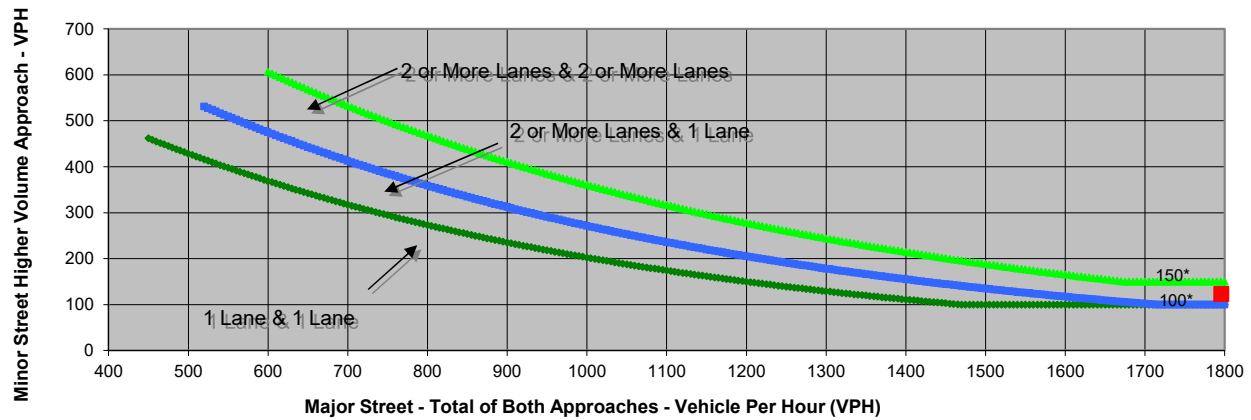
Intersection 34  
 Major Street Bellegrave  
 Minor Street Proposed Driveway

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour AM

	NB	SB	EB	WB
Left	0	88	18	0
Through	0	0	1063	697
Right	0	35	0	18
Total	0	123	1,081	715

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bellegrave	Proposed Driveway	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,796	123	

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





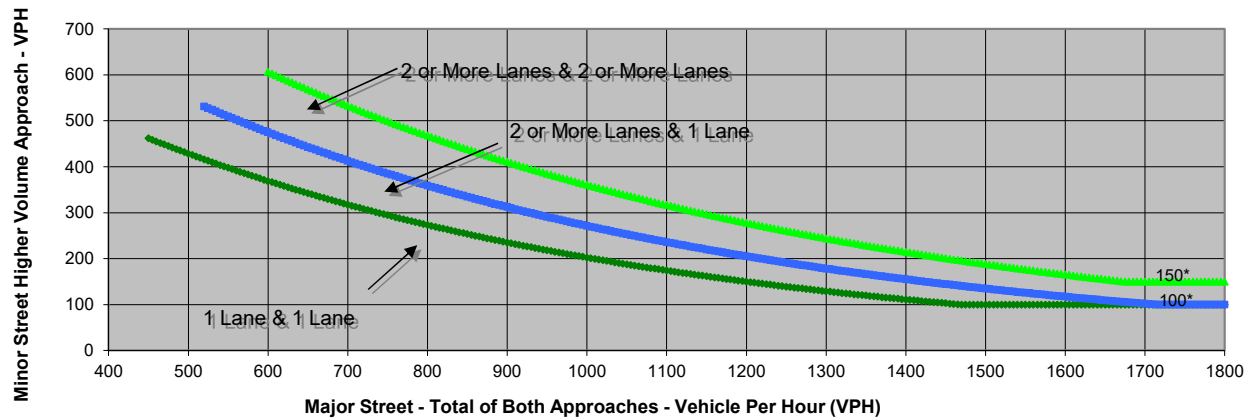
Intersection 34  
 Major Street Bellegrave  
 Minor Street Proposed Driveway

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour PM

	NB	SB	EB	WB
Left	0	53	8	0
Through	0	0	1236	1102
Right	0	22	0	131
Total	0	75	1,244	1,233

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bellegrave	Proposed Driveway	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,477	75	

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



Intersection 54  
 Major Street Edison  
 Minor Street Grove Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour AM

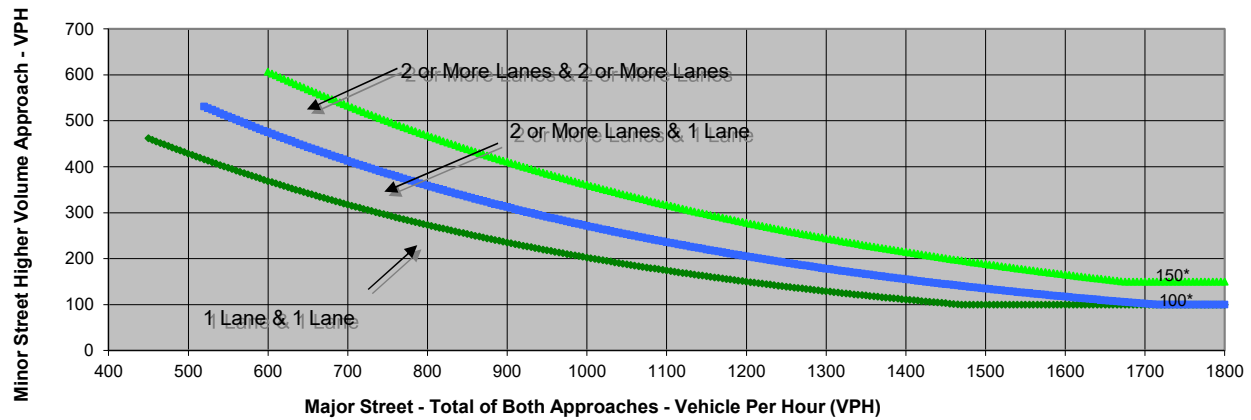
**Turn Movement Volumes**

	NB	SB	EB	WB
Left	160	139	210	190
Through	510	390	1213	1531
Right	80	120	140	70
Total	750	649	1,563	1,791

**Major Street Direction**

	North/South
X	East/West

**Figure 4C-3. Warrant 3, Peak Hour**



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Edison	Grove Ave	
Number of Approach Lanes	4	2	<b><u>YES</u></b>
Traffic Volume (VPH) *	3,354	750	

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



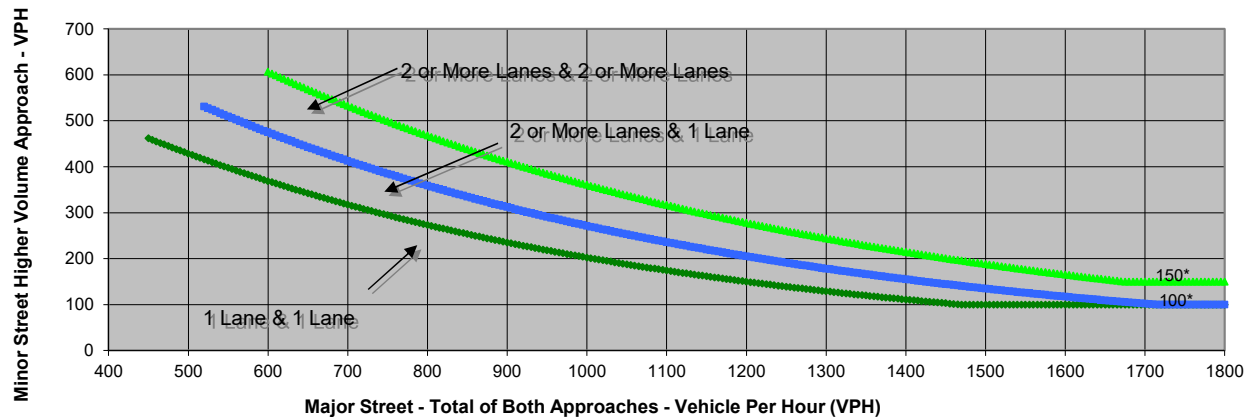
Intersection 54  
 Major Street Edison  
 Minor Street Grove Ave

Project Subare 29 Specific Plan Amendment  
 Scenario Cumulative Year (2040) Plus Project Conditions  
 Peak Hour PM

	NB	SB	EB	WB
Left	80	72	150	100
Through	510	460	1647	1422
Right	180	140	90	92
Total	770	672	1,887	1,614

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Edison	Grove Ave	
Number of Approach Lanes	4	2	<u>YES</u>
Traffic Volume (VPH) *	3,501	770	

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

# Appendix G: Queuing Worksheets

Queues  
1: Archibald Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	197	188	182	764	801	352	167
v/c Ratio	0.66	0.51	0.44	0.83	0.24	0.16	0.26
Control Delay	43.7	16.0	7.9	26.9	6.2	22.5	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	16.0	7.9	26.9	6.2	22.5	5.9
Queue Length 50th (ft)	109	32	0	206	85	39	0
Queue Length 95th (ft)	169	92	51	292	117	69	50
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	420	468	510	1101	3352	2167	634
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.40	0.36	0.69	0.24	0.16	0.26
Intersection Summary							

Queues  
2: Haven Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	73	75	504	314	1288	678	375
v/c Ratio	0.18	0.18	1.10	0.57	0.43	0.35	0.46
Control Delay	23.7	23.8	96.5	28.5	6.8	17.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	23.8	96.5	28.5	6.8	17.5	4.2
Queue Length 50th (ft)	28	29	~234	72	130	79	0
Queue Length 95th (ft)	62	64	#416	85	87	117	54
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	410	414	459	725	3021	1937	822
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.18	1.10	0.43	0.43	0.35	0.46

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
3: Archibald Ave & SR 60 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	254	247	244	1273	472	88	496
v/c Ratio	0.69	0.51	0.47	0.39	0.46	0.35	0.16
Control Delay	40.5	9.2	6.5	14.7	3.4	19.5	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	9.2	6.5	14.7	3.4	19.5	6.8
Queue Length 50th (ft)	140	15	0	122	0	24	49
Queue Length 95th (ft)	197	74	53	190	59	47	75
Internal Link Dist (ft)		1294		512			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	546	618	650	3283	1017	513	3140
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.40	0.38	0.39	0.46	0.17	0.16
<b>Intersection Summary</b>							

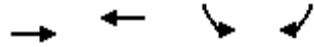


Queues  
4: Haven Ave & SR-60 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	300	306	204	1333	250	590
v/c Ratio	0.74	0.75	0.38	0.65	0.51	0.19
Control Delay	37.3	38.0	5.8	19.3	22.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	38.0	5.8	19.3	22.3	6.0
Queue Length 50th (ft)	130	133	0	173	58	71
Queue Length 95th (ft)	214	218	46	242	83	93
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	468	470	589	2051	770	3063
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.65	0.35	0.65	0.32	0.19
<b>Intersection Summary</b>						

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	724	609	603	381
v/c Ratio	0.47	0.57	0.53	0.67
Control Delay	13.2	15.1	9.8	13.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.2	15.1	9.8	13.5
Queue Length 50th (ft)	46	58	38	41
Queue Length 95th (ft)	107	142	91	146
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	3383	2354	2177	1000
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.26	0.28	0.38
<b>Intersection Summary</b>				

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	406	605	162	276	581	269
v/c Ratio	0.37	0.59	0.36	0.12	0.62	0.47
Control Delay	21.3	3.5	33.6	9.3	23.3	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	3.5	33.6	9.3	23.3	6.9
Queue Length 50th (ft)	46	10	26	19	72	0
Queue Length 95th (ft)	88	41	94	39	247	78
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2450	1199	1528	4254	1519	777
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.50	0.11	0.06	0.38	0.35
<b>Intersection Summary</b>						

Queues  
40: Limonite Ave & I-15 SB Ramps



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	968	505	872	701	98	99	536
v/c Ratio	0.38	0.49	0.34	0.58	0.23	0.23	0.64
Control Delay	9.2	2.9	6.6	9.1	16.0	16.0	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	2.9	6.6	9.1	16.0	16.0	15.7
Queue Length 50th (ft)	70	0	69	112	24	25	55
Queue Length 95th (ft)	97	41	87	238	55	55	100
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2547	1025	2547	1252	501	501	943
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.49	0.34	0.56	0.20	0.20	0.57
Intersection Summary							

Queues  
41: I-15 NB Ramps & Limonite Ave

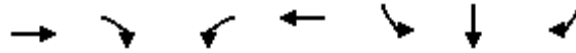
Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	645	518	1119	299	227	230	555
v/c Ratio	0.25	0.43	0.43	0.32	0.56	0.56	0.60
Control Delay	5.8	5.4	9.0	2.3	22.8	23.0	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	5.4	9.0	2.3	22.8	23.0	9.5
Queue Length 50th (ft)	36	32	80	0	64	64	31
Queue Length 95th (ft)	50	139	110	31	122	123	71
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2613	1248	2613	942	472	473	1020
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.42	0.43	0.32	0.48	0.49	0.54
Intersection Summary							

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	718	276	56	1398	308	309	268
v/c Ratio	0.28	0.31	0.33	0.48	0.77	0.77	0.62
Control Delay	16.4	4.6	59.1	13.3	52.2	52.4	33.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	4.6	59.1	13.3	52.2	52.4	33.2
Queue Length 50th (ft)	104	10	22	188	233	234	136
Queue Length 95th (ft)	168	63	41	294	274	275	181
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2571	898	309	2932	613	613	619
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.31	0.18	0.48	0.50	0.50	0.43
<b>Intersection Summary</b>							

Queues  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) AM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	238	882	168	1080	238	242	54	40	689
v/c Ratio	1.50	0.34	0.07	0.44	0.71	0.71	0.13	0.31	1.06
Control Delay	291.1	16.0	0.1	26.6	53.7	53.4	0.7	59.1	70.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	291.1	16.0	0.1	26.6	53.7	53.4	0.7	59.1	70.4
Queue Length 50th (ft)	~255	126	0	165	183	186	0	30	~126
Queue Length 95th (ft)	#418	207	0	246	232	235	0	67	#260
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	159	2581	2515	2437	543	553	580	131	647
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.50	0.34	0.07	0.44	0.44	0.44	0.09	0.31	1.06

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues  
59: Euclid Ave & SR-71 NB Ramps



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	49	493	923	645	820
v/c Ratio	0.17	0.34	0.78	0.99	0.29
Control Delay	38.4	0.6	26.7	61.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	0.6	26.7	61.6	2.4
Queue Length 50th (ft)	12	0	215	~373	51
Queue Length 95th (ft)	31	0	294	#683	75
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	1266	1468	1696	653	3001
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.04	0.34	0.54	0.99	0.27

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	167	165	151	498	340	1146	313
v/c Ratio	0.61	0.62	0.41	0.75	0.10	0.40	0.36
Control Delay	43.6	42.6	8.6	27.1	3.9	18.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	42.6	8.6	27.1	3.9	18.2	4.3
Queue Length 50th (ft)	94	93	0	138	35	120	3
Queue Length 95th (ft)	147	149	49	178	0	188	61
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	414	399	484	982	3557	2892	866
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.41	0.31	0.51	0.10	0.40	0.36
<b>Intersection Summary</b>							

Queues  
2: Haven Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	120	121	581	148	773	1504	563
v/c Ratio	0.30	0.30	1.07	0.42	0.24	0.61	0.54
Control Delay	30.6	30.6	82.0	34.1	8.1	18.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	30.6	82.0	34.1	8.1	18.6	3.5
Queue Length 50th (ft)	58	60	~266	43	99	220	0
Queue Length 95th (ft)	110	110	#471	48	58	283	55
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	397	399	542	793	3189	2447	1036
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.30	1.07	0.19	0.24	0.61	0.54

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
3: Archibald Ave & SR 60 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	64	190	190	763	369	478	959
v/c Ratio	0.31	0.67	0.66	0.24	0.39	0.74	0.25
Control Delay	37.8	26.0	25.0	14.3	3.4	25.7	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	26.0	25.0	14.3	3.4	25.7	8.0
Queue Length 50th (ft)	35	40	38	65	0	133	121
Queue Length 95th (ft)	68	105	100	113	56	199	171
Internal Link Dist (ft)		1294		512			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	488	506	523	3195	958	906	3766
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.38	0.36	0.24	0.39	0.53	0.25
<b>Intersection Summary</b>							

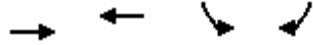
Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	165	166	234	1001	769	1118
v/c Ratio	0.57	0.57	0.68	0.52	0.84	0.32
Control Delay	40.6	40.7	32.1	21.8	29.0	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	40.7	32.1	21.8	29.0	5.6
Queue Length 50th (ft)	91	92	82	147	212	107
Queue Length 95th (ft)	136	136	136	208	272	192
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	562	562	583	1925	982	3531
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.30	0.40	0.52	0.78	0.32
Intersection Summary						

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1072	610	842	600
v/c Ratio	0.65	0.53	0.59	0.86
Control Delay	19.1	18.1	12.5	27.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.1	18.1	12.5	27.1
Queue Length 50th (ft)	127	98	89	153
Queue Length 95th (ft)	166	142	168	#427
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2434	1694	1600	767
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.44	0.36	0.53	0.78

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	603	695	177	322	408	115
v/c Ratio	0.45	0.67	0.36	0.13	0.50	0.27
Control Delay	20.1	5.3	32.9	7.8	26.1	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	5.3	32.9	7.8	26.1	8.0
Queue Length 50th (ft)	66	27	28	20	61	0
Queue Length 95th (ft)	127	77	100	44	186	51
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)				280	570	470
Base Capacity (vph)	2573	1275	1604	4458	1604	731
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.55	0.11	0.07	0.25	0.16
<b>Intersection Summary</b>						



Queues  
40: Limonite Ave & I-15 SB Ramps



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1211	551	1294	545	146	148	673
v/c Ratio	0.49	0.53	0.53	0.44	0.28	0.29	0.75
Control Delay	11.0	3.2	8.3	3.4	15.7	15.8	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	3.2	8.3	3.4	15.7	15.8	21.3
Queue Length 50th (ft)	97	0	69	9	36	36	96
Queue Length 95th (ft)	130	44	104	124	74	75	152
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2454	1040	2454	1287	552	554	959
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.53	0.53	0.42	0.26	0.27	0.70
Intersection Summary							

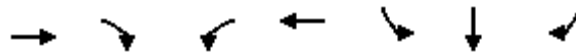
Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1234	284	1579	159	141	141	446
v/c Ratio	0.44	0.23	0.56	0.17	0.35	0.35	0.63
Control Delay	6.1	0.8	9.9	2.2	19.0	19.0	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	0.8	9.9	2.2	19.0	19.0	19.6
Queue Length 50th (ft)	63	0	119	0	38	38	60
Queue Length 95th (ft)	87	0	168	23	77	77	98
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2795	1320	2795	929	490	490	859
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.22	0.56	0.17	0.29	0.29	0.52
<b>Intersection Summary</b>							

Queues  
48: Grand Ave & SR-71 SB Ramps



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1297	480	267	1228	306	310	423
v/c Ratio	0.59	0.59	0.84	0.43	0.63	0.64	0.84
Control Delay	26.8	16.7	76.6	14.8	40.6	40.8	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	16.7	76.6	14.8	40.6	40.8	46.3
Queue Length 50th (ft)	269	134	106	179	212	215	258
Queue Length 95th (ft)	376	294	#175	268	271	274	338
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2217	808	324	2874	641	643	645
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.59	0.82	0.43	0.48	0.48	0.66

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Existing (2021) PM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	341	1342	244	1538	204	209	201	140	655
v/c Ratio	2.45	0.48	0.09	0.56	0.64	0.64	0.51	1.07	0.89
Control Delay	698.8	16.8	0.1	26.0	51.5	51.0	20.3	150.7	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	698.8	16.8	0.1	26.0	51.5	51.0	20.3	150.7	24.1
Queue Length 50th (ft)	~437	198	0	234	157	161	55	~120	35
Queue Length 95th (ft)	#623	340	0	360	197	200	106	#252	#144
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	139	2795	2632	2758	595	614	626	131	735
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.45	0.48	0.09	0.56	0.34	0.34	0.32	1.07	0.89

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	93	701	984	479	826
v/c Ratio	0.30	0.47	0.81	0.78	0.30
Control Delay	41.0	1.1	29.7	37.5	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	1.1	29.7	37.5	3.1
Queue Length 50th (ft)	24	0	246	237	56
Queue Length 95th (ft)	52	0	332	#477	84
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	1194	1495	1618	615	2918
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.47	0.61	0.78	0.28

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	305	298	273	978	1004	443	171
v/c Ratio	0.81	0.82	0.63	0.93	0.32	0.27	0.33
Control Delay	49.7	50.0	22.9	32.9	7.6	28.1	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	50.0	22.9	32.9	7.6	28.1	6.8
Queue Length 50th (ft)	166	164	73	310	134	61	0
Queue Length 95th (ft)	#286	#294	161	#388	108	85	50
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	420	405	468	1101	3120	1615	518
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.74	0.58	0.89	0.32	0.27	0.33

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	99	99	569	668	1557	791	387
v/c Ratio	0.24	0.24	1.24	0.92	0.52	0.47	0.50
Control Delay	24.6	24.5	149.9	32.7	7.1	20.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	24.5	149.9	32.7	7.1	20.9	4.8
Queue Length 50th (ft)	38	38	~300	139	138	105	0
Queue Length 95th (ft)	80	80	#490	m146	m120	139	56
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	410	414	459	725	3021	1678	771
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.24	1.24	0.92	0.52	0.47	0.50

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	258	349	344	1681	896	90	883
v/c Ratio	0.63	0.78	0.75	0.54	0.75	0.36	0.29
Control Delay	35.9	31.9	29.6	17.9	6.3	15.1	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	31.9	29.6	18.0	6.3	15.1	3.9
Queue Length 50th (ft)	135	131	121	192	0	13	68
Queue Length 95th (ft)	196	221	204	275	105	48	93
Internal Link Dist (ft)		1294		1358			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	546	555	569	3135	1201	513	3025
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	65	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.63	0.60	0.55	0.75	0.18	0.29
<b>Intersection Summary</b>							

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



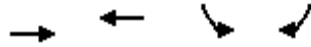
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	326	331	376	2031	264	744
v/c Ratio	0.77	0.78	0.68	1.03	0.53	0.25
Control Delay	38.9	39.6	18.2	52.1	21.2	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	39.6	18.2	52.1	21.2	4.4
Queue Length 50th (ft)	143	145	67	~391	50	90
Queue Length 95th (ft)	#243	#258	158	#525	71	91
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	468	470	586	1980	770	3014
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.70	0.64	1.03	0.34	0.25

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Opening Year (2025) Conditions AM Peak Hour

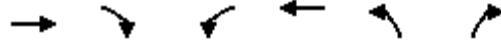


Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1701	1205	1002	775
v/c Ratio	0.89	0.91	1.28dr	1.40
Control Delay	27.5	32.1	26.6	214.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.5	32.1	26.6	214.6
Queue Length 50th (ft)	249	256	195	~520
Queue Length 95th (ft)	#351	#391	#307	#749
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	1906	1327	1196	553
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.89	0.91	0.84	1.40

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	569	1435	166	447	892	400
v/c Ratio	0.51	1.31	0.44	0.22	0.75	0.54
Control Delay	26.8	161.2	39.4	13.1	29.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	161.2	39.4	13.1	29.3	6.1
Queue Length 50th (ft)	86	~793	36	46	163	0
Queue Length 95th (ft)	124	#1615	96	62	#537	98
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1957	1094	1195	3967	1194	747
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	1.31	0.14	0.11	0.75	0.54

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1165	606	1223	715	101	101	823
v/c Ratio	0.50	0.59	0.52	0.59	0.20	0.20	0.94
Control Delay	10.9	3.6	8.2	9.4	15.4	15.4	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	3.6	8.2	9.4	15.4	15.4	38.8
Queue Length 50th (ft)	89	0	112	109	25	25	135
Queue Length 95th (ft)	120	45	140	229	56	56	#253
Internal Link Dist (ft)	532		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2335	1035	2335	1203	501	501	876
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.59	0.52	0.59	0.20	0.20	0.94

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



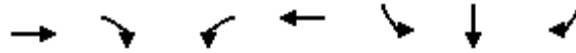
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	682	600	1211	305	364	366	567
v/c Ratio	0.28	0.50	0.49	0.34	0.80	0.80	0.58
Control Delay	6.1	6.9	10.1	2.4	33.9	34.1	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	6.9	10.1	2.4	33.9	34.1	10.3
Queue Length 50th (ft)	36	64	89	0	113	113	38
Queue Length 95th (ft)	50	175	121	31	#238	#241	81
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2470	1217	2470	910	472	473	997
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.49	0.49	0.34	0.77	0.77	0.57

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	733	282	57	1425	315	315	274
v/c Ratio	0.29	0.32	0.33	0.49	0.78	0.78	0.63
Control Delay	16.6	4.8	59.2	13.6	52.6	52.6	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	4.8	59.2	13.6	52.6	52.6	33.5
Queue Length 50th (ft)	108	12	22	196	238	238	140
Queue Length 95th (ft)	172	66	42	302	282	282	185
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2557	894	309	2919	613	613	619
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.32	0.18	0.49	0.51	0.51	0.44
<b>Intersection Summary</b>							



Queues  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	242	900	171	1103	242	247	56	41	702
v/c Ratio	1.52	0.35	0.07	0.46	0.71	0.72	0.14	0.31	1.10
Control Delay	301.1	16.3	0.1	27.0	53.7	53.6	0.7	59.4	82.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	301.1	16.3	0.1	27.0	53.7	53.6	0.7	59.4	82.2
Queue Length 50th (ft)	~261	130	0	171	186	189	0	31	~144
Queue Length 95th (ft)	#426	212	0	252	237	242	0	68	#280
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	159	2569	2515	2422	543	553	580	131	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.35	0.07	0.46	0.45	0.45	0.10	0.31	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions AM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	51	614	1171	760	1089
v/c Ratio	0.21	0.42	0.83	1.41	0.40
Control Delay	42.9	0.9	29.2	222.4	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	0.9	29.2	222.4	3.1
Queue Length 50th (ft)	14	0	313	~619	76
Queue Length 95th (ft)	32	0	#425	#856	110
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	1048	1468	1413	540	2743
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.42	0.83	1.41	0.40

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	392	386	158	672	486	1380	319
v/c Ratio	0.95	0.97	0.32	0.82	0.16	0.67	0.47
Control Delay	67.9	73.5	6.7	17.9	3.1	28.8	8.8
Queue Delay	5.8	7.3	0.0	0.0	0.0	0.0	0.0
Total Delay	73.8	80.8	6.7	17.9	3.1	28.8	8.8
Queue Length 50th (ft)	231	237	0	183	6	196	25
Queue Length 95th (ft)	#415	#438	49	25	0	252	101
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	414	398	489	982	3133	2060	672
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	14	13	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	1.00	0.32	0.68	0.16	0.67	0.47

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	173	171	601	463	955	1827	606
v/c Ratio	0.44	0.43	1.23	0.71	0.30	0.91	0.63
Control Delay	33.2	33.0	146.3	18.3	1.7	34.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	33.0	146.3	18.3	1.7	34.9	5.9
Queue Length 50th (ft)	88	87	~358	43	2	353	10
Queue Length 95th (ft)	152	150	#565	m31	m2	#503	98
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	397	399	488	793	3189	2002	958
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.43	1.23	0.58	0.30	0.91	0.63

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	65	290	294	1080	784	487	1624
v/c Ratio	0.16	0.80	0.69	0.44	0.81	0.75	0.51
Control Delay	25.9	45.9	28.6	22.8	14.7	22.5	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Total Delay	25.9	45.9	28.6	22.8	14.7	22.5	11.4
Queue Length 50th (ft)	30	153	105	133	70	153	202
Queue Length 95th (ft)	61	245	188	190	#361	207	m236
Internal Link Dist (ft)		1294		1358			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	488	437	504	2442	970	906	3180
Starvation Cap Reductn	0	0	0	0	0	0	1181
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.66	0.58	0.44	0.81	0.54	0.81

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour

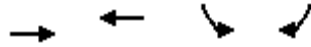


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	172	172	754	1615	839	1521
v/c Ratio	0.31	0.31	1.29	1.43	0.89	0.55
Control Delay	24.5	24.5	170.7	228.0	29.4	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	24.5	170.7	228.0	29.4	11.4
Queue Length 50th (ft)	75	75	~523	~466	251	279
Queue Length 95th (ft)	126	126	#708	#535	m289	m316
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	562	562	583	1128	982	2741
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.31	1.29	1.43	0.85	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2478	1473	1362	1115
v/c Ratio	1.24	1.06	1.78dr	1.96
Control Delay	137.3	65.6	81.7	458.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	137.3	65.6	81.7	458.6
Queue Length 50th (ft)	~515	~389	~364	~880
Queue Length 95th (ft)	#609	#516	#490	#1135
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	1992	1387	1235	569
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.24	1.06	1.10	1.96

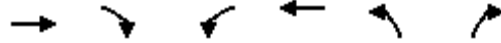
Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.



Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	819	1872	180	531	1058	118
v/c Ratio	0.60	1.64	0.46	0.23	0.90	0.21
Control Delay	27.4	309.3	41.2	12.5	39.5	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	309.3	41.2	12.5	39.5	6.8
Queue Length 50th (ft)	133	~1320	43	56	243	0
Queue Length 95th (ft)	181	#2299	103	73	#668	50
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1934	1140	1174	3904	1177	568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	1.64	0.15	0.14	0.90	0.21

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1599	871	1459	556	149	151	854
v/c Ratio	0.68	0.73	0.62	0.44	0.27	0.28	0.90
Control Delay	13.6	5.3	9.6	3.4	15.4	15.5	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	5.3	9.6	3.4	15.4	15.5	31.5
Queue Length 50th (ft)	141	0	83	8	36	37	136
Queue Length 95th (ft)	187	54	130	137	75	77	#250
Internal Link Dist (ft)	532		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2351	1193	2351	1256	552	554	959
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.73	0.62	0.44	0.27	0.27	0.89

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
41: I-15 NB Ramps & Limonite Ave

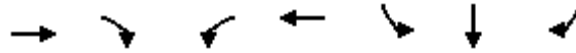
Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1347	507	1657	162	192	192	456
v/c Ratio	0.50	0.41	0.61	0.18	0.45	0.45	0.60
Control Delay	8.5	3.1	10.8	2.2	20.2	20.2	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	3.1	10.8	2.2	20.2	20.2	18.6
Queue Length 50th (ft)	76	16	137	0	52	52	59
Queue Length 95th (ft)	124	135	180	23	102	102	101
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2710	1300	2710	907	490	490	859
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.39	0.61	0.18	0.39	0.39	0.53
<b>Intersection Summary</b>							

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1323	490	272	1253	312	316	431
v/c Ratio	0.60	0.61	0.86	0.44	0.63	0.64	0.84
Control Delay	27.5	17.4	77.9	15.2	40.4	40.6	46.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	17.4	77.9	15.2	40.4	40.6	46.6
Queue Length 50th (ft)	279	144	108	187	215	218	264
Queue Length 95th (ft)	386	308	#180	275	276	280	348
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2195	803	324	2854	641	643	645
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.61	0.84	0.44	0.49	0.49	0.67

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	348	1370	249	1570	208	213	205	143	668
v/c Ratio	2.50	0.49	0.09	0.57	0.65	0.64	0.52	1.09	0.92
Control Delay	720.7	17.1	0.1	26.3	51.6	51.1	20.7	156.7	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	720.7	17.1	0.1	26.3	51.6	51.1	20.7	156.7	28.7
Queue Length 50th (ft)	~449	205	0	242	161	164	58	~125	45
Queue Length 95th (ft)	#636	349	0	370	201	204	109	#258	#164
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	139	2786	2632	2747	595	614	626	131	727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.50	0.49	0.09	0.57	0.35	0.35	0.33	1.09	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Conditions PM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	95	956	1203	568	1448
v/c Ratio	0.34	0.64	0.84	1.04	0.52
Control Delay	43.9	2.1	30.6	84.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	2.1	30.6	84.1	4.3
Queue Length 50th (ft)	28	0	334	~383	132
Queue Length 95th (ft)	53	0	#482	#603	193
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	1055	1495	1434	544	2764
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.64	0.84	1.04	0.52

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	301	302	276	985	1013	445	171
v/c Ratio	0.79	0.82	0.64	0.93	0.33	0.28	0.33
Control Delay	47.7	50.1	23.5	29.9	6.0	28.3	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	50.1	23.5	29.9	6.0	28.3	6.8
Queue Length 50th (ft)	164	168	77	296	129	61	0
Queue Length 95th (ft)	#281	#301	166	#393	67	85	50
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	420	405	466	1101	3107	1590	512
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.75	0.59	0.89	0.33	0.28	0.33

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	99	99	569	947	1571	793	387
v/c Ratio	0.24	0.24	1.24	1.31	0.52	0.47	0.50
Control Delay	24.6	24.5	149.9	162.6	3.9	20.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	24.5	149.9	162.6	3.9	20.9	4.8
Queue Length 50th (ft)	38	38	~300	~287	64	105	0
Queue Length 95th (ft)	80	80	#490	m#252	m3	140	56
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	410	414	459	725	3021	1678	771
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.24	1.24	1.31	0.52	0.47	0.50

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	258	351	346	1696	899	90	886
v/c Ratio	0.61	0.77	0.74	0.55	0.75	0.36	0.30
Control Delay	34.3	30.5	28.3	18.6	6.4	13.8	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	30.5	28.3	18.7	6.4	13.8	2.9
Queue Length 50th (ft)	133	131	121	199	0	2	0
Queue Length 95th (ft)	196	224	207	279	107	46	89
Internal Link Dist (ft)		1294		512			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	546	554	568	3074	1196	513	2978
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	64	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.63	0.61	0.56	0.75	0.18	0.30
<b>Intersection Summary</b>							

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour

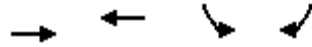


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	326	331	421	2351	264	745
v/c Ratio	0.75	0.76	0.76	1.20	0.53	0.25
Control Delay	37.8	38.3	22.9	120.4	21.4	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	38.3	22.9	120.4	21.4	1.5
Queue Length 50th (ft)	143	145	90	~512	23	2
Queue Length 95th (ft)	#243	#258	#198	#647	31	3
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	468	470	586	1957	770	2992
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.70	0.72	1.20	0.34	0.25

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps



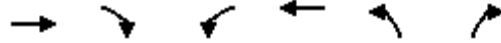
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1912	1217	1024	797
v/c Ratio	1.00	0.92	1.32dr	1.45
Control Delay	44.4	33.0	28.0	233.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	44.4	33.0	28.0	233.6
Queue Length 50th (ft)	~304	261	203	~545
Queue Length 95th (ft)	#426	#398	#320	#776
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	1904	1325	1193	551
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	0.92	0.86	1.45

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	577	1641	166	452	894	405
v/c Ratio	0.50	1.50	0.44	0.22	0.76	0.54
Control Delay	26.5	244.2	39.8	12.9	30.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	244.2	39.8	12.9	30.0	6.2
Queue Length 50th (ft)	88	~1013	37	47	170	0
Queue Length 95th (ft)	126	#1950	96	63	#539	98
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1937	1096	1182	3923	1180	746
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	1.50	0.14	0.12	0.76	0.54

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1180	660	1254	715	101	101	823
v/c Ratio	0.51	0.62	0.54	0.59	0.20	0.20	0.94
Control Delay	11.0	3.9	7.3	11.0	15.4	15.4	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	3.9	7.3	11.0	15.4	15.4	38.8
Queue Length 50th (ft)	90	0	31	173	25	25	135
Queue Length 95th (ft)	123	46	82	281	56	56	#253
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2335	1064	2335	1203	501	501	876
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.62	0.54	0.59	0.20	0.20	0.94

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	698	600	1229	305	371	373	567
v/c Ratio	0.28	0.50	0.50	0.34	0.81	0.81	0.59
Control Delay	9.8	8.8	10.2	2.4	34.9	35.1	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	8.8	10.2	2.4	34.9	35.1	10.7
Queue Length 50th (ft)	35	123	91	0	115	116	40
Queue Length 95th (ft)	69	244	124	31	#245	#246	84
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2464	1215	2464	909	472	473	988
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.49	0.50	0.34	0.79	0.79	0.57

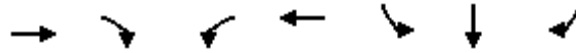
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	733	282	57	1425	315	315	274
v/c Ratio	0.29	0.32	0.33	0.49	0.78	0.78	0.63
Control Delay	16.6	4.8	59.2	13.6	52.6	52.6	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	4.8	59.2	13.6	52.6	52.6	33.5
Queue Length 50th (ft)	108	12	22	196	238	238	140
Queue Length 95th (ft)	172	66	42	302	282	282	185
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2557	894	309	2919	613	613	619
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.32	0.18	0.49	0.51	0.51	0.44
<b>Intersection Summary</b>							

Queues  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	242	900	171	1103	242	247	56	41	702
v/c Ratio	1.52	0.35	0.07	0.46	0.71	0.72	0.14	0.31	1.10
Control Delay	301.1	16.3	0.1	27.0	53.7	53.6	0.7	59.4	82.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	301.1	16.3	0.1	27.0	53.7	53.6	0.7	59.4	82.2
Queue Length 50th (ft)	~261	130	0	171	186	189	0	31	~144
Queue Length 95th (ft)	#426	212	0	252	237	242	0	68	#280
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	159	2569	2515	2422	543	553	580	131	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.35	0.07	0.46	0.45	0.45	0.10	0.31	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project AM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	51	614	1171	760	1092
v/c Ratio	0.21	0.42	0.83	1.41	0.40
Control Delay	42.9	0.9	29.2	222.4	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	0.9	29.2	222.4	3.1
Queue Length 50th (ft)	14	0	313	~619	77
Queue Length 95th (ft)	32	0	#425	#856	111
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	1048	1468	1413	540	2743
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.42	0.83	1.41	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	394	388	158	675	491	1384	319
v/c Ratio	0.95	0.97	0.32	0.82	0.16	0.67	0.48
Control Delay	68.9	74.7	6.7	17.6	2.9	28.9	8.9
Queue Delay	6.7	8.3	0.0	0.0	0.0	0.0	0.0
Total Delay	75.6	83.0	6.7	17.6	2.9	28.9	8.9
Queue Length 50th (ft)	232	239	0	184	0	197	26
Queue Length 95th (ft)	#420	#441	49	24	1	253	101
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	414	398	489	982	3133	2055	671
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	15	14	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.01	0.32	0.69	0.16	0.67	0.48

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	181	178	601	627	963	1847	606
v/c Ratio	0.46	0.45	1.24	0.84	0.30	1.00	0.66
Control Delay	33.6	33.4	148.5	18.5	1.8	49.9	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	33.4	148.5	18.5	1.8	49.9	7.2
Queue Length 50th (ft)	92	90	~361	76	2	~416	20
Queue Length 95th (ft)	160	156	#567	m36	m1	#512	117
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	397	399	486	793	3189	1854	914
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.45	1.24	0.79	0.30	1.00	0.66

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	65	301	305	1087	784	487	1633
v/c Ratio	0.16	0.82	0.70	0.45	0.81	0.75	0.52
Control Delay	25.7	47.3	29.4	23.2	14.9	22.6	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Total Delay	25.7	47.3	29.4	23.2	14.9	22.6	11.8
Queue Length 50th (ft)	29	160	111	136	72	155	203
Queue Length 95th (ft)	61	257	198	191	#361	207	m239
Internal Link Dist (ft)		1294		512			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	488	436	504	2409	965	906	3154
Starvation Cap Reductn	0	0	0	0	0	0	1170
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.69	0.61	0.45	0.81	0.54	0.82

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



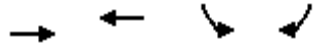
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	172	172	1029	1815	839	1562
v/c Ratio	0.31	0.31	1.77	1.61	0.89	0.57
Control Delay	24.5	24.5	374.3	307.3	27.0	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	24.5	374.3	307.3	27.0	9.9
Queue Length 50th (ft)	75	75	~859	~558	215	252
Queue Length 95th (ft)	126	126	#1051	#625	m245	m274
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	562	562	583	1125	982	2741
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.31	1.77	1.61	0.85	0.57

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2601	1505	1500	1252
v/c Ratio	1.31	1.09	2.01dr	2.20
Control Delay	164.5	73.9	128.3	566.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	164.5	73.9	128.3	566.8
Queue Length 50th (ft)	~557	~405	~435	~1027
Queue Length 95th (ft)	#652	#532	#563	#1291
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	1992	1387	1233	568
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.31	1.09	1.22	2.20

**Intersection Summary**

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	826	1987	180	537	1084	118
v/c Ratio	0.60	1.74	0.46	0.23	0.92	0.21
Control Delay	27.4	354.4	41.2	12.5	42.3	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	354.4	41.2	12.5	42.3	6.8
Queue Length 50th (ft)	135	~1445	43	57	253	0
Queue Length 95th (ft)	183	#2484	103	73	#690	50
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1930	1141	1172	3896	1174	567
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.74	0.15	0.14	0.92	0.21

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1602	908	1544	556	149	151	854
v/c Ratio	0.68	0.75	0.66	0.44	0.27	0.28	0.90
Control Delay	13.7	5.7	9.9	3.4	15.4	15.5	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.7	5.7	9.9	3.4	15.4	15.5	31.5
Queue Length 50th (ft)	142	0	94	8	36	37	136
Queue Length 95th (ft)	187	55	143	139	75	77	#250
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2351	1213	2351	1256	552	554	959
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.75	0.66	0.44	0.27	0.27	0.89

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
41: I-15 NB Ramps & Limonite Ave

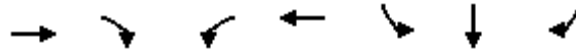
Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1349	507	1670	162	228	229	456
v/c Ratio	0.50	0.41	0.62	0.18	0.53	0.54	0.60
Control Delay	8.5	3.1	10.9	2.2	22.1	22.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	3.1	10.9	2.2	22.1	22.1	18.6
Queue Length 50th (ft)	76	16	138	0	64	64	59
Queue Length 95th (ft)	124	135	182	23	121	121	101
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2710	1300	2710	907	490	490	859
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.39	0.62	0.18	0.47	0.47	0.53
<b>Intersection Summary</b>							

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1323	490	272	1253	312	316	431
v/c Ratio	0.60	0.61	0.86	0.44	0.63	0.64	0.84
Control Delay	27.5	17.4	77.9	15.2	40.4	40.6	46.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	17.4	77.9	15.2	40.4	40.6	46.6
Queue Length 50th (ft)	279	144	108	187	215	218	264
Queue Length 95th (ft)	386	308	#180	275	276	280	348
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2195	803	324	2854	641	643	645
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.61	0.84	0.44	0.49	0.49	0.67

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	348	1370	249	1570	208	213	205	143	668
v/c Ratio	2.50	0.49	0.09	0.57	0.65	0.64	0.52	1.09	0.92
Control Delay	720.7	17.1	0.1	26.3	51.6	51.1	20.7	156.7	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	720.7	17.1	0.1	26.3	51.6	51.1	20.7	156.7	28.7
Queue Length 50th (ft)	~449	205	0	242	161	164	58	~125	45
Queue Length 95th (ft)	#636	349	0	370	201	204	109	#258	#164
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	139	2786	2632	2747	595	614	626	131	727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.50	0.49	0.09	0.57	0.35	0.35	0.33	1.09	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Opening Year (2025) Plus Project PM Peak Hour



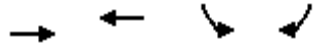
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	95	956	1203	568	1448
v/c Ratio	0.34	0.64	0.84	1.04	0.52
Control Delay	43.9	2.1	30.6	84.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	2.1	30.6	84.1	4.3
Queue Length 50th (ft)	28	0	334	~383	132
Queue Length 95th (ft)	53	0	#482	#603	193
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	1055	1495	1434	544	2764
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.64	0.84	1.04	0.52

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues  
14: Ontario Ranch Rd & I-15 SB Ramps



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2601	1505	247	2505
v/c Ratio	0.79	0.66	0.64	1.68
Control Delay	9.3	7.6	33.8	321.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	7.6	33.8	321.5
Queue Length 50th (ft)	199	138	44	~786
Queue Length 95th (ft)	263	196	76	#1039
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	3285	2286	388	1495
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.79	0.66	0.64	1.68

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	283	276	262	747	1495	600	211
v/c Ratio	0.95	0.79	0.76	0.91	0.45	0.25	0.30
Control Delay	79.3	40.3	38.0	25.8	4.6	19.5	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	79.3	40.3	38.0	25.8	4.9	19.5	4.1
Queue Length 50th (ft)	168	108	95	210	109	67	0
Queue Length 95th (ft)	#330	#248	#221	#295	32	89	44
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	298	351	344	844	3359	2362	703
Starvation Cap Reductn	0	0	0	0	1020	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.79	0.76	0.89	0.64	0.25	0.30

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	101	101	576	343	1939	1121	424
v/c Ratio	0.17	0.17	0.94	0.84	0.77	0.69	0.54
Control Delay	17.3	17.3	46.3	41.5	19.9	25.0	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	17.3	46.3	41.5	19.9	25.0	5.2
Queue Length 50th (ft)	32	32	214	88	319	167	0
Queue Length 95th (ft)	67	67	#415	m100	389	215	60
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	603	603	630	408	2503	1630	785
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.91	0.84	0.77	0.69	0.54

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	366	354	333	1726	558	232	811
v/c Ratio	0.79	0.72	0.64	0.65	0.58	0.73	0.28
Control Delay	41.6	29.3	20.2	22.6	4.6	36.1	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	29.3	20.2	22.6	4.6	36.1	10.1
Queue Length 50th (ft)	194	140	89	229	0	67	82
Queue Length 95th (ft)	292	241	177	285	67	#116	m99
Internal Link Dist (ft)		1294		937			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	542	553	584	2654	961	330	2850
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.64	0.57	0.65	0.58	0.70	0.28

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	328	328	250	2052	302	1063
v/c Ratio	0.87	0.87	0.56	0.86	0.95	0.34
Control Delay	52.6	52.6	19.4	21.7	68.5	2.5
Queue Delay	0.0	0.0	0.0	3.0	0.0	0.0
Total Delay	52.6	52.6	19.4	24.7	68.5	2.5
Queue Length 50th (ft)	153	153	54	289	43	4
Queue Length 95th (ft)	#295	#295	124	360	m#133	5
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	393	393	456	2386	317	3152
Starvation Cap Reductn	0	0	0	238	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.83	0.55	0.96	0.95	0.34

Intersection Summary

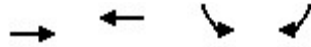
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions AM Peak Hour



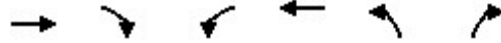
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1347	989	822	589
v/c Ratio	0.78	0.82	0.93dr	1.02
Control Delay	21.4	25.1	17.1	62.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.4	25.1	17.1	62.8
Queue Length 50th (ft)	164	176	123	~258
Queue Length 95th (ft)	214	249	181	#473
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	1812	1261	1256	580
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.74	0.78	0.65	1.02

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	632	937	168	379	881	404
v/c Ratio	0.56	0.93	0.50	0.19	0.67	0.55
Control Delay	30.9	24.5	47.7	16.2	24.3	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	24.5	47.7	16.2	24.3	8.8
Queue Length 50th (ft)	120	247	45	50	165	26
Queue Length 95th (ft)	153	449	107	68	400	172
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1951	1087	397	2860	1479	792
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.86	0.42	0.13	0.60	0.51
Intersection Summary						

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1198	844	1302	719	109	110	708
v/c Ratio	0.41	0.68	0.44	0.60	0.36	0.36	1.21
Control Delay	6.5	3.8	3.3	10.4	23.6	23.6	134.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	3.8	3.3	10.4	23.6	23.6	134.1
Queue Length 50th (ft)	65	0	16	113	33	33	~151
Queue Length 95th (ft)	89	36	m19	230	73	73	#255
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2937	1242	2937	1200	302	302	583
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.68	0.44	0.60	0.36	0.36	1.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



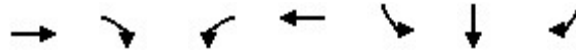
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	854	563	1208	323	415	408	563
v/c Ratio	0.35	0.47	0.50	0.36	0.87	0.85	0.61
Control Delay	6.7	3.7	10.5	2.5	40.9	38.7	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	3.7	10.5	2.5	40.9	38.7	14.4
Queue Length 50th (ft)	49	14	90	0	133	130	57
Queue Length 95th (ft)	65	79	122	32	#281	#274	105
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2409	1206	2409	904	480	482	925
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.47	0.50	0.36	0.86	0.85	0.61

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	937	295	53	1642	310	311	253
v/c Ratio	0.36	0.33	0.35	0.56	0.77	0.77	0.59
Control Delay	16.8	6.5	47.5	15.5	52.2	52.4	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	6.5	47.5	15.5	52.2	52.4	31.2
Queue Length 50th (ft)	143	28	19	326	234	235	124
Queue Length 95th (ft)	227	103	m26	m417	290	291	176
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2594	890	162	2926	625	625	630
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.33	0.56	0.50	0.50	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues

Subarea 29 Specific Plan Amendment

49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	232	1158	168	1505	274	284	53	42	684
v/c Ratio	1.31	0.47	0.07	0.67	0.75	0.76	0.12	0.30	1.08
Control Delay	215.7	17.7	0.1	33.6	53.9	54.4	0.6	58.4	77.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	215.7	17.7	0.1	33.6	53.9	54.4	0.6	58.4	77.4
Queue Length 50th (ft)	~235	185	0	274	209	217	0	31	~140
Queue Length 95th (ft)	#402	259	0	#380	271	280	0	69	#274
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	177	2466	2515	2232	518	529	559	138	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.31	0.47	0.07	0.67	0.53	0.54	0.09	0.30	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions AM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	53	642	1179	884	1474
v/c Ratio	0.48	0.44	1.13	0.99	0.49
Control Delay	85.9	0.9	114.3	62.0	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	85.9	0.9	114.3	62.0	2.1
Queue Length 50th (ft)	26	0	~702	~860	108
Queue Length 95th (ft)	52	0	#844	#1162	127
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	110	1468	1045	891	2982
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.44	1.13	0.99	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	220	215	197	495	558	1926	368
v/c Ratio	0.69	0.57	0.44	0.75	0.16	0.71	0.47
Control Delay	44.4	23.2	7.7	19.7	0.6	24.8	11.4
Queue Delay	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	23.2	7.7	19.7	0.6	24.8	11.4
Queue Length 50th (ft)	122	65	0	24	0	256	56
Queue Length 95th (ft)	190	135	54	10	0	#392	159
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	414	462	518	982	3416	2717	780
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	11	10	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.48	0.38	0.50	0.16	0.71	0.47

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	196	196	619	155	1351	2052	649
v/c Ratio	0.33	0.33	1.02	0.82	0.52	0.97	0.64
Control Delay	23.3	23.3	69.2	59.6	23.8	40.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	23.3	69.2	59.6	23.8	40.7	4.7
Queue Length 50th (ft)	85	85	~330	46	286	408	0
Queue Length 95th (ft)	144	144	#554	m#80	331	#532	63
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	588	588	606	188	2613	2109	1021
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.33	1.02	0.82	0.52	0.97	0.64

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	199	234	230	832	432	758	1568
v/c Ratio	0.69	0.71	0.68	0.34	0.51	0.86	0.45
Control Delay	46.7	32.2	30.2	21.5	4.8	25.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Total Delay	46.7	32.2	30.2	21.5	4.8	25.8	14.0
Queue Length 50th (ft)	111	80	73	99	0	242	276
Queue Length 95th (ft)	181	163	151	136	65	303	316
Internal Link Dist (ft)		1294		937			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	355	382	392	2419	854	982	3507
Starvation Cap Reductn	0	0	0	0	0	0	1442
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.61	0.59	0.34	0.51	0.77	0.76
<b>Intersection Summary</b>							

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	152	153	221	1548	705	1789
v/c Ratio	0.63	0.64	0.75	0.71	0.84	0.49
Control Delay	48.2	48.4	38.9	22.4	31.3	1.5
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay	48.2	48.4	38.9	23.0	31.3	1.5
Queue Length 50th (ft)	86	86	76	252	130	6
Queue Length 95th (ft)	148	150	151	324	m146	m7
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	289	289	340	2184	906	3686
Starvation Cap Reductn	0	0	0	281	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.53	0.65	0.81	0.78	0.49

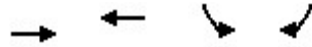
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) No Project Conditions PM Peak Hour



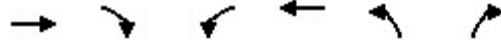
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1916	1453	1085	810
v/c Ratio	0.93	1.01	1.12dr	1.23
Control Delay	46.9	66.0	33.1	147.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	46.9	66.0	33.1	147.3
Queue Length 50th (ft)	598	~706	401	~994
Queue Length 95th (ft)	672	#870	488	#1272
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2065	1437	1448	661
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.93	1.01	0.75	1.23

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	811	1379	179	621	850	161
v/c Ratio	0.66	1.19	0.99	0.35	0.51	0.21
Control Delay	38.2	110.4	119.4	25.0	21.1	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	110.4	119.4	25.0	21.1	3.9
Queue Length 50th (ft)	184	~1132	62	113	179	0
Queue Length 95th (ft)	223	#1668	#178	141	372	48
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2877	1156	180	3411	1652	772
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	1.19	0.99	0.18	0.51	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1449	1031	1663	551	182	185	888
v/c Ratio	0.52	0.78	0.60	0.44	0.45	0.45	1.23
Control Delay	9.0	5.9	6.5	2.6	22.0	22.0	136.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	5.9	6.5	2.6	22.0	22.0	136.5
Queue Length 50th (ft)	99	0	100	7	53	54	~203
Queue Length 95th (ft)	131	46	m131	35	105	106	#315
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2773	1325	2773	1249	407	409	724
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.78	0.60	0.44	0.45	0.45	1.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



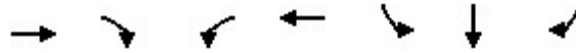
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1536	289	1588	165	324	325	454
v/c Ratio	0.73	0.23	0.54	0.17	0.94	0.94	0.73
Control Delay	7.6	0.8	8.0	1.6	61.7	62.3	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	0.8	8.0	1.6	61.7	62.3	25.8
Queue Length 50th (ft)	82	0	101	0	110	111	67
Queue Length 95th (ft)	93	0	133	18	#250	#250	#130
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2098	1248	2960	977	345	345	625
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.23	0.54	0.17	0.94	0.94	0.73

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1616	525	273	1495	355	352	424
v/c Ratio	0.77	0.69	0.90	0.54	0.70	0.69	0.80
Control Delay	31.2	23.2	81.7	17.0	39.0	38.6	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	23.2	81.7	17.0	39.0	38.6	38.3
Queue Length 50th (ft)	351	189	100	230	226	224	224
Queue Length 95th (ft)	#544	#432	#177	346	283	281	295
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2105	756	303	2760	801	804	791
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.69	0.90	0.54	0.44	0.44	0.54

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

Subarea 29 Specific Plan Amendment

49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	424	1636	253	1788	233	241	202	141	707
v/c Ratio	1.04	0.62	0.10	1.11	0.73	0.73	0.51	0.77	0.77
Control Delay	99.6	20.8	0.1	98.1	57.1	57.0	21.1	79.6	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	20.8	0.1	98.1	57.1	57.0	21.1	79.6	9.9
Queue Length 50th (ft)	~355	310	0	~475	177	184	54	107	0
Queue Length 95th (ft)	#556	417	0	#648	251	258	119	#201	60
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	408	2651	2632	1617	430	442	485	197	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.62	0.10	1.11	0.54	0.55	0.42	0.72	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) No Project Conditions PM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	95	1095	1358	495	1358
v/c Ratio	0.47	0.73	0.92	0.92	0.48
Control Delay	49.4	3.2	34.0	53.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	3.2	34.0	53.5	3.0
Queue Length 50th (ft)	27	0	370	271	93
Queue Length 95th (ft)	52	0	#524	#464	120
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	202	1495	1610	583	2834
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.73	0.84	0.85	0.48

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	283	276	262	747	1505	600	211
v/c Ratio	0.95	0.79	0.76	0.91	0.45	0.25	0.30
Control Delay	79.3	40.3	38.0	25.7	4.6	19.5	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	79.3	40.3	38.0	25.7	4.9	19.5	4.1
Queue Length 50th (ft)	168	108	95	210	112	67	0
Queue Length 95th (ft)	#330	#248	#221	#293	33	89	44
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	298	351	344	844	3359	2362	703
Starvation Cap Reductn	0	0	0	0	1020	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.79	0.76	0.89	0.64	0.25	0.30

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	101	102	576	423	1947	1123	424
v/c Ratio	0.17	0.18	0.94	1.04	0.78	0.69	0.54
Control Delay	17.3	17.4	46.3	72.1	19.9	25.0	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	17.4	46.3	72.1	19.9	25.0	5.2
Queue Length 50th (ft)	32	33	214	~117	326	168	0
Queue Length 95th (ft)	67	67	#415	m#146	m383	215	60
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	603	603	630	408	2503	1630	785
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.91	1.04	0.78	0.69	0.54

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	366	354	333	1732	558	232	811
v/c Ratio	0.79	0.72	0.64	0.65	0.58	0.73	0.28
Control Delay	41.6	29.3	20.2	22.6	4.6	36.1	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	29.3	20.2	22.6	4.6	36.1	10.1
Queue Length 50th (ft)	194	140	89	230	0	67	82
Queue Length 95th (ft)	292	241	177	286	67	#116	m99
Internal Link Dist (ft)		1294		937			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	542	553	584	2654	961	330	2850
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.64	0.57	0.65	0.58	0.70	0.28

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	328	328	267	2148	302	1066
v/c Ratio	0.87	0.87	0.60	0.90	0.95	0.34
Control Delay	52.6	52.6	21.3	24.2	68.5	2.5
Queue Delay	0.0	0.0	0.0	7.7	0.0	0.0
Total Delay	52.6	52.6	21.3	31.9	68.5	2.5
Queue Length 50th (ft)	153	153	62	314	43	4
Queue Length 95th (ft)	#295	#295	137	#415	m#133	5
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	393	393	455	2386	317	3152
Starvation Cap Reductn	0	0	0	229	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.83	0.59	1.00	0.95	0.34

Intersection Summary

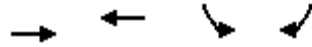
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
 14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
 Cumulative Year (2040) Plus Project Conditions AM Peak Hour



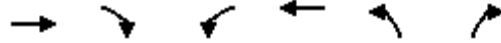
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1488	993	841	608
v/c Ratio	0.85	0.81	0.97dr	1.06
Control Delay	24.1	24.5	17.8	75.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.1	24.5	17.8	75.5
Queue Length 50th (ft)	189	177	127	~292
Queue Length 95th (ft)	246	#252	187	#495
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	1794	1249	1242	575
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.83	0.80	0.68	1.06

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	631	1079	168	376	879	411
v/c Ratio	0.57	1.04	0.53	0.20	0.63	0.54
Control Delay	32.5	52.8	49.0	17.2	23.4	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	52.8	49.0	17.2	23.4	8.7
Queue Length 50th (ft)	120	~579	45	50	166	28
Queue Length 95th (ft)	153	#679	107	67	401	182
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1834	1034	371	2684	1387	761
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	1.04	0.45	0.14	0.63	0.54

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1208	873	1319	719	109	110	708
v/c Ratio	0.41	0.70	0.45	0.60	0.36	0.36	1.22
Control Delay	6.5	4.0	3.3	10.3	23.6	23.6	136.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	4.0	3.3	10.3	23.6	23.6	136.8
Queue Length 50th (ft)	66	0	16	112	33	33	~153
Queue Length 95th (ft)	89	37	m19	229	73	73	#257
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2937	1254	2937	1200	302	302	580
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.70	0.45	0.60	0.36	0.36	1.22

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



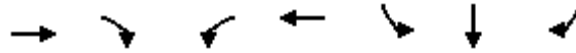
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	865	563	1216	323	419	413	563
v/c Ratio	0.36	0.47	0.51	0.36	0.88	0.86	0.61
Control Delay	6.7	3.7	10.5	2.5	41.7	39.6	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	3.7	10.5	2.5	41.7	39.6	14.6
Queue Length 50th (ft)	50	14	91	0	134	132	58
Queue Length 95th (ft)	66	77	123	32	#285	#278	106
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2405	1205	2405	903	480	482	921
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.47	0.51	0.36	0.87	0.86	0.61

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	937	295	53	1642	321	321	253
v/c Ratio	0.36	0.33	0.35	0.57	0.78	0.78	0.58
Control Delay	17.2	6.6	46.4	16.1	52.5	52.5	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	6.6	46.4	16.1	52.5	52.5	30.5
Queue Length 50th (ft)	146	29	18	343	243	243	122
Queue Length 95th (ft)	227	103	m24	m424	302	302	176
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	2569	884	162	2901	625	625	630
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.33	0.57	0.51	0.51	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Queues

Subarea 29 Specific Plan Amendment

49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	232	1179	168	1640	274	284	53	42	684
v/c Ratio	1.31	0.48	0.07	0.73	0.75	0.76	0.12	0.30	1.08
Control Delay	215.5	17.4	0.1	35.1	53.9	54.4	0.6	58.4	77.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	215.5	17.4	0.1	35.1	53.9	54.4	0.6	58.4	77.4
Queue Length 50th (ft)	~235	186	0	308	209	217	0	31	~140
Queue Length 95th (ft)	#400	260	0	#457	271	280	0	69	#274
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	177	2466	2515	2232	518	529	559	138	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.31	0.48	0.07	0.73	0.53	0.54	0.09	0.30	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions AM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	53	642	1179	884	1474
v/c Ratio	0.48	0.44	1.13	0.99	0.49
Control Delay	85.9	0.9	114.3	62.0	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	85.9	0.9	114.3	62.0	2.1
Queue Length 50th (ft)	26	0	~702	~860	108
Queue Length 95th (ft)	52	0	#844	#1162	127
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	110	1468	1045	891	2982
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.44	1.13	0.99	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
1: Archibald Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	220	215	197	495	561	1929	368
v/c Ratio	0.69	0.57	0.44	0.75	0.16	0.71	0.47
Control Delay	44.4	23.2	7.7	19.7	0.6	24.8	11.4
Queue Delay	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	23.2	7.7	19.7	0.6	24.8	11.4
Queue Length 50th (ft)	122	65	0	24	0	257	56
Queue Length 95th (ft)	190	135	54	10	0	#393	159
Internal Link Dist (ft)		1258			370	816	
Turn Bay Length (ft)	420		420				120
Base Capacity (vph)	414	462	518	982	3416	2717	780
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	11	10	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.48	0.38	0.50	0.16	0.71	0.47

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: Haven Ave & SR-60 WB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	199	199	619	197	1356	2064	649
v/c Ratio	0.34	0.34	1.02	1.05	0.52	0.98	0.64
Control Delay	23.4	23.4	69.2	101.9	22.8	41.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	23.4	69.2	101.9	22.8	41.8	4.7
Queue Length 50th (ft)	86	86	~330	~63	293	412	0
Queue Length 95th (ft)	146	146	#554	m#105	334	#537	63
Internal Link Dist (ft)		1381			540	1224	
Turn Bay Length (ft)	370		280	245			
Base Capacity (vph)	588	588	606	188	2613	2109	1021
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.34	1.02	1.05	0.52	0.98	0.64

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
3: Archibald Ave & SR 60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	199	234	230	835	432	758	1572
v/c Ratio	0.69	0.71	0.68	0.35	0.51	0.86	0.45
Control Delay	46.7	32.2	30.2	21.5	4.8	25.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Total Delay	46.7	32.2	30.2	21.5	4.8	25.8	14.0
Queue Length 50th (ft)	111	80	73	100	0	242	277
Queue Length 95th (ft)	181	163	151	137	65	303	317
Internal Link Dist (ft)		1294		937			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	355	382	392	2419	854	982	3507
Starvation Cap Reductn	0	0	0	0	0	0	1442
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.61	0.59	0.35	0.51	0.77	0.76
<b>Intersection Summary</b>							

Queues  
4: Haven Ave & SR-60 EB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	152	153	287	1600	705	1813
v/c Ratio	0.56	0.56	0.88	0.77	0.84	0.51
Control Delay	43.0	43.1	54.7	24.7	29.6	2.0
Queue Delay	0.0	0.0	0.0	0.9	0.0	0.0
Total Delay	43.0	43.1	54.7	25.6	29.6	2.0
Queue Length 50th (ft)	84	84	116	276	131	7
Queue Length 95th (ft)	148	150	#255	341	m147	m7
Internal Link Dist (ft)		1456		330		540
Turn Bay Length (ft)			345		170	
Base Capacity (vph)	289	289	340	2091	906	3587
Starvation Cap Reductn	0	0	0	234	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.53	0.84	0.86	0.78	0.51

Intersection Summary

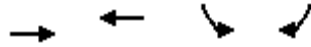
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
14: Ontario Ranch Rd & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2000	1467	1180	906
v/c Ratio	0.97	1.02	1.25dr	1.37
Control Delay	52.7	68.5	36.4	207.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	52.7	68.5	36.4	207.1
Queue Length 50th (ft)	643	~744	460	~1196
Queue Length 95th (ft)	#763	#883	558	#1481
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2065	1437	1445	661
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.97	1.02	0.82	1.37

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues  
15: I-15 NB Ramps & Ontario Ranch Rd

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	812	1462	179	621	863	161
v/c Ratio	0.66	1.26	1.00	0.35	0.52	0.21
Control Delay	38.2	142.0	119.7	25.0	21.2	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	142.0	119.7	25.0	21.2	3.9
Queue Length 50th (ft)	184	~1250	62	113	182	0
Queue Length 95th (ft)	223	#1820	#178	141	379	48
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2876	1156	179	3410	1652	771
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	1.26	1.00	0.18	0.52	0.21

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues  
40: Limonite Ave & I-15 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1451	1053	1701	551	182	185	888
v/c Ratio	0.52	0.79	0.61	0.44	0.45	0.45	1.23
Control Delay	9.0	6.7	6.6	2.5	22.0	22.0	136.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	6.7	6.6	2.5	22.0	22.0	136.5
Queue Length 50th (ft)	99	3	101	7	53	54	~203
Queue Length 95th (ft)	131	#55	m142	34	105	106	#315
Internal Link Dist (ft)	1005		772			1372	
Turn Bay Length (ft)		300		575			460
Base Capacity (vph)	2773	1326	2773	1249	407	409	724
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.79	0.61	0.44	0.45	0.45	1.23

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues  
41: I-15 NB Ramps & Limonite Ave

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



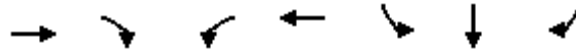
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1538	289	1590	165	343	343	454
v/c Ratio	0.73	0.23	0.54	0.17	0.99	0.99	0.73
Control Delay	7.6	0.8	8.0	1.6	74.4	74.4	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	0.8	8.0	1.6	74.4	74.4	25.9
Queue Length 50th (ft)	83	0	101	0	118	118	67
Queue Length 95th (ft)	93	0	133	18	#266	#266	#131
Internal Link Dist (ft)	772		983			1063	
Turn Bay Length (ft)		570		345			435
Base Capacity (vph)	2098	1248	2960	977	345	345	624
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.23	0.54	0.17	0.99	0.99	0.73

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
48: Grand Ave & SR-71 SB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1616	525	273	1495	422	416	424
v/c Ratio	0.83	0.73	0.90	0.57	0.75	0.74	0.74
Control Delay	35.4	26.2	81.7	19.4	39.4	38.6	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	26.2	81.7	19.4	39.4	38.6	32.2
Queue Length 50th (ft)	370	200	100	247	271	266	214
Queue Length 95th (ft)	#585	#458	#177	369	329	323	276
Internal Link Dist (ft)	1045			366		1059	
Turn Bay Length (ft)		100					565
Base Capacity (vph)	1953	715	303	2608	801	803	791
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.73	0.90	0.57	0.53	0.52	0.54

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

Subarea 29 Specific Plan Amendment

49: SR-71 NB Ramps/Roswell Ave & Grand Ave

Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	424	1768	253	1860	233	241	202	141	707
v/c Ratio	1.04	0.67	0.10	1.15	0.73	0.73	0.51	0.77	0.77
Control Delay	99.6	21.9	0.1	114.9	57.1	57.0	21.1	79.6	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	21.9	0.1	114.9	57.1	57.0	21.1	79.6	9.9
Queue Length 50th (ft)	~355	350	0	~510	177	184	54	107	0
Queue Length 95th (ft)	#556	468	0	#682	251	258	119	#201	60
Internal Link Dist (ft)		184		567		960			
Turn Bay Length (ft)							820		115
Base Capacity (vph)	408	2651	2632	1617	430	442	485	197	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.67	0.10	1.15	0.54	0.55	0.42	0.72	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
59: Euclid Ave & SR-71 NB Ramps

Subarea 29 Specific Plan Amendment  
Cumulative Year (2040) Plus Project Conditions PM Peak Hour



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	95	1095	1358	495	1358
v/c Ratio	0.47	0.73	0.92	0.92	0.48
Control Delay	49.4	3.2	34.0	53.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	3.2	34.0	53.5	3.0
Queue Length 50th (ft)	27	0	370	271	93
Queue Length 95th (ft)	52	0	#524	#464	120
Internal Link Dist (ft)	503		696		369
Turn Bay Length (ft)				325	
Base Capacity (vph)	202	1495	1610	583	2834
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.73	0.84	0.85	0.48

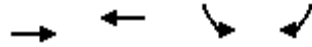
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

Subarea 29 Specific Plan Amendment

14: Ontario Ranch Rd & I-15 SB Ramps Cumulative Year (2040) Plus Project Conditions PM Peak Hour Improvements



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2000	1467	274	1812
v/c Ratio	0.68	0.71	0.58	1.21
Control Delay	8.1	9.4	25.7	111.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.1	9.4	25.7	111.3
Queue Length 50th (ft)	120	131	39	~203
Queue Length 95th (ft)	163	197	69	#429
Internal Link Dist (ft)	868	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2954	2056	474	1495
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.68	0.71	0.58	1.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.