# Chambers Road Apartments

## Traffic Impact Study

### City of Commerce City

**Date:** June 11, 2024

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FOX TUTTLE

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## 1.0 EXECUTIVE SUMMARY

This traffic impact study has been prepared by the Fox Tuttle Transportation Group for the Chambers Road Apartments project. The project proposes to develop multifamily residential use on a ±12.7-acre site in the City of Commerce City. The project parcel is located along the west side of Chambers Road approximately 1,000' south of E. 104th Avenue. The purpose of this study is to assist the City in identifying potential traffic impacts within the study area with buildout of this project in the short-term (Year 2027) and long-term, 20-year (Year 2044) planning horizons.

The project is proposing to construct 283 apartment units on the site. Access is proposed via an extension of E. 102nd Avenue west from Chambers Road, with two full-movement access points into the project site from E. 102nd Avenue: 1) located approximately 370' west of Chambers Road and, 2) aligning with Altura Street approximately 1,200' west of Chambers Road.

The Chambers Road Apartments project is anticipated to generate 1,907 daily, 113 AM peak hour, and 144 PM peak hour trips at buildout. These volumes will be distributed along Chambers Road north (to/from E. 104th Avenue) and south (to/from E. 96th Avenue) and along E. 102nd Avenue, which will ultimately connect to Sable Blvd. with the development of Anderson Ranch to the west.

Based on the projected rate of background (non-project) within the study area, it is anticipated that the following background (non-project related) improvements will need to be in place by the Year 2044 scenario to service existing volumes and future area growth at acceptable Levels of Service per City criteria:

<u>Long-Term (Year 2044) Background (non-project related) Improvement Recommendations:</u>

- If future regional growth projections are realized, the intersection of E. 104th Avenue & Chambers Road will need to be constructed to its buildout lane geometry, with three (3) through lanes in each direction eastbound and westbound on E. 104th Avenue and exclusive right-turn lanes added on the eastbound, northbound and southbound approaches.

- If future regional growth projections are realized, the intersection of E. 96th Avenue & Chambers Road will need to be constructed to its buildout lane geometry, with two (2) through lanes in each direction eastbound and westbound on E. 96th Avenue.

- Roadway improvements identified by the adjacent Anderson Ranch project were assumed to be implemented in the background for this study. Those improvements include:

- Install traffic signal control at E. 104th Avenue and Sable Boulevard. Extend northbound left turn storage at the intersection to 125 feet.
- Add eastbound, northbound, and southbound left turn auxiliary lanes and southbound right turn auxiliary lane at E. 100th Avenue and Chambers Road. Install traffic signal control at the intersection.
- Extend eastbound left turn storage at E. 96th Avenue & Chambers Road to 425 feet. Extend southbound right turn storage at E. 96th Avenue & Chambers Road to 175 feet.

The project-added traffic can be accommodated on the existing and proposed roadway and intersection network with the following recommended improvements in place:

Project-Related Improvement Recommendations (Responsibility of the Developer):

- Extend E. 102nd Avenue from Chambers to the west along the project frontage. This roadway should be built consistent with the City's "Minor/Residential Collector" standards per the C3 Vision Transportation Plan Roadway Classification Plan.

- The intersection of E. 102nd Avenue should include a northbound left-turn deceleration lane (175' lane + 180' taper) and a southbound right-turn deceleration lane (135' + 180'), consistent with the City of Commerce City Engineering Construction Standards and Specifications. The eastbound approach should be striped with a 50' left turn lane.

- Construct the east access to the site along E. 102nd Avenue with side-street stop-sign control on the southbound approach. No auxiliary turn lanes are required or recommended at this access given the Minor Collector roadway classification, consistent with City standards.

- Construct the west access to the site along E. 102nd Avenue to align with Altura Street, with side-street stop-sign control on the northbound and southbound approaches. No auxiliary turn lanes are required or recommended at this access given the Minor Collector roadway classification, consistent with City standards.

**CHAMBERS ROAD APARTMENTS**
**TRAFFIC IMPACT STUDY**

## 2.0 INTRODUCTION

This traffic impact study has been prepared by the Fox Tuttle Transportation Group for the Chambers Road Apartments project in the City of Commerce City. The project proposes to construct 283 apartment units. The project parcel is located in the northwest quadrant of Chambers Road and E. 102nd Avenue alignment, approximately 1,000 feet south of E. 104th Avenue.

The purpose of this study is to assist in identifying potential traffic impacts within the study area with buildout of this project in the short-term (Year 2027) and long-term (Year 2044) scenarios. The traffic study addresses peak hour intersection conditions in the study area without and with the project added traffic. The information contained in this study is anticipated to be used by the City of Commerce City in identifying any intersection or roadway deficiencies and potential improvements for both the near term and long-term future scenarios.

## 3.0 PROJECT DESCRIPTION

The project is proposing to develop 283 apartment units on a ±12.7-acre site which currently has a single residential use. The project proposes to extend E. 102nd Avenue along the project's southern frontage. Access to the site is proposed, as follows:

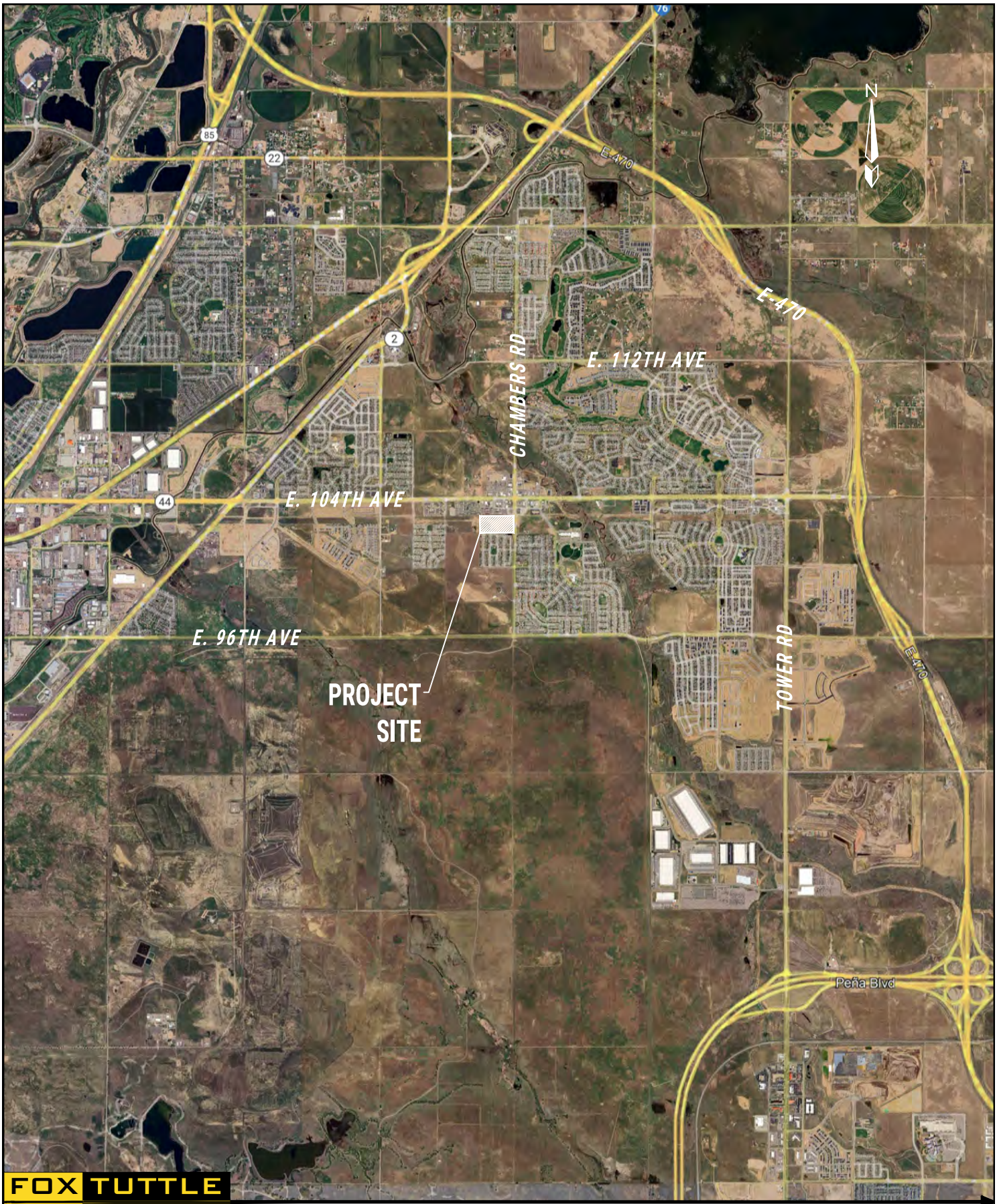
- Full-movement access along E. 102nd Avenue approximately 370' west of Chambers Road
- Full-movement access aligning with Altura Street approximately 1,200' west of Chambers Road

Development of the project includes construction of the E. 102nd Avenue & Chambers Road intersection as a full-movement, side-street stop-sign controlled intersection, which will provide access to the project via Chambers Road. Additional access to the site to the west will be provided via the ultimate connection of E. 102nd Avenue with development of the adjacent Anderson Ranch project.

The project site has been identified as a "Residential High" future land use per the C3 Vision Plan (2010). The proposed use is consistent with this zoning designation. Adjacent land uses include existing single-family residential use to the south in the Harvest Meadows

neighborhood, future attached and detached single-family residential uses to the south and west in the Anderson Ranch neighborhood, and multifamily apartments and mixed-use commercial to the north of the site.

A vicinity map is shown on **Figure 1**. A concept site plan depicting the proposed access points is shown on **Figure 2**.

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CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

VICINITY MAP

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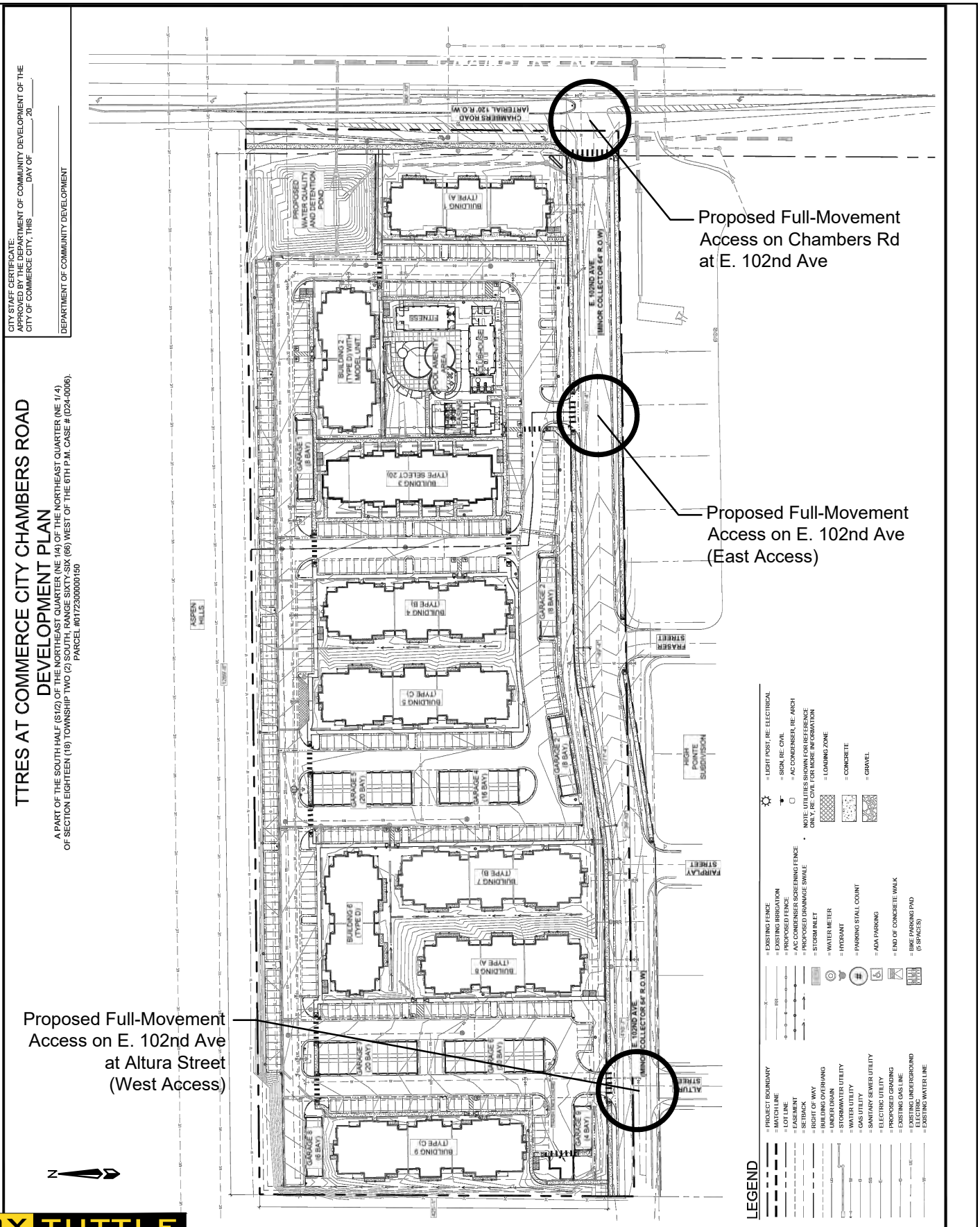
|---|---|---|---|---|---|---|---|---|---|

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CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

SITE AND ACCESS PLAN

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## 4.0 EXISTING AND FUTURE BACKGROUND TRAFFIC CONDTIONS

### 4.1 Study Area and Circulation Network

The study area boundaries took into consideration the amount of traffic to be generated by the project and potential impact to the existing and proposed roadway network.

The existing study area street network consists of arterial, collector and local streets. The primary public roadways that will provide access to the project site are discussed in the following text. Roadway classifications discussed are consistent with the City of Commerce City C3 Vision Transportation Plan[1]. The existing study area roadway network is illustrated on **Figure 1**.

***Chambers Road*** is a two-lane "Multimodal Arterial" providing north-south access through the study area, extending from E. 96th Avenue to the south to E. 120th Avenue to the north. Chambers Road has a posted speed of 40 miles per hour (mph) adjacent to the project site. There exists a 12' concrete multi-use path along the east side of Chambers Road between E. 96th Avenue and E. 104th Avenue and a 6' detached sidewalk on the west side of Chambers Road extending from roughly 200' north of the site to E. 104th Avenue. Chambers Road widens to a four-lane section with auxiliary lanes north of the site within commercials areas adjacent to E. 104th Avenue. The current limits of the four-lane section were assumed to remain the same for future conditions in this study.

***E. 104th Avenue*** is a four-lane, "Principal Arterial" roadway that provides east-west access north of the project site, extending from E. 470 on the east to US 36 and Westminster to the west. E. 104th Avenue has a posted speed of 45 mph within the study area. The Chambers Road & E. 104th Avenue intersection is controlled with a traffic signal. The C3 Vision Transportation Plan identifies E. 104th Avenue to be built to six (6) lanes at buildout, with three (3) through lanes in each direction, in addition to auxiliary turn lanes. Transit service exists on E. 104th Avenue at Chambers Road via the RTD 104L route, which provides access between Wagon Road Park-n-Ride and Denver Airport Station, with connectivity to other regional routes.

***E. 96th Avenue*** is a two-lane, "Minor Arterial" roadway that provides east-west access south of the project site, extending from E. 470 on the east to I-76 to the west. E. 96th Avenue has a posted speed of 30 mph within the study area. The Chambers Road & E. 96th Avenue intersection is controlled with a traffic signal. The C3 Vision Transportation Plan identifies E. 96th Avenue to be built to four (4) lanes at buildout, with two (2) through lanes in each direction, in addition to auxiliary turn lanes.

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1 C3 Vision Transportation Plan. City of Commerce City. July 2010.

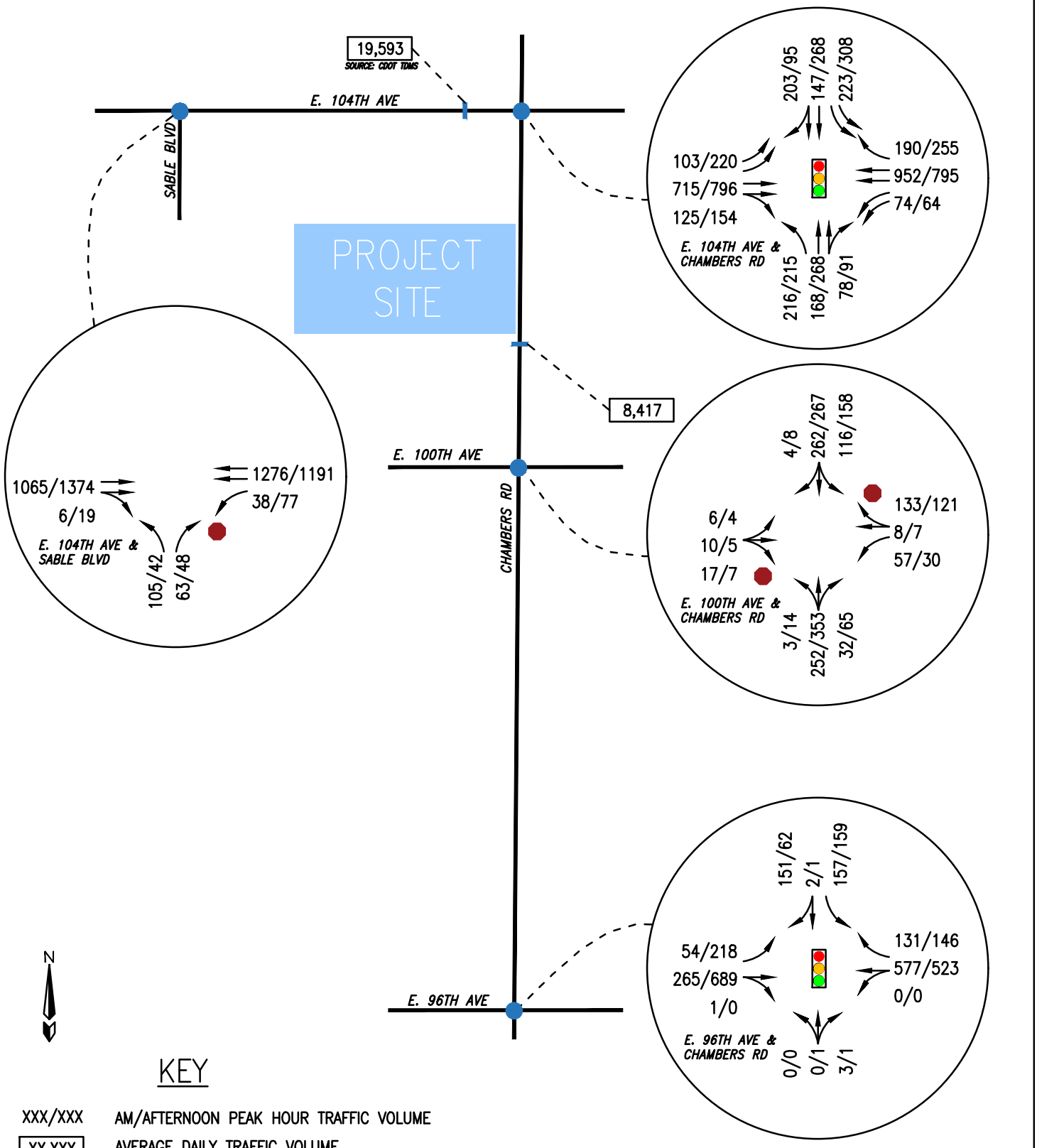
***E. 102nd Avenue*** is a two-lane "Minor/Residential Collector" roadway that will provide east-west access to existing and proposed residential land uses in the immediate project site area. Only a short segment of E. 102nd Avenue exists today, on the north border of the existing Harvest Meadows neighborhood to the south of the project site. With development of the adjacent Anderson Ranch project, E. 102nd Avenue will be extended/improved to Sable Blvd to the west. The Chambers Road Apartments project proposes to construct the section of E. 102nd Avenue, extending from Chambers Road to the west along the project's southern frontage. This roadway will be a two-lane street consistent with the C3 Vision Transportation Plan.

**E. 100th Avenue** is a two-lane "Minor/Residential Collector" roadway that provides east-west access in the project area. The adjacent Anderson Ranch project will complete the missing south half of E. 100th Avenue west of Chambers Road and extend E. 100th Avenue to Sable Boulevard. Anderson Ranch also plans to install traffic signal control

**Sable Boulevard** is a two-lane "Minor/Residential Collector" roadway that provides north-south access to developments south of 104th Avenue. The adjacent Anderson Ranch project will extend Sable Boulevard from its current limits south to 98th Avenue (also to be built by Anderson Ranch). Anderson Ranch also plans to install traffic signal control at E. 104th Avenue & Sable Boulevard and extend the northbound auxiliary lane storage.

## 4.2 Existing Traffic Volumes

Weekday AM and PM peak hour traffic volumes and daily traffic volumes were collected at study area intersections in November 2023. The existing traffic volumes are illustrated on **Figure 3**, along with the existing intersection geometry and traffic controls. Count data sheets are provided in the Appendix.




## KEY

| | |
|---|---|
| XXX/XXX | AM/AFTERNOON PEAK HOUR TRAFFIC VOLUME |
| XX,XXX | AVERAGE DAILY TRAFFIC VOLUME |

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CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

EXISTING TRAFFIC VOLUMES

| FT # | 23095 | Original Scale | NTS | Date | 6/11/2024 | Drawn by | SKK | Figure # | 3 |
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## 4.3 Annual Growth Factor and Future Volume Methodology

Potential for background (non-project) traffic growth in the study area was considered based on a review of Denver Regional Council of Governments (DRCOG) regional travel model projections and Colorado Department of Transportation (CDOT) growth factors. Additional trip projections from the adjacent Anderson Ranch Traffic Impact Study (Kimley-Horn, January 2023) were also incorporated. Using the DRCOG 2050 model projections vs. 2020 base-year data, it was determined that an average 2.1% annual background growth would effectively represent traffic volume growth along Chambers Road and at study area intersections over the next 20 years, with the site-specific projections of the Anderson Ranch buildout added on top of this ambient growth.

Using this methodology, the Year 2027 (short-term planning horizon) and Year 2044 background (without project) traffic volumes are provided on **Figure 4** and **Figure 5**, respectively.

## 4.4 Existing, Year 2027 Background, and Year 2044 Background Capacity Analysis

Existing, Year 2027 and Year 2044 traffic scenarios *without* development of the project were analyzed to provide a baseline for future year comparison.

In determining the operational characteristics of an intersection, "Levels of Service" (LOS) A through F are applied, with LOS A indicating very good operations and LOS F indicating congested operations. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. A more detailed discussion of LOS methodology is contained in the Appendix for reference. Criteria contained in the Highway Capacity Manual (HCM), using Synchro software, was applied for these analyses in order to determine LOS and 95$^{th}$-percentile queues during peak hour periods. Traffic signal phasing and timing operations were obtained from City staff and incorporated into the modeling.

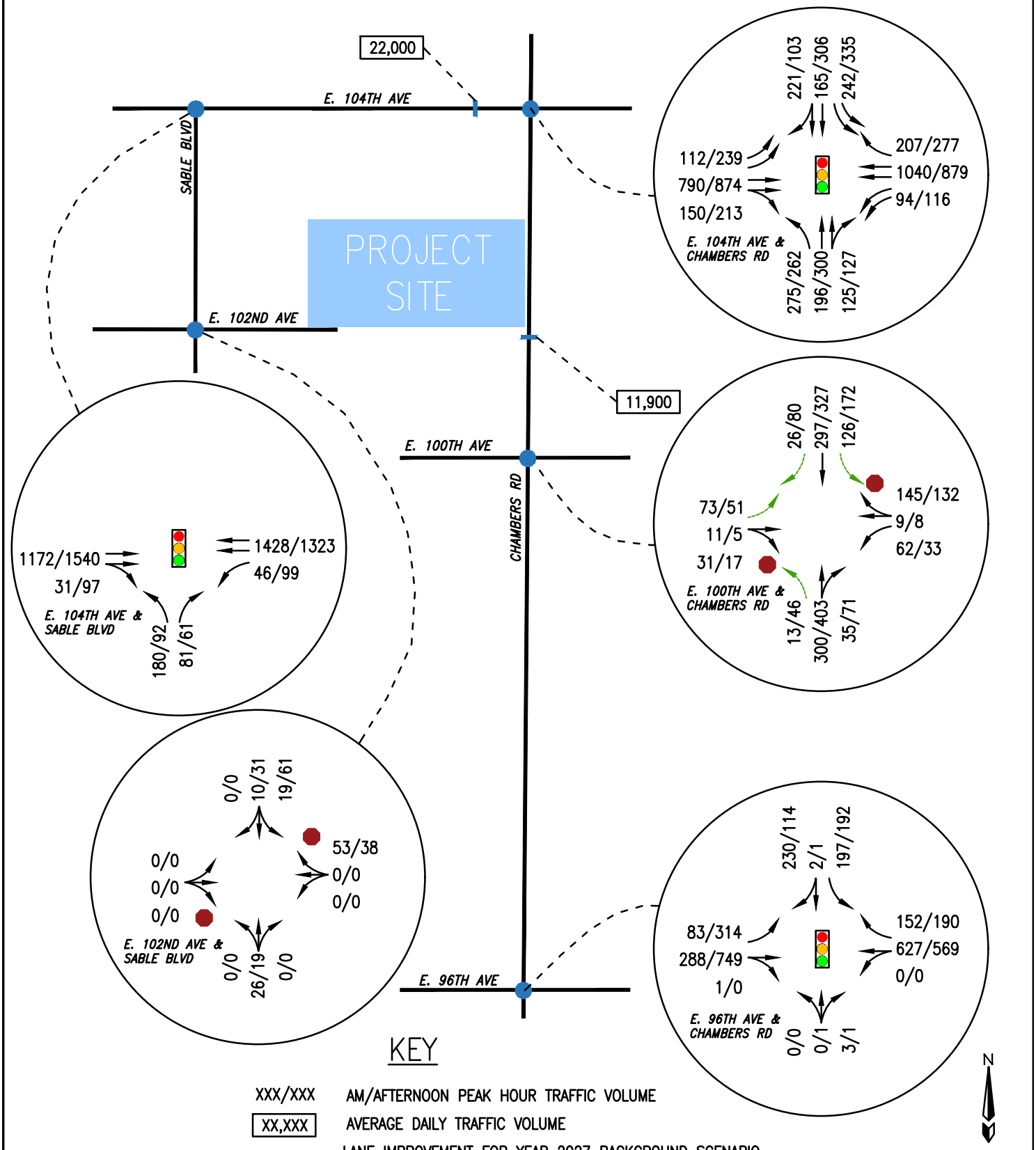
The results of the LOS and queue calculations for the baseline traffic scenarios (without project) are summarized on **Table 1**. The intersection LOS and queue worksheets are attached in the Appendix. The data in the tables shows that all study intersections are operating acceptably and will continue to operate acceptably (overall LOS D or better) in the AM and PM peak hours for all existing, short-term and long-term background scenarios.

Some individual left-turn movements are shown to operate at LOS E in existing and future scenarios. This level of delay is typical of protected-only left-turn operation with a long (120-second) cycle length, and is in place to maximize safety.

The following background (non-project related) long-term future roadway improvements were identified as necessary to maintain LOS D or better overall for the Year 2044 scenario:

- E. 104th Avenue & Chambers Blvd. will need to be widened to its buildout lane geometry, with three (3) through lanes in each direction eastbound and westbound on E. 104th Avenue and exclusive right-turn lanes added on the eastbound, northbound and southbound approaches; northbound left-turn queues are shown to exceed storage lengths in the Year 2044 background condition, though there is sufficient capacity in the northbound approach to accommodate these queues without impacts to adjacent accesses/intersections.

- E. 96th Avenue & Chambers Blvd. will need to be widened to its buildout lane geometry, with two (2) through lanes in each direction eastbound and westbound on E. 96th Avenue; in addition, the queue analysis shows the eastbound left-turn and southbound left-turn storage lengths should be extended as the intersection is improved to accommodate existing and future queues.

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YEAR 2027 BACKGROUND TRAFFIC VOLUMES

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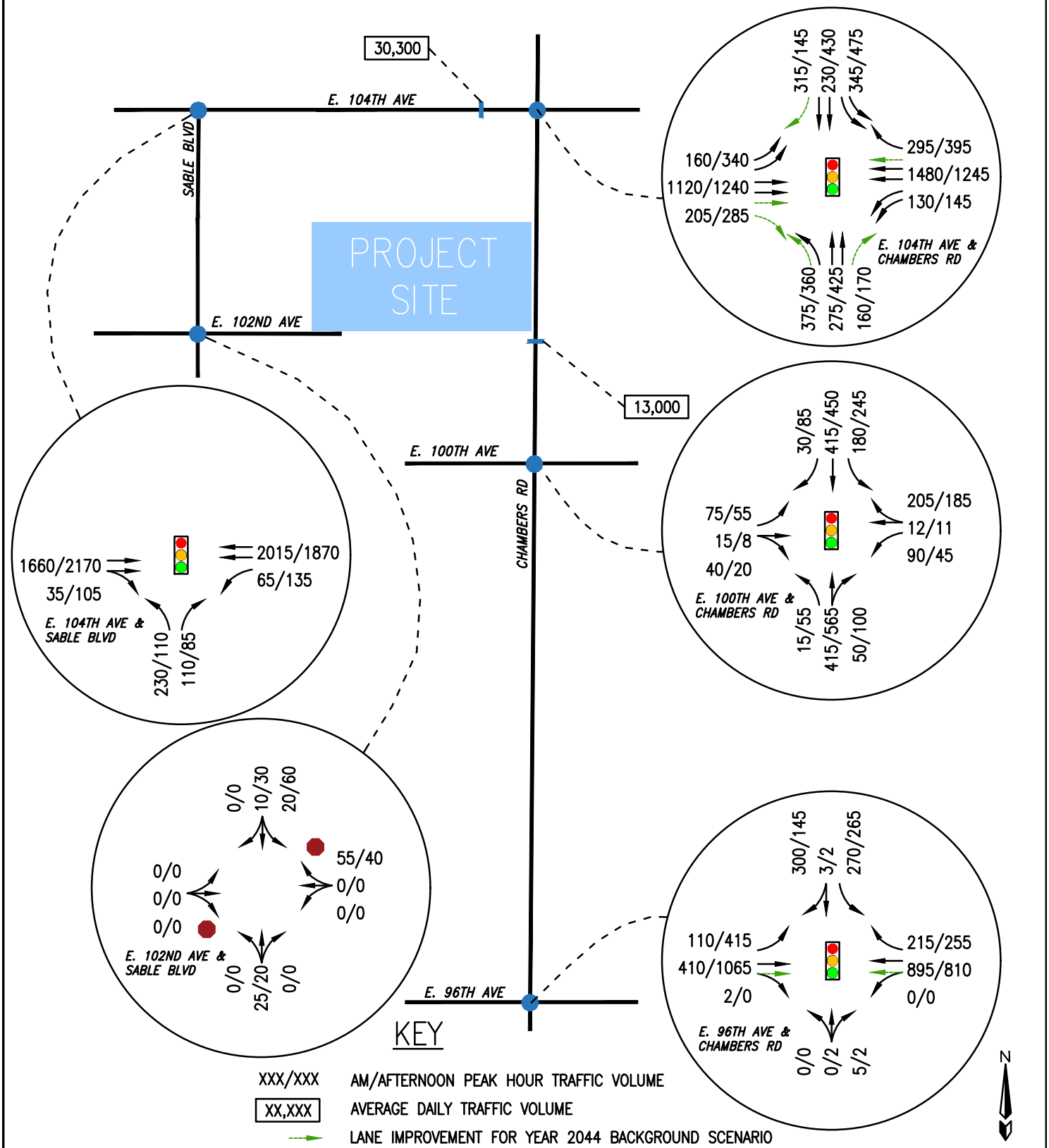


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CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

YEAR 2044 BACKGROUND TRAFFIC VOLUMES

| FT # | 23095 | Original Scale | NTS | Date | 6/11/2024 | Drawn by | SKK | Figure # | 5 |
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## Table 1 – Existing and Future Background Intersection LOS and Queue Summary

| Int. | Lane | Storage | Existing | | | | | | Year 2027 Background | | | | | | Year 2044 Background | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | |
| | | | Delay (s) | LOS | Q(1) | Delay (s) | LOS | Q(1) | Delay (s) | LOS | Q(1) | Delay (s) | LOS | Q(1) | Delay (s) | LOS | Q(1) | Delay (s) | LOS | Q(1) |
| Chambers Rd & 104th Ave | *Overall* | - | **38** | **D** | - | **45** | **D** | - | **46** | **D** | - | **41** | **D** | - | **35** | **C** | - | **38** | **D** | - |
| | EB LT | 275' | 60 | E | 72' | 65 | E | 151' | 60 | E | 85' | 62 | E | 155' | 58 | E | 80' | 63 | E | 221' |
| | EB TH+RT | - | 27 | C | 351' | 46 | D | 726' | 40 | D | 400' | 33 | C | 430' | 20 | B | 256' | 25 | C | 283' |
| | EB RT | - | | | | | | | | | | | | | 18 | B | 33' | 24 | C | 48' |
| | WB LT | 380' | 61 | E | 55' | 54 | D | 78' | 61 | E | 66' | 60 | E | 77' | 61 | E | 89' | 61 | E | 97' |
| | WB TH | - | 29 | C | 422' | 37 | D | 537' | 48 | D | 613' | 33 | C | 493' | 24 | C | 449' | 32 | C | 424' |
| | WB RT | 350' | 0 | A | 34' | 0 | A | 27' | 0 | A | 43' | 0 | A | 27' | 0 | A | 55' | 0 | A | 76' |
| | NB LT | 290' | 71 | E | 268' | 47 | D | 289' | 69 | E | 252' | 46 | D | 263' | 40 | D | 170' | 37 | D | 135' |
| | NB TH+RT | - | 43 | D | 125' | 48 | D | 217' | 37 | D | 129' | 48 | D | 207' | 48 | D | 157' | 53 | D | 226' |
| | NB RT | - | | | | | | | | | | | | | 59 | E | 61' | 52 | D | 63' |
| | SB LT | 285' | 38 | D | 107' | 36 | D | 131' | 31 | C | 99' | 37 | D | 127' | 40 | D | 160' | 40 | D | 181' |
| | SB TH+RT | - | 61 | E | 112' | 57 | E | 217' | 50 | D | 108' | 54 | D | 208' | 46 | D | 136' | 48 | D | 225' |
| | SB RT | - | | | | | | | | | | | | | 80 | E | 271' | 31 | C | 64' |
| Chambers Rd & 96th Ave | *Overall* | | **20** | **C** | - | **28** | **C** | - | **23** | **C** | - | **23** | **C** | - | **23** | **C** | - | **29** | **C** | - |
| | EB LT | 70' | 29 | C | 64' | 29 | C | 207' | 32 | C | 68' | 29 | C | 194' | 31 | C | 101' | 64 | E | 438' |
| | EB TH+RT | - | 7 | A | 124' | 21 | C | 536' | 7 | A | 135' | 10 | A | 463' | 9 | A | 88' | 9 | A | 256' |
| | WB LT+TH | - | 23 | C | 544' | 54 | D | 634' | 28 | C | 618' | 39 | D | 599' | 26 | C | 392' | 33 | C | 353' |
| | WB RT | - | 12 | B | 43' | 16 | B | 59' | 12 | B | 43' | 15 | B | 46' | 18 | B | 51' | 25 | C | 57' |
| | NB LT+TH+RT | - | 51 | D | 0' | 60 | E | 6' | 53 | D | 0' | 59 | E | 6' | 48 | D | 0' | 53 | D | 8' |
| | SB LT | 85' | 27 | C | 141' | 29 | C | 160' | 28 | C | 154' | 29 | C | 153' | 24 | C | 242' | 39 | D | 259' |
| | SB TH+RT | - | 28 | C | 39' | 24 | C | 33' | 30 | C | 40' | 24 | C | 32' | 34 | C | 64' | 28 | C | 48' |
| Chambers Rd & 100th Ave | *Overall* | | **5** | **A** | - | **5** | **A** | - | **9** | **A** | - | **10** | **B** | - | **19** | **B** | - | **12** | **B** | |
| | EB LT | 150' | | | | | | | 62 | F | 73' | >120 | F | 90' | 56 | E | 162' | 20 | B | 33' |
| | EB LT+TH+RT | - | 17 | C | 8' | 24 | C | 8' | 14 | B | 8' | 17 | C | 5' | 38 | D | 46' | 14 | B | 15' |
| | WB LT | 100' | 25 | D | 25' | 34 | D | 20' | 36 | E | 40' | 62 | F | 38' | 42 | D | 118' | 15 | B | 27' |
| | WB TH+RT | - | 12 | B | 23' | 14 | B | 25' | 13 | B | 28' | 16 | C | 35' | 45 | D | 77' | 18 | B | 50' |
| | NB LT | 235' | | | | | | | | | | | | | 10 | A | 10' | 8 | A | 22' |
| | NB LT+TH+RT | - | 8 | A | 0' | 8 | A | 0' | 8 | A | 0' | 8 | A | 3' | 8 | A | 190' | 9 | A | 307' |
| | SB LT | 235' | | | | | | | | | | | | | 15 | B | 201' | 26 | C | 178' |
| | SB LT+TH+RT | - | 8 | A | 8' | 9 | A | 13' | 8 | A | 10' | 9 | A | 15' | 8 | A | 394' | 7 | A | 137' |
| | SB RT | 135' | | | | | | | | | | | | | 6 | A | 25' | 4 | A | 15' |
| Sable Blvd & 104th Ave | *Overall* | | **29** | **C** | - | **11** | **B** | - | **11** | **B** | - | **8** | **A** | - | **13** | **B** | - | **11** | **B** | |
| | EB TH+RT | - | 0 | A | 0' | 0 | A | 0' | 7 | A | 304' | 6 | A | 394' | 8 | A | 303' | 7 | A | 369' |
| | WB LT | 300' | 12 | B | 5' | 15 | B | 18' | 10 | B | 9' | 18 | B | 58' | 19 | B | 37' | 110 | F | 282' |
| | WB TH | - | 0 | A | 0' | 0 | A | 0' | 7 | A | 126' | 4 | A | 78' | 9 | A | 219' | 4 | A | 557' |
| | NB LT | 125' | >120 | F | 285' | >120 | F | 138' | 59 | E | 214' | 62 | E | 128' | 62 | E | 263' | 62 | E | 147' |
| | NB RT | - | 14 | B | 13' | 17 | B | 13' | 49 | D | 53' | 58 | E | 69' | 47 | D | 116' | 59 | E | 112' |
| Sable Blvd & 102nd Ave | *Overall* | | | | | | | | **6** | **A** | - | **5** | **A** | - | **6** | **A** | - | **5** | **A** | |
| | EB LT+TH+RT | - | | | | | | | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | WB LT+TH+RT | - | | | | | | | 9 | A | 5' | 9 | A | 3' | 9 | A | 5' | 9 | A | 3' |
| | NB LT+TH+RT | - | | | | | | | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | SB LT+TH+RT | - | | | | | | | 7 | A | 0' | 7 | A | 3' | 7 | A | 0' | 7 | A | 3' |

(1) 95th-percentile queue length as calculated by Synchro/HCM

*Note: Delay represented in average seconds per vehicle.*

## 5.0 PROPOSED DEVELOPMENT TRAFFIC

### 5.1 Trip Generation

In order to estimate the anticipated volume of trips generated by the site at buildout, trip rates contained in the Institute of Transportation Engineers (ITE) Trip Generation manual[2] for the ITE #220 "Multifamily Housing (Low-Rise)" land use category were applied, consistent with the requirements of Section 5.02.1.D. of the City of Commerce City Engineering Construction Standards and Specifications.

The resulting existing trip estimates using ITE rates are provided on **Table 2**, below.

**Table 2 – Trip Generation Estimates**

| | | | Average Daily Trips | | | | AM Peak Hour Trips | | | | PM Peak Hour Trips | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | Size | Unit | Rate | Total | In | Out | Rate | Total | In | Out | Rate | Total | In | Out |
| ITE #220 - Multifamily Housing (Low-Rise) | 283 | Dwelling Units | 6.74 | 1907 | 954 | 953 | 0.40 | 113 | 27 | 86 | 0.51 | 144 | 91 | 53 |
| **Total Added Trips** | | | | **1907** | **954** | **953** | | **113** | **27** | **86** | | **144** | **91** | **53** |

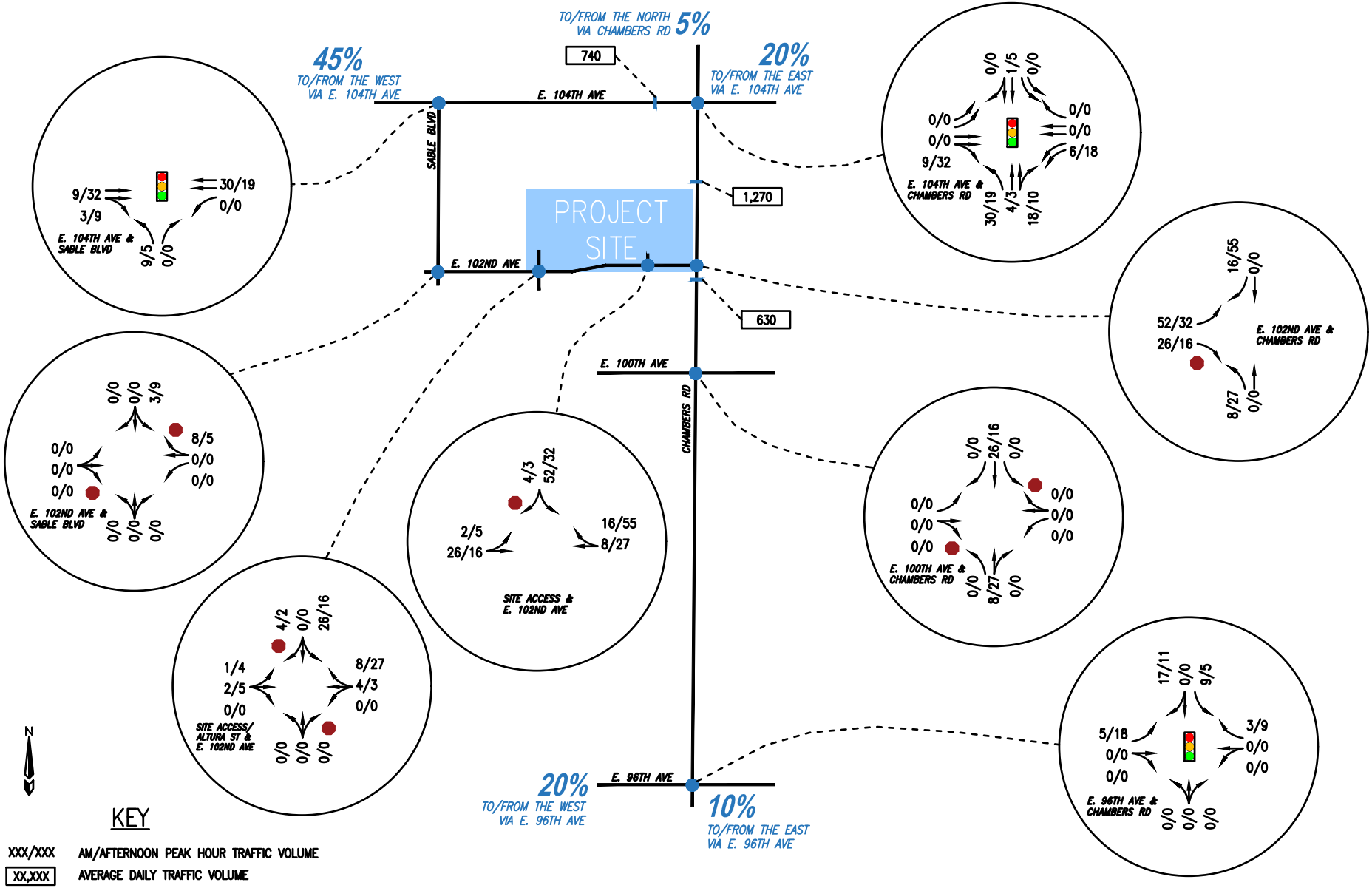
*Source: ITE Trip Generation 11th Edition. 2021.*

As show above, using ITE rates the project site is anticipated to generate approximately 1,907 daily, 113 AM peak hour and 144 PM peak hour trips at full buildout and occupancy.

### 5.2 Trip Distribution and Assignment

The site-generated traffic volumes presented in **Table 2** were distributed onto the adjacent street network based on existing traffic data, existing and anticipated future traffic patterns in and around the area, and consideration of local and regional origins and destinations for the proposed residential use. The assumed distribution percentages are shown on **Figure 6**, along with the resulting site-generated traffic volume estimates with buildout of the project.

[2] Trip Generation 11th Edition, Institute of Transportation Engineers, 2021.

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CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

SITE-GENERATED TRAFFIC VOLUMES

| FT Project # | 23095 | Original Scale | NTS | Date | 6/11/2024 | Drawn by | SKK | Figure # | 6 |
|---|---|---|---|---|---|---|---|---|---|

## 6.0 FUTURE TRAFFIC CONDITIONS WITH SITE DEVELOPMENT

This analysis has been conducted in order to determine impacts associated with full development and occupancy of the project in the short-term and long-term scenarios.

With the connectivity of E. 102nd Avenue to Chambers Road, it is anticipated that some existing traffic from the western portion of the Harvest Meadows neighborhood to the south, as well as a portion of future trips from the Anderson Ranch development to the west (on the order of a total of 5-10 trips per peak hour based on the number of residences these routes would serve), may shift to this connection as it will provide more direct access to Chambers Road and the E. 104th Avenue corridor. The future-year projections analyzed for the 2027 and 2044 scenarios with the project development in place assume this shift.

### 6.1 Intersection Capacity Analysis for Year 2027 w/Project Scenario

The site-generated traffic volumes were added to the Year 2027 background traffic volumes to analyze potential site impacts in the short-term buildout scenario, representing full buildout of the site. The Year 2027 total (with project) traffic volumes are illustrated on **Figure 7**. The level of service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of site-build out traffic volumes in the short-term planning horizon. The results of the LOS and queue calculations for the intersections are summarized for each scenario on **Table 3**. The intersection level of service and queue worksheets are attached in the Appendix.

As shown in **Table 3**, the study area intersections and proposed accesses are projected to operate acceptably (LOS D or better overall) with the addition of site traffic at full project buildout in the short-term.

The E. 102nd Avenue & Chambers Road intersection is anticipated to operate acceptably overall as a side-street stop-controlled intersection, with left-turn deceleration and right-turn deceleration lanes in place, consistent with City of Commerce City Engineering Construction Standards and Specifications requirements (discussed further in Section 6.3).

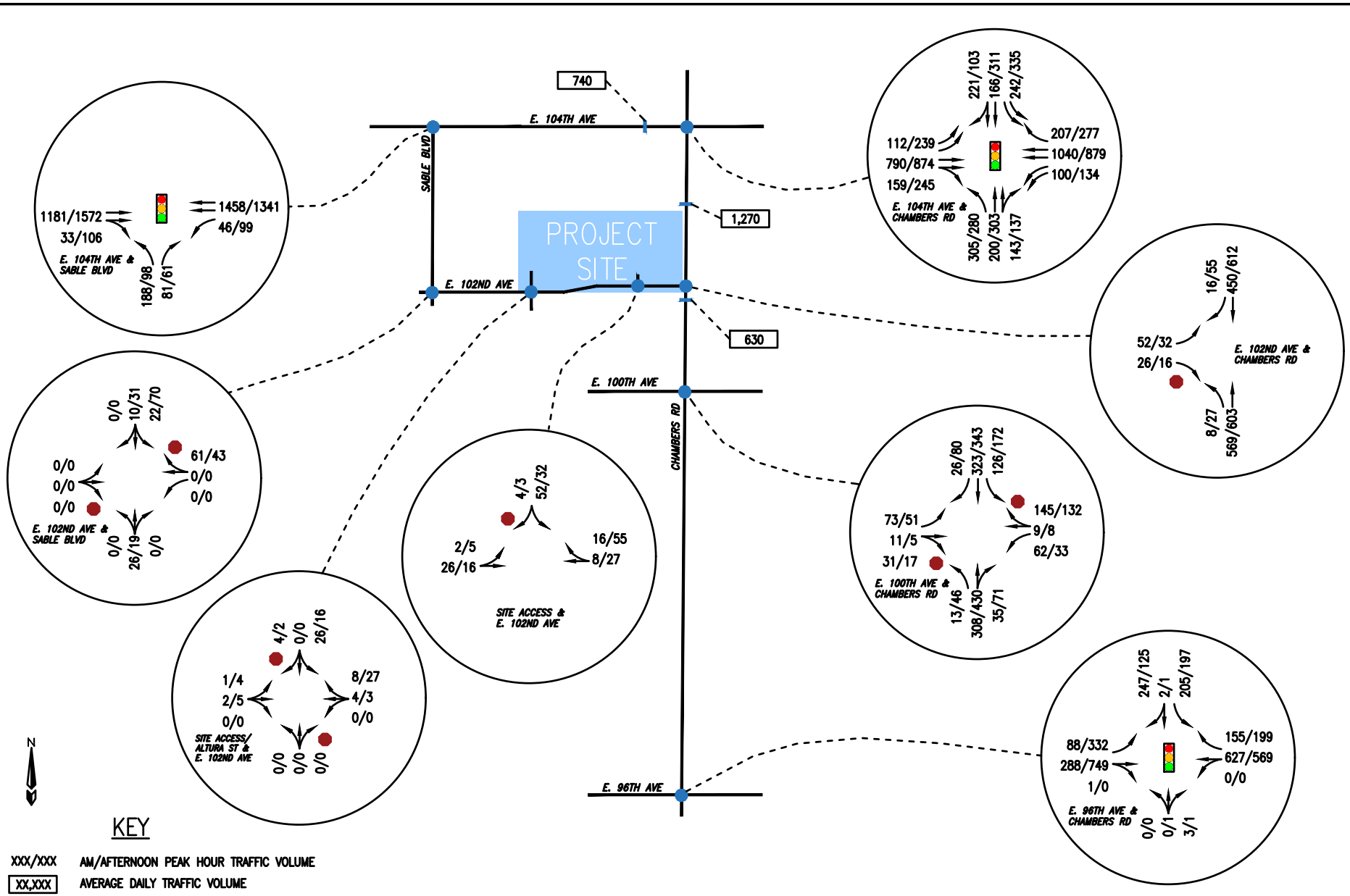
### 6.2 Intersection Capacity Analysis for Year 2044 w/Project Scenario

The site-generated traffic volumes were added to the Year 2044 background traffic volumes to analyze potential site impacts in the long-term buildout scenario. The Year 2044 total (with project) traffic volumes are illustrated on **Figure 8**. The level of service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of site-build out traffic volumes in the long-term planning horizon. The results of the LOS and

queue calculations for the intersections are summarized for each scenario on **Table 3**. The intersection level of service and queue worksheets are attached in the Appendix. Long-term background improvements, including the widening of E. 104th Avenue to six-lanes and E. 96th Avenue to four-lanes, to meet 20-year background growth projections, were assumed in place for this scenario.

As shown in **Table 3**, the study area intersections and proposed accesses are projected to operate acceptably overall (LOS D or better) with the addition of site traffic with full project buildout in the long-term. The E. 102nd Avenue & Chambers Road intersection is anticipated to continue to operate acceptably overall as a side-street stop-controlled intersection, with left-turn deceleration and right-turn deceleration lanes in place, consistent with City of Commerce City Engineering Construction Standards and Specifications requirements (discussed further in Section 6.3).

Although the intersection is anticipated to operate at acceptable overall LOS, the individual eastbound left-turn movement at E. 102nd Avenue & Chambers Road is anticipated to operate at LOS F in the AM and PM peak hour for 20-year buildout conditions. The projected 95th-percentile queues during these periods is calculated to be 1.9 to 2.5 vehicles, and increase in queue of approximately 1 vehicle per peak hour from background conditions, indicating minimal operational impact with the addition of project traffic. This LOS is common of a side-street stop-controlled approach to an arterial roadway and does not in itself warrant mitigation. However, traffic signal warrants were reviewed to determine if this intersection would approach signal warrant thresholds in the Year 2044 buildout scenario. As discussed in Section 6.4, this intersection is not anticipated to meet signal warrants and can operate effectively with side-street stop control.




KEY

XXX/XXX AM/AFTERNOON PEAK HOUR TRAFFIC VOLUME

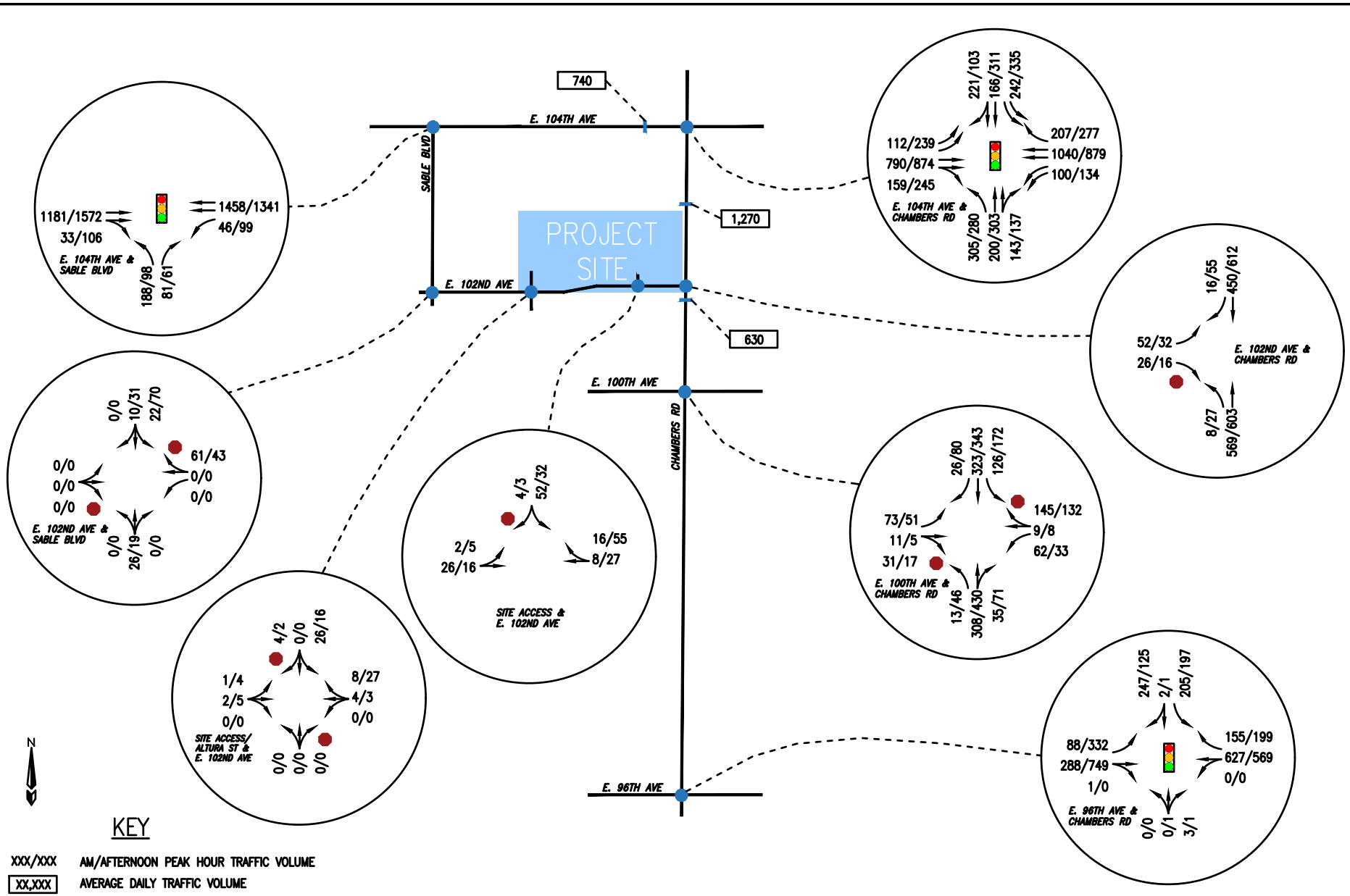
XX,XXX AVERAGE DAILY TRAFFIC VOLUME

FOX TUTTLE TRANSPORTATION GROUP

CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

YEAR 2027 TOTAL TRAFFIC VOLUMES

| FT Project # | 23095 | Original Scale | NTS | Date | 6/11/2024 | Drawn by | SKK | Figure # | 7 |
|---|---|---|---|---|---|---|---|---|---|




KEY

XXX/XXX AM/AFTERNOON PEAK HOUR TRAFFIC VOLUME

XX,XXX AVERAGE DAILY TRAFFIC VOLUME

FOX TUTTLE TRANSPORTATION GROUP

CHAMBERS RD APARTMENTS TRAFFIC IMPACT STUDY

YEAR 2044 TOTAL TRAFFIC VOLUMES

| FT Project # | 23095 | Original Scale | NTS | Date | 6/11/2024 | Drawn by | SKK | Figure # | 8 |
|---|---|---|---|---|---|---|---|---|---|

## Table 3 – Future Intersection LOS and Queue Summary w/Project

| Int. | Lane | Storage | Year 2027 w/Project | | | | | | Year 2044 w/Project | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | |
| | | | Delay (s) | LOS | Q[(1)] | Delay (s) | LOS | Q[(1)] | Delay (s) | LOS | Q[(1)] | Delay (s) | LOS | Q[(1)] |
| Chambers Rd & 104th Ave | *Overall* | - | **45** | **D** | - | **39** | **D** | - | **33** | **C** | - | **32** | **C** | - |
| | EB LT | 275' | 93 | F | 86' | 60 | E | 169' | 59 | E | 112' | 56 | E | 211' |
| | EB TH+RT | - | 10 | B | 462' | 16 | B | 308' | 6 | A | 161' | 5 | A | 287' |
| | EB RT | - | | | | | | | 6 | A | 19' | 6 | A | 25' |
| | WB LT | 380' | 68 | E | 71' | 75 | E | 91' | 63 | E | 92' | 61 | E | 106' |
| | WB TH | - | 33 | C | 511' | 38 | D | 394' | 31 | C | 498' | 32 | C | 412' |
| | WB RT | 350' | 0 | A | 38' | 0 | A | 23' | 0 | A | 61' | 0 | A | 91' |
| | NB LT | 290' | >120 | F | 429' | 46 | D | 329' | 37 | D | 176' | 37 | D | 157' |
| | NB TH+RT | - | 41 | D | 122' | 43 | D | 213' | 45 | D | 153' | 53 | D | 234' |
| | NB RT | - | | | | | | | 49 | D | 80' | 55 | E | 69' |
| | SB LT | 285' | 39 | D | 105' | 41 | D | 140' | 41 | D | 141' | 42 | D | 189' |
| | SB TH+RT | - | 47 | D | 171' | 71 | E | 232' | 47 | D | 139' | 49 | D | 239' |
| | SB RT | - | | | | | | | 95 | F | 223' | 32 | C | 67' |
| Chambers Rd & 96th Ave | *Overall* | | **32** | **C** | - | **33** | **C** | - | **25** | **C** | - | **31** | **C** | - |
| | EB LT | 70' | 38 | D | 93' | 39 | D | 327' | 32 | C | 104' | 76 | E | 462' |
| | EB TH+RT | - | 9 | A | 134' | 10 | B | 463' | 9 | A | 88' | 9 | A | 256' |
| | WB LT+TH | - | 42 | D | 643' | 67 | E | 599' | 27 | C | 394' | 34 | C | 353' |
| | WB RT | - | 15 | B | 46' | 19 | B | 51' | 18 | B | 51' | 26 | C | 58' |
| | NB LT+TH+RT | - | 58 | E | 0' | 63 | E | 6' | 49 | D | 0' | 53 | D | 8' |
| | SB LT | 85' | 29 | C | 190' | 31 | C | 172' | 24 | C | 255' | 40 | D | 266' |
| | SB TH+RT | - | 46 | D | 44' | 28 | C | 42' | 37 | D | 66' | 28 | C | 50' |
| Chambers Rd & 100th Ave | *Overall* | | **10** | **A** | - | **12** | **B** | - | **19** | **B** | - | **19** | **B** | - |
| | EB LT | 150' | 70 | E | 80' | >120 | F | 100' | 56 | E | 161' | 87 | F | 130' |
| | EB TH+RT | - | 14 | B | 10' | 18 | B | 5' | 38 | D | 46' | 44 | D | 35' |
| | WB LT | 100' | 39 | D | 43' | 69 | E | 40' | 43 | D | 116' | 47 | D | 73' |
| | WB TH+RT | - | 13 | B | 28' | 17 | B | 38' | 46 | D | 76' | 81 | F | 80' |
| | NB LT | 235' | 8 | A | 0' | 8 | A | 3' | 10 | A | 10' | 6 | A | 20' |
| | NB TH+RT | - | 0 | A | 0' | 0 | A | 0' | 8 | A | 203' | 6 | A | 251' |
| | SB LT | 235' | 8 | A | 10' | 9 | A | 18' | 15 | B | 57' | 18 | B | 125' |
| | SB TH | - | 0 | A | 0' | 0 | A | 0' | 8 | A | 116' | 5 | A | 73' |
| | SB RT | 135' | 0 | A | 0' | 0 | A | 0' | 6 | A | 4' | 3 | A | 1' |
| Sable Blvd & 104th Ave | *Overall* | | **17** | **B** | - | **7** | **A** | - | **13** | **B** | - | **16** | **B** | - |
| | EB TH+RT | - | 7 | A | 314' | 7 | A | 425' | 9 | A | 326' | 7 | A | 389' |
| | WB LT | 300' | 20 | B | 14' | 11 | B | 99' | 19 | B | 86' | 140 | F | 289' |
| | WB TH | - | 17 | B | 511' | 0 | A | 561' | 9 | A | 674' | 13 | B | 476' |
| | NB LT | 125' | 59 | E | 221' | 62 | E | 134' | 57 | E | 267' | 61 | E | 151' |
| | NB RT | - | 49 | D | 54' | 57 | E | 70' | 46 | D | 118' | 58 | E | 113' |
| Sable Blvd & 102nd Ave | *Overall* | | **5** | **A** | - | **5** | **A** | - | **6** | **A** | - | **5** | **A** | - |
| | EB LT+TH+RT | - | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | WB LT+TH+RT | - | 9 | A | 5' | 9 | A | 3' | 9 | A | 5' | 9 | A | 3' |
| | NB LT+TH+RT | - | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | SB LT+TH+RT | - | 7 | A | 0' | 7 | A | 3' | 7 | A | 0' | 7 | A | 3' |
| Chambers Road & 102nd Ave | *Overall* | | **2** | **A** | - | **1** | **A** | - | **3** | **A** | - | **2** | **A** | - |
| | EB LT | - | 26 | D | 25' | 35 | D | 20' | 52 | F | 63' | 67 | F | 48' |
| | EB RT | 50' | 12 | B | 5' | 13 | B | 3' | 13 | B | 5' | 15 | B | 3' |
| | NB LT | 175' | 8 | A | 0' | 9 | A | 3' | 9 | A | 0' | 10 | A | 3' |
| | NB TH | - | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | SB TH | - | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | SB TH+RT | 135' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| E. Access & 102nd | *Overall* | | **5** | **A** | - | **3** | **A** | - | **4** | **A** | - | **2** | **A** | - |
| | EB LT+TH | - | 7 | A | 0' | 7 | A | 0' | 7 | A | 0' | 7 | A | 0' |
| | WB TH+RT | - | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' | 0 | A | 0' |
| | SB LT+RT | - | 9 | A | 5' | 9 | A | 3' | 9 | A | 5' | 9 | A | 3' |
| W. Access / Altura & 102nd | *Overall* | | **6** | **A** | - | **3** | **A** | - | **6** | **A** | - | **4** | **A** | - |
| | EB LT+TH+RT | - | 7 | A | 0' | 7 | A | 0' | 7 | A | 0' | 7 | A | 0' |
| | WB LT+TH+RT | - | 0 | A | 0' | 0 | A | 0' | 7 | A | 0' | 7 | A | 0' |
| | NB LT+TH+RT | - | 0 | A | 0' | 0 | A | 0' | 9 | A | 0' | 9 | A | 0' |
| | SB LT+TH+RT | - | 9 | A | 3' | 9 | A | 3' | 9 | A | 3' | 9 | A | 3' |

(1) 95th-percentile queue length as calculated by Synchro/HCM

*Note: Delay represented in average seconds per vehicle.*

### 6.3 Site Access and Circulation

The project proposes the following access points and configurations:

- Full-movement access along E. 102nd Avenue approximately 370' west of Chambers Road
- Full-movement access aligning with Altura Street approximately 1,200' west of Chambers Road

The project proposes to extend E. 102nd Avenue from Chambers to the west along the project frontage consistent with the City's "Minor/Residential Collector" standards per the C3 Vision Transportation Plan Roadway Classification Plan. This includes construction of the E. 102nd Avenue & Chambers Road intersection as a full-movement, side-street stop-sign controlled intersection, which will provide access to the project via Chambers Road. Per the concept site plan, a detached sidewalk is proposed along the north side of E. 102nd Avenue along the project frontage. Internal drive aisles and interior parking throughout the site allows direct access to each of the proposed buildings and access to on-site amenities without traveling on exterior roadways.

As noted in Section 6.0, with the connectivity of E. 102nd Avenue to Chambers Road, it is anticipated that some existing traffic from the western portion of the Harvest Meadows neighborhood to the south, as well as future trips from the Anderson Ranch development to the west (on the order of 5-10 vehicles per peak hour), may shift to this connection as it will provide more direct access to Chambers Road and the E. 104th Avenue corridor. This will result in a change in traffic patterns within the adjacent Harvest Meadows neighborhood, with a likely reduced use of E. 101st Avenue for access to/from the western portion of Harvest Meadows to access the E. 104th Avenue corridor, in favor of increased use of E. 102nd Avenue.

Based on the projected site trips at buildout and accounting for this shift of some existing/future traffic to the E. 102nd Avenue & Chambers Road intersection, the following auxiliary lanes are prescribed per Section 3.04 of the City of Commerce City Engineering Construction Standards and Specifications:

- Construct a northbound left-turn deceleration lane = 175' lane + 180' (15:1) taper; this includes a 40' storage component as required by City standards
- Construct a southbound right-turn deceleration lane = 135' + 180' (15:1) taper

### 6.4 Traffic Signal Warrants

An analysis of a potential traffic signal at the E. 102nd Avenue & Chambers Road intersection was performed consistent with Manual on Uniform Traffic Control Devices (MUTCD) criteria.

The MUTCD provides criteria for nine different warrants. For the purposes of this planning-level analysis, MUTCD "Peak Hour", warrant criteria was applied and used as an indicator to determine applicability of a signal at this location with 20-year buildout traffic volumes. These warrants consider the hourly volume of both the "major street" (Chambers Road) and the "minor street" approaches (E. 102nd Avenue eastbound approach).

The MUTCD Peak Hour signal warrant analysis graph with plots of the projected Year 2044 AM and PM peak hour volume totals is provided in the Appendix. Consistent with MUTCD criteria, eastbound right-turns from E. 102nd Avenue were not included since the LOS and queue analysis shows that these turns can be made onto Chambers Road with minimal conflict. Thus, only the left-turn volumes were applied, and the approach was evaluated as a one-lane approach on the warrant chart.

Based on the projected traffic volumes and MUTCD Peak Hour criteria, this intersection is not anticipated to meet any signal warrant thresholds in the 20-year buildout scenario.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

This traffic impact study has been prepared by the Fox Tuttle Transportation Group for the Chambers Road Apartments project in the City of Commerce City. The project proposes to develop multifamily rental residential units at the northwest quadrant of the E. 102nd Avenue and Chambers Road intersection.

The project proposes 283 apartments with access via two full-movement intersections along E. 102nd Avenue. The project is anticipated to generate approximately 1,907 daily, 113 AM peak hour and 144 PM peak hour driveway trips at full buildout and occupancy. **It was determined that the existing and future roadway and intersection network can serve the project at acceptable Levels of Service per City criteria in the short and long-term with the following background (non-project related) and project-related improvements in place:**

Long-Term (Year 2044) Background (non-project related) Improvement Recommendations:

- If future regional growth projections are realized, the intersection of E. 104th Avenue & Chambers Blvd. will need to be constructed to its buildout lane geometry, with three (3) through lanes in each direction eastbound and westbound on E. 104th Avenue and exclusive right-turn lanes added on the eastbound, northbound and southbound approaches.

- If future regional growth projections are realized, the intersection of E. 96th Avenue & Chambers Blvd. will need to be constructed to its buildout lane geometry, with two (2) through lanes in each direction eastbound and westbound on E. 96th Avenue.

- Roadway improvements identified by the adjacent Anderson Ranch project were assumed to be implemented in the background for this study. Those improvements include:

    - Install traffic signal control at E. 104th Avenue and Sable Boulevard. Extend northbound left turn storage at the intersection to 125 feet.
    - Add eastbound, northbound, and southbound left turn auxiliary lanes and southbound right turn auxiliary lane at E. 100th Avenue and Chambers Road. Install traffic signal control at the intersection.
    - Extend eastbound left turn storage at E. 96th Avenue & Chambers Road to 425 feet. Extend southbound right turn storage at E. 96th Avenue & Chambers Road to 175 feet.

Project-Related Improvement Recommendations (Responsibility of the Developer):

- Extend E. 102nd Avenue from Chambers to the west along the project frontage. This roadway should be built consistent with the City's "Minor/Residential Collector" standards per the C3 Vision Transportation Plan Roadway Classification Plan.

- The intersection of E. 102nd Avenue should be built as a side-street, stop-controlled intersection to include a northbound left-turn deceleration lane (175' lane + 180' taper) and a southbound right-turn deceleration lane (135' + 180'), consistent with the City of Commerce City Engineering Construction Standards and Specifications. The eastbound approach should be striped with a 50' left turn lane.

- Construct the east access to the site along E. 102nd Avenue with side-street stop-sign control on the southbound approach. No auxiliary turn lanes are required or recommended at this access given the Minor Collector roadway classification, consistent with City standards.

- Construct the west access to the site along E. 102nd Avenue to align with Altura Street, with side-street stop-sign control on the northbound and southbound approaches. No auxiliary turn lanes are required or recommended at this access given the Minor Collector roadway classification, consistent with City standards.

## APPENDIX

Level of Service Definitions
Intersection Capacity Worksheets
MUTCD Peak Hour Signal Warrant
Traffic Count Data Sheets

*Level of Service Definitions*

# LEVEL OF SERVICE (LOS) DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, "Levels of Service" (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

| Level of Service Rating | Delay in seconds per vehicle* | | Definition |
|---|---|---|---|
| | Signalized | Unsignalized | |
| A | 0.0 to 10.0 | 0.0 to 10.0 | Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers can maintain their desired speeds with little or no delay. |
| B | 10.1 to 20.0 | 10.1 to 15.0 | Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome, and drivers are not subject to appreciable tension. |
| C | 20.1 to 35.0 | 15.1 to 25.0 | Stable traffic operations, however, the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor. |
| D | 35.1 to 55.0 | 25.1 to 35.0 | Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable. |
| E | 55.1 to 80.0 | 35.1 to 50.0 | Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors. |
| F | > 80.0 | > 50.0 | Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. |

** Delay ranges based on 2010 Highway Capacity Manual Criteria*

1624 Market Street | Suite 202 | Denver, CO 80202
Phone: 303.652.3571 | www.FoxTuttle.com

*Intersection Capacity Worksheets*

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 103 | 715 | 74 | 952 | 190 | 216 | 168 | 223 | 147 |
| Future Volume (vph) | 103 | 715 | 74 | 952 | 190 | 216 | 168 | 223 | 147 |
| Turn Type | Prot | NA | Prot | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | | | | | 6 | 4 | | 8 | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 15.0 | 3.0 | 15.0 | 15.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Minimum Split (s) | 12.0 | 37.0 | 12.0 | 37.0 | 37.0 | 11.7 | 34.7 | 11.7 | 34.7 |
| Total Split (s) | 22.0 | 44.0 | 22.0 | 44.0 | 44.0 | 19.0 | 35.0 | 19.0 | 35.0 |
| Total Split (%) | 18.3% | 36.7% | 18.3% | 36.7% | 36.7% | 15.8% | 29.2% | 15.8% | 29.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.7 | 4.7 | 4.7 | 4.7 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 6.7 | 6.7 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | C-Min | None | None | None | None |
| Act Effct Green (s) | 9.4 | 59.3 | 8.5 | 58.4 | 58.4 | 25.6 | 13.3 | 24.0 | 12.5 |
| Actuated g/C Ratio | 0.08 | 0.49 | 0.07 | 0.49 | 0.49 | 0.21 | 0.11 | 0.20 | 0.10 |
| v/c Ratio | 0.43 | 0.56 | 0.37 | 0.67 | 0.26 | 1.01 | 0.66 | 0.48 | 0.72 |
| Control Delay | 57.4 | 23.2 | 57.0 | 26.9 | 3.4 | 99.9 | 47.2 | 37.9 | 29.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 57.4 | 23.2 | 57.0 | 26.9 | 3.4 | 99.9 | 47.2 | 37.9 | 29.0 |
| LOS | E | C | E | C | A | F | D | D | C |
| Approach Delay | | 27.0 | | 25.0 | | | 71.8 | | 32.5 |
| Approach LOS | | C | | C | | | E | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 8 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 100 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.01 | |
| Intersection Signal Delay: 33.5 | Intersection LOS: C |
| Intersection Capacity Utilization 75.0% | ICU Level of Service D |
| Analysis Period (min) 15 | |

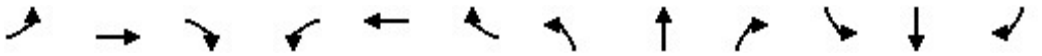
Splits and Phases: 1: Chambers Rd & E. 104th Ave

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 117 | 955 | 89 | 1147 | 229 | 245 | 280 | 245 | 385 |
| v/c Ratio | 0.43 | 0.56 | 0.37 | 0.67 | 0.26 | 1.01 | 0.66 | 0.48 | 0.72 |
| Control Delay | 57.4 | 23.2 | 57.0 | 26.9 | 3.4 | 99.9 | 47.2 | 37.9 | 29.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 57.4 | 23.2 | 57.0 | 26.9 | 3.4 | 99.9 | 47.2 | 37.9 | 29.0 |
| Queue Length 50th (ft) | 45 | 262 | 34 | 350 | 0 | ~163 | 86 | 77 | 62 |
| Queue Length 95th (ft) | 72 | 351 | 55 | 422 | 34 | #268 | 125 | 107 | 112 |
| Internal Link Dist (ft) | | 3830 | | 955 | | | 548 | | 948 |
| Turn Bay Length (ft) | 275 | | 380 | | 350 | 290 | | 285 | |
| Base Capacity (vph) | 429 | 1719 | 429 | 1721 | 887 | 243 | 840 | 534 | 932 |
| 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 | 0.27 | 0.56 | 0.21 | 0.67 | 0.26 | 1.01 | 0.33 | 0.46 | 0.41 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 103 | 715 | 125 | 74 | 952 | 190 | 216 | 168 | 78 | 223 | 147 | 203 |
| Future Volume (veh/h) | 103 | 715 | 125 | 74 | 952 | 190 | 216 | 168 | 78 | 223 | 147 | 203 |
| 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 | 117 | 812 | 142 | 89 | 1147 | 0 | 245 | 191 | 89 | 245 | 162 | 223 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.83 | 0.83 | 0.83 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 174 | 1398 | 244 | 141 | 1609 | | 272 | 458 | 205 | 637 | 295 | 263 |
| Arrive On Green | 0.05 | 0.46 | 0.46 | 0.04 | 0.45 | 0.00 | 0.10 | 0.19 | 0.19 | 0.08 | 0.17 | 0.17 |
| Sat Flow, veh/h | 3456 | 3023 | 529 | 3456 | 3554 | 1585 | 1781 | 2386 | 1069 | 3456 | 1777 | 1585 |
| Grp Volume(v), veh/h | 117 | 477 | 477 | 89 | 1147 | 0 | 245 | 140 | 140 | 245 | 162 | 223 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1775 | 1728 | 1777 | 1585 | 1781 | 1777 | 1678 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 4.0 | 23.7 | 23.7 | 3.0 | 31.3 | 0.0 | 12.3 | 8.3 | 8.8 | 6.9 | 10.0 | 16.4 |
| Cycle Q Clear(g_c), s | 4.0 | 23.7 | 23.7 | 3.0 | 31.3 | 0.0 | 12.3 | 8.3 | 8.8 | 6.9 | 10.0 | 16.4 |
| Prop In Lane | 1.00 | | 0.30 | 1.00 | | 1.00 | 1.00 | | 0.64 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 174 | 821 | 821 | 141 | 1609 | | 272 | 341 | 322 | 637 | 295 | 263 |
| V/C Ratio(X) | 0.67 | 0.58 | 0.58 | 0.63 | 0.71 | | 0.90 | 0.41 | 0.43 | 0.38 | 0.55 | 0.85 |
| Avail Cap(c_a), veh/h | 432 | 821 | 821 | 432 | 1609 | | 272 | 419 | 396 | 727 | 419 | 374 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 56.0 | 23.7 | 23.7 | 56.6 | 26.5 | 0.0 | 40.4 | 42.5 | 42.7 | 37.2 | 45.9 | 48.6 |
| Incr Delay (d2), s/veh | 4.4 | 3.0 | 3.0 | 4.5 | 2.7 | 0.0 | 30.3 | 0.8 | 0.9 | 0.4 | 1.6 | 11.9 |
| 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 | 1.8 | 10.1 | 10.0 | 1.4 | 13.0 | 0.0 | 8.2 | 3.7 | 3.7 | 2.9 | 4.5 | 7.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.4 | 26.7 | 26.7 | 61.2 | 29.3 | 0.0 | 70.6 | 43.3 | 43.7 | 37.6 | 47.5 | 60.5 |
| LnGrp LOS | E | C | C | E | C | | E | D | D | D | D | E |
| Approach Vol, veh/h | | 1071 | | | 1236 | | | 525 | | | 630 | |
| Approach Delay, s/veh | | 30.4 | | | 31.6 | | | 56.2 | | | 48.2 | |
| Approach LOS | | C | | | C | | | E | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.9 | 62.5 | 15.9 | 29.7 | 13.1 | 61.3 | 19.0 | 26.6 |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.7 | 6.7 | 7.0 | 7.0 | 6.7 | 6.7 |
| Max Green Setting (Gmax), s | 15.0 | 37.0 | 12.3 | 28.3 | 15.0 | 37.0 | 12.3 | 28.3 |
| Max Q Clear Time (g_c+I1), s | 5.0 | 25.7 | 8.9 | 10.8 | 6.0 | 33.3 | 14.3 | 18.4 |
| Green Ext Time (p_c), s | 0.1 | 4.3 | 0.3 | 1.3 | 0.2 | 2.3 | 0.0 | 1.5 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 38.0 |
| HCM 6th LOS | D |

**Notes**

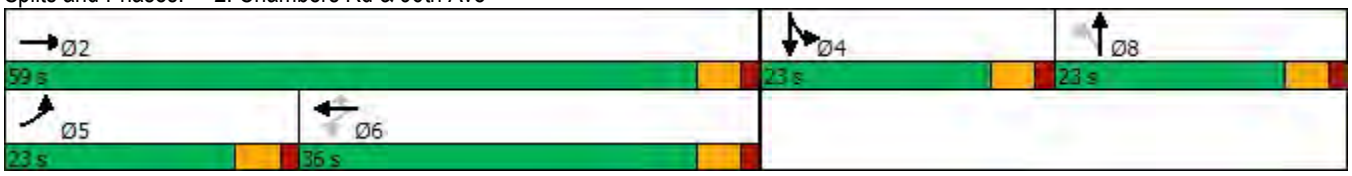
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 54 | 265 | 577 | 131 | 0 | 157 | 2 |
| Future Volume (vph) | 54 | 265 | 577 | 131 | 0 | 157 | 2 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 59.0 | 36.0 | 36.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 21.9% | 56.2% | 34.3% | 34.3% | 21.9% | 21.9% | 21.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 8.1 | 40.6 | 32.9 | 32.9 | 5.7 | 12.6 | 12.6 |
| Actuated g/C Ratio | 0.12 | 0.62 | 0.51 | 0.51 | 0.09 | 0.19 | 0.19 |
| v/c Ratio | 0.30 | 0.28 | 0.71 | 0.18 | 0.02 | 0.57 | 0.41 |
| Control Delay | 33.2 | 7.4 | 22.9 | 5.4 | 0.0 | 32.9 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.2 | 7.4 | 22.9 | 5.4 | 0.0 | 32.9 | 7.9 |
| LOS | C | A | C | A | A | C | A |
| Approach Delay | | 11.8 | 19.7 | | | | 20.6 |
| Approach LOS | | B | B | | | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 105 | |
| Actuated Cycle Length: 65.1 | |
| Natural Cycle: 105 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.71 | |
| Intersection Signal Delay: 17.9 | Intersection LOS: B |
| Intersection Capacity Utilization 68.6% | ICU Level of Service C |
| Analysis Period (min) 15 | |

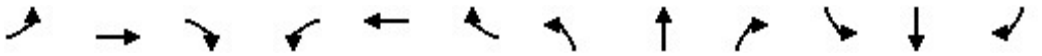
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 66 | 324 | 671 | 152 | 8 | 194 | 188 |
| v/c Ratio | 0.30 | 0.28 | 0.71 | 0.18 | 0.02 | 0.57 | 0.41 |
| Control Delay | 33.2 | 7.4 | 22.9 | 5.4 | 0.0 | 32.9 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.2 | 7.4 | 22.9 | 5.4 | 0.0 | 32.9 | 7.9 |
| Queue Length 50th (ft) | 25 | 45 | 215 | 6 | 0 | 73 | 1 |
| Queue Length 95th (ft) | 64 | 124 | #544 | 43 | 0 | 141 | 39 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2115 |
| Turn Bay Length (ft) | 70 | | | | | | |
| Base Capacity (vph) | 507 | 1571 | 941 | 862 | 763 | 507 | 587 |
| 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 | 0.21 | 0.71 | 0.18 | 0.01 | 0.38 | 0.32 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 54 | 265 | 1 | 0 | 577 | 131 | 0 | 0 | 3 | 157 | 2 | 151 |
| Future Volume (veh/h) | 54 | 265 | 1 | 0 | 577 | 131 | 0 | 0 | 3 | 157 | 2 | 151 |
| 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 | 66 | 323 | 1 | 0 | 671 | 152 | 0 | 0 | 8 | 194 | 2 | 186 |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.86 | 0.86 | 0.86 | 0.38 | 0.38 | 0.38 | 0.81 | 0.81 | 0.81 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 146 | 1081 | 3 | 0 | 779 | 660 | 0 | 0 | 16 | 291 | 3 | 257 |
| Arrive On Green | 0.08 | 0.58 | 0.58 | 0.00 | 0.42 | 0.42 | 0.00 | 0.00 | 0.01 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1781 | 1864 | 6 | 0 | 1870 | 1585 | 0 | 0 | 1585 | 1781 | 17 | 1571 |
| Grp Volume(v), veh/h | 66 | 0 | 324 | 0 | 671 | 152 | 0 | 0 | 8 | 194 | 0 | 188 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1869 | 0 | 1870 | 1585 | 0 | 0 | 1585 | 1781 | 0 | 1588 |
| Q Serve(g_s), s | 2.2 | 0.0 | 5.4 | 0.0 | 19.9 | 3.8 | 0.0 | 0.0 | 0.3 | 6.2 | 0.0 | 6.9 |
| Cycle Q Clear(g_c), s | 2.2 | 0.0 | 5.4 | 0.0 | 19.9 | 3.8 | 0.0 | 0.0 | 0.3 | 6.2 | 0.0 | 6.9 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 146 | 0 | 1085 | 0 | 779 | 660 | 0 | 0 | 16 | 291 | 0 | 259 |
| V/C Ratio(X) | 0.45 | 0.00 | 0.30 | 0.00 | 0.86 | 0.23 | 0.00 | 0.00 | 0.49 | 0.67 | 0.00 | 0.72 |
| Avail Cap(c_a), veh/h | 526 | 0 | 1656 | 0 | 951 | 806 | 0 | 0 | 468 | 526 | 0 | 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 26.7 | 0.0 | 6.5 | 0.0 | 16.2 | 11.5 | 0.0 | 0.0 | 30.0 | 23.9 | 0.0 | 24.2 |
| Incr Delay (d2), s/veh | 2.2 | 0.0 | 0.2 | 0.0 | 7.0 | 0.2 | 0.0 | 0.0 | 20.5 | 2.6 | 0.0 | 3.8 |
| 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 | 1.0 | 0.0 | 1.7 | 0.0 | 8.8 | 1.2 | 0.0 | 0.0 | 0.2 | 2.6 | 0.0 | 2.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 28.9 | 0.0 | 6.7 | 0.0 | 23.2 | 11.7 | 0.0 | 0.0 | 50.5 | 26.6 | 0.0 | 28.0 |
| LnGrp LOS | C | A | A | A | C | B | A | A | D | C | A | C |
| Approach Vol, veh/h | | 390 | | | 823 | | | 8 | | | 382 | |
| Approach Delay, s/veh | | 10.4 | | | 21.0 | | | 50.5 | | | 27.3 | |
| Approach LOS | | B | | | C | | | D | | | C | |

| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 40.4 | | 15.0 | 10.0 | 30.4 | | 5.6 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 54.0 | | 18.0 | 18.0 | 31.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 7.4 | | 8.9 | 4.2 | 21.9 | | 2.3 | | | | |
| Green Ext Time (p_c), s | | 2.2 | | 1.1 | 0.1 | 3.5 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 20.1 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | ↰ | ↱ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 10 | 17 | 57 | 8 | 133 | 3 | 252 | 32 | 116 | 262 | 4 |
| Future Vol, veh/h | 6 | 10 | 17 | 57 | 8 | 133 | 3 | 252 | 32 | 116 | 262 | 4 |
| 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 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 11 | 18 | 62 | 9 | 145 | 3 | 274 | 35 | 126 | 285 | 4 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 914 | 854 | 287 | 852 | 839 | 292 | 289 | 0 | 0 | 309 | 0 | 0 |
| Stage 1 | 539 | 539 | - | 298 | 298 | - | - | - | - | - | - | - |
| Stage 2 | 375 | 315 | - | 554 | 541 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 254 | 296 | 752 | 280 | 302 | 747 | 1273 | - | - | 1252 | - | - |
| Stage 1 | 527 | 522 | - | 711 | 667 | - | - | - | - | - | - | - |
| Stage 2 | 646 | 656 | - | 517 | 521 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 181 | 260 | 752 | 240 | 265 | 747 | 1273 | - | - | 1252 | - | - |
| Mov Cap-2 Maneuver | 181 | 260 | - | 240 | 265 | - | - | - | - | - | - | - |
| Stage 1 | 525 | 459 | - | 709 | 665 | - | - | - | - | - | - | - |
| Stage 2 | 513 | 654 | - | 433 | 458 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 16.5 | 15.7 | 0.1 | 2.5 |
| HCM LOS | C | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1273 | - | - | 350 | 240 | 677 | 1252 | - | - |
| HCM Lane V/C Ratio | 0.003 | - | - | 0.102 | 0.258 | 0.226 | 0.101 | - | - |
| HCM Control Delay (s) | 7.8 | 0 | - | 16.5 | 25.1 | 11.9 | 8.2 | 0 | - |
| HCM Lane LOS | A | A | - | C | D | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.3 | 1 | 0.9 | 0.3 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 29.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1065 | 6 | 38 | 1276 | 105 | 63 |
| Future Vol, veh/h | 1065 | 6 | 38 | 1276 | 105 | 63 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 300 | - | 70 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1158 | 7 | 41 | 1387 | 114 | 68 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1165 | 0 | 1938 | 583 |
| Stage 1 | - | - | - | - | 1162 | - |
| Stage 2 | - | - | - | - | 776 | - |
| 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 | - | - | 595 | - | ~ 57 | 456 |
| Stage 1 | - | - | - | - | 260 | - |
| Stage 2 | - | - | - | - | 414 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 595 | - | ~ 53 | 456 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 53 | - |
| Stage 1 | - | - | - | - | 260 | - |
| Stage 2 | - | - | - | - | 385 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.3 | $ 441.2 |
| HCM LOS | | | F |

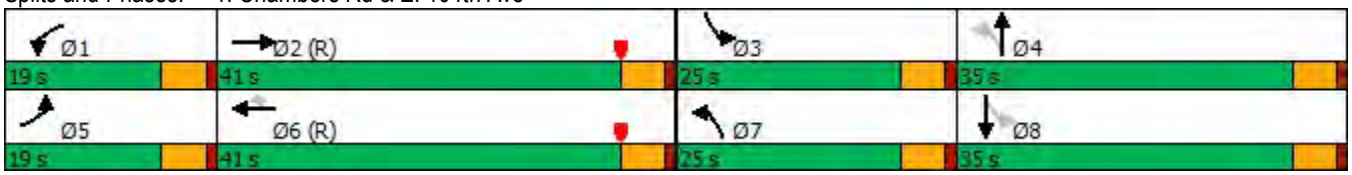
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 53 | 456 | - | - | 595 | - |
| HCM Lane V/C Ratio | 2.153 | 0.15 | - | - | 0.069 | - |
| HCM Control Delay (s) | $ 697.4 | 14.3 | - | - | 11.5 | - |
| HCM Lane LOS | F | B | - | - | B | - |
| HCM 95th %tile Q(veh) | 11.4 | 0.5 | - | - | 0.2 | - |

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

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 251 | 919 | 119 | 924 | 291 | 274 | 315 | 352 | 321 |
| Future Volume (vph) | 251 | 919 | 119 | 924 | 291 | 274 | 315 | 352 | 321 |
| Turn Type | Prot | NA | Prot | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | | | | | 6 | 4 | | 8 | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 15.0 | 10.0 | 15.0 | 15.0 | 10.0 | 15.0 | 10.0 | 15.0 |
| Minimum Split (s) | 15.0 | 24.0 | 15.0 | 24.5 | 24.5 | 15.0 | 24.0 | 15.0 | 24.5 |
| Total Split (s) | 19.0 | 41.0 | 19.0 | 41.0 | 41.0 | 25.0 | 35.0 | 25.0 | 35.0 |
| Total Split (%) | 15.8% | 34.2% | 15.8% | 34.2% | 34.2% | 20.8% | 29.2% | 20.8% | 29.2% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | C-Min | None | None | None | None |
| Act Effct Green (s) | 14.8 | 48.2 | 11.3 | 44.7 | 44.7 | 44.0 | 25.1 | 37.1 | 21.6 |
| Actuated g/C Ratio | 0.12 | 0.40 | 0.09 | 0.37 | 0.37 | 0.37 | 0.21 | 0.31 | 0.18 |
| v/c Ratio | 0.68 | 0.94 | 0.48 | 0.91 | 0.46 | 0.86 | 0.66 | 0.63 | 0.76 |
| Control Delay | 58.9 | 48.7 | 56.5 | 48.3 | 5.1 | 52.4 | 43.1 | 30.5 | 50.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 58.9 | 48.7 | 56.5 | 48.3 | 5.1 | 52.4 | 43.1 | 30.5 | 50.8 |
| LOS | E | D | E | D | A | D | D | C | D |
| Approach Delay | | 50.5 | | 39.6 | | | 46.6 | | 41.6 |
| Approach LOS | | D | | D | | | D | | D |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 1 (1%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.94 | |
| Intersection Signal Delay: 44.6 | Intersection LOS: D |
| Intersection Capacity Utilization 85.2% | ICU Level of Service E |
| Analysis Period (min) 15 | |

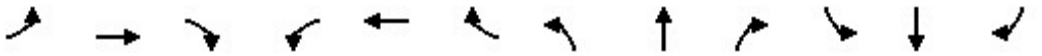
Splits and Phases: 1: Chambers Rd & E. 104th Ave



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 289 | 1311 | 155 | 1200 | 378 | 304 | 497 | 400 | 489 |
| v/c Ratio | 0.68 | 0.94 | 0.48 | 0.91 | 0.46 | 0.86 | 0.66 | 0.63 | 0.76 |
| Control Delay | 58.9 | 48.7 | 56.5 | 48.3 | 5.1 | 52.4 | 43.1 | 30.5 | 50.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 58.9 | 48.7 | 56.5 | 48.3 | 5.1 | 52.4 | 43.1 | 30.5 | 50.8 |
| Queue Length 50th (ft) | 111 | 501 | 59 | 470 | 0 | 172 | 167 | 109 | 177 |
| Queue Length 95th (ft) | 151 | #726 | 78 | #537 | 27 | #289 | 217 | 131 | 217 |
| Internal Link Dist (ft) | | 3830 | | 955 | | | 548 | | 948 |
| Turn Bay Length (ft) | 275 | | 380 | | 350 | 290 | | 285 | |
| Base Capacity (vph) | 440 | 1394 | 400 | 1317 | 826 | 368 | 884 | 770 | 879 |
| 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 | 0.66 | 0.94 | 0.39 | 0.91 | 0.46 | 0.83 | 0.56 | 0.52 | 0.56 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 251 | 919 | 222 | 119 | 924 | 291 | 274 | 315 | 132 | 352 | 321 | 109 |
| Future Volume (veh/h) | 251 | 919 | 222 | 119 | 924 | 291 | 274 | 315 | 132 | 352 | 321 | 109 |
| 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 | 289 | 1056 | 255 | 155 | 1200 | 0 | 304 | 350 | 147 | 400 | 365 | 124 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.77 | 0.77 | 0.77 | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 347 | 1208 | 290 | 286 | 1448 | | 366 | 512 | 211 | 653 | 447 | 150 |
| Arrive On Green | 0.10 | 0.43 | 0.43 | 0.08 | 0.41 | 0.00 | 0.15 | 0.21 | 0.21 | 0.12 | 0.17 | 0.17 |
| Sat Flow, veh/h | 3456 | 2842 | 683 | 3456 | 3554 | 1585 | 1781 | 2452 | 1013 | 3456 | 2614 | 875 |
| Grp Volume(v), veh/h | 289 | 658 | 653 | 155 | 1200 | 0 | 304 | 252 | 245 | 400 | 246 | 243 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1747 | 1728 | 1777 | 1585 | 1781 | 1777 | 1688 | 1728 | 1777 | 1713 |
| Q Serve(g_s), s | 9.9 | 40.6 | 41.1 | 5.2 | 36.3 | 0.0 | 16.3 | 15.7 | 16.1 | 11.2 | 16.0 | 16.4 |
| Cycle Q Clear(g_c), s | 9.9 | 40.6 | 41.1 | 5.2 | 36.3 | 0.0 | 16.3 | 15.7 | 16.1 | 11.2 | 16.0 | 16.4 |
| Prop In Lane | 1.00 | | 0.39 | 1.00 | | 1.00 | 1.00 | | 0.60 | 1.00 | | 0.51 |
| Lane Grp Cap(c), veh/h | 347 | 755 | 743 | 286 | 1448 | | 366 | 371 | 352 | 653 | 304 | 293 |
| V/C Ratio(X) | 0.83 | 0.87 | 0.88 | 0.54 | 0.83 | | 0.83 | 0.68 | 0.70 | 0.61 | 0.81 | 0.83 |
| Avail Cap(c_a), veh/h | 403 | 755 | 743 | 403 | 1448 | | 388 | 444 | 422 | 826 | 444 | 428 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 53.0 | 31.5 | 31.7 | 52.8 | 31.8 | 0.0 | 33.5 | 43.8 | 44.0 | 35.1 | 47.9 | 48.0 |
| Incr Delay (d2), s/veh | 12.3 | 13.2 | 14.0 | 1.6 | 5.6 | 0.0 | 13.5 | 3.2 | 3.9 | 0.9 | 7.1 | 8.5 |
| 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 | 19.1 | 19.1 | 2.3 | 15.8 | 0.0 | 8.2 | 7.1 | 7.0 | 4.7 | 7.5 | 7.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 65.2 | 44.7 | 45.6 | 54.4 | 37.4 | 0.0 | 47.1 | 47.0 | 47.8 | 36.1 | 54.9 | 56.5 |
| LnGrp LOS | E | D | D | D | D | | D | D | D | D | D | E |
| Approach Vol, veh/h | | 1600 | | | 1355 | | | 801 | | | 889 | |
| Approach Delay, s/veh | | 48.8 | | | 39.4 | | | 47.3 | | | 46.9 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 14.9 | 56.0 | 19.0 | 30.0 | 17.1 | 53.9 | 23.5 | 25.5 |
| Change Period (Y+Rc), s | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Max Green Setting (Gmax), s | 14.0 | 36.0 | 20.0 | 30.0 | 14.0 | 36.0 | 20.0 | 30.0 |
| Max Q Clear Time (g_c+I1), s | 7.2 | 43.1 | 13.2 | 18.1 | 11.9 | 38.3 | 18.3 | 18.4 |
| Green Ext Time (p_c), s | 0.2 | 0.0 | 0.8 | 2.2 | 0.2 | 0.0 | 0.2 | 2.1 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 45.4 |
| HCM 6th LOS | D |

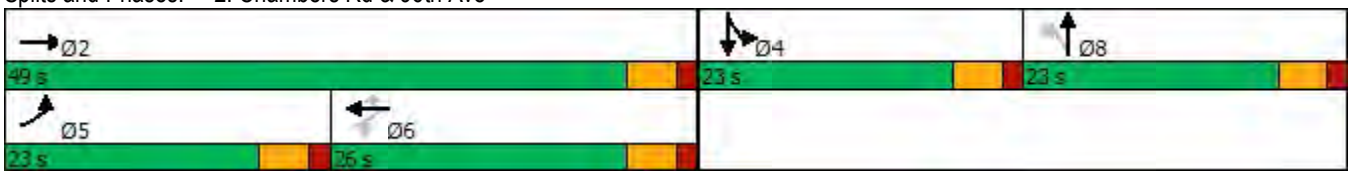
**Notes**

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 249 | 788 | 598 | 167 | 1 | 182 | 1 |
| Future Volume (vph) | 249 | 788 | 598 | 167 | 1 | 182 | 1 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 14.9 | 41.4 | 21.4 | 21.4 | 5.8 | 12.9 | 12.9 |
| Actuated g/C Ratio | 0.22 | 0.62 | 0.32 | 0.32 | 0.09 | 0.19 | 0.19 |
| v/c Ratio | 0.65 | 0.70 | 1.04 | 0.29 | 0.03 | 0.61 | 0.22 |
| Control Delay | 33.3 | 14.4 | 76.4 | 7.4 | 28.0 | 33.8 | 8.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.3 | 14.4 | 76.4 | 7.4 | 28.0 | 33.8 | 8.5 |
| LOS | C | B | E | A | C | C | A |
| Approach Delay | | 19.0 | 61.3 | | 28.0 | | 26.6 |
| Approach LOS | | B | E | | C | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Cycle Length: 95 | | | |
| Actuated Cycle Length: 66.3 | | | |
| Natural Cycle: 105 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 1.04 | | | |
| Intersection Signal Delay: 35.7 | | Intersection LOS: D | |
| Intersection Capacity Utilization 102.2% | | ICU Level of Service G | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Chambers Rd & 96th Ave

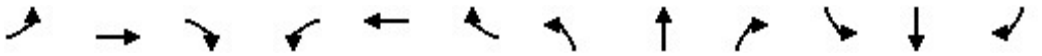


| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 257 | 812 | 629 | 176 | 4 | 209 | 83 |
| v/c Ratio | 0.65 | 0.70 | 1.04 | 0.29 | 0.03 | 0.61 | 0.22 |
| Control Delay | 33.3 | 14.4 | 76.4 | 7.4 | 28.0 | 33.8 | 8.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.3 | 14.4 | 76.4 | 7.4 | 28.0 | 33.8 | 8.5 |
| Queue Length 50th (ft) | 90 | 170 | ~274 | 7 | 1 | 75 | 0 |
| Queue Length 95th (ft) | #207 | #536 | #634 | 59 | 6 | 160 | 33 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2115 |
| Turn Bay Length (ft) | 70 | | | | | | |
| Base Capacity (vph) | 490 | 1262 | 602 | 613 | 482 | 490 | 499 |
| 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 | 0.64 | 1.04 | 0.29 | 0.01 | 0.43 | 0.17 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 249 | 788 | 0 | 0 | 598 | 167 | 0 | 1 | 1 | 182 | 1 | 71 |
| Future Volume (veh/h) | 249 | 788 | 0 | 0 | 598 | 167 | 0 | 1 | 1 | 182 | 1 | 71 |
| 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 | 257 | 812 | 0 | 0 | 629 | 176 | 0 | 2 | 2 | 209 | 1 | 82 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.50 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 317 | 1118 | 0 | 0 | 634 | 537 | 0 | 5 | 5 | 276 | 3 | 243 |
| Arrive On Green | 0.18 | 0.60 | 0.00 | 0.00 | 0.34 | 0.34 | 0.00 | 0.01 | 0.01 | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 0 | 1870 | 1585 | 0 | 858 | 858 | 1781 | 19 | 1569 |
| Grp Volume(v), veh/h | 257 | 812 | 0 | 0 | 629 | 176 | 0 | 0 | 4 | 209 | 0 | 83 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 0 | 1870 | 1585 | 0 | 0 | 1716 | 1781 | 0 | 1588 |
| Q Serve(g_s), s | 8.6 | 19.1 | 0.0 | 0.0 | 20.8 | 5.1 | 0.0 | 0.0 | 0.1 | 7.0 | 0.0 | 2.9 |
| Cycle Q Clear(g_c), s | 8.6 | 19.1 | 0.0 | 0.0 | 20.8 | 5.1 | 0.0 | 0.0 | 0.1 | 7.0 | 0.0 | 2.9 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 0.50 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 317 | 1118 | 0 | 0 | 634 | 537 | 0 | 0 | 9 | 276 | 0 | 246 |
| V/C Ratio(X) | 0.81 | 0.73 | 0.00 | 0.00 | 0.99 | 0.33 | 0.00 | 0.00 | 0.43 | 0.76 | 0.00 | 0.34 |
| Avail Cap(c_a), veh/h | 518 | 1328 | 0 | 0 | 634 | 537 | 0 | 0 | 499 | 518 | 0 | 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 24.5 | 8.9 | 0.0 | 0.0 | 20.4 | 15.2 | 0.0 | 0.0 | 30.7 | 25.1 | 0.0 | 23.3 |
| Incr Delay (d2), s/veh | 5.0 | 1.6 | 0.0 | 0.0 | 33.7 | 0.4 | 0.0 | 0.0 | 29.1 | 4.3 | 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 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.8 | 6.3 | 0.0 | 0.0 | 14.0 | 1.7 | 0.0 | 0.0 | 0.1 | 3.0 | 0.0 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 29.4 | 10.5 | 0.0 | 0.0 | 54.1 | 15.6 | 0.0 | 0.0 | 59.8 | 29.3 | 0.0 | 24.2 |
| LnGrp LOS | C | B | A | A | D | B | A | A | E | C | A | C |
| Approach Vol, veh/h | | 1069 | | | 805 | | | 4 | | | 292 | |
| Approach Delay, s/veh | | 15.1 | | | 45.6 | | | 59.8 | | | 27.9 | |
| Approach LOS | | B | | | D | | | E | | | C | |

| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 42.0 | | 14.6 | 16.0 | 26.0 | | 5.3 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 21.1 | | 9.0 | 10.6 | 22.8 | | 2.1 | | | | |
| Green Ext Time (p_c), s | | 6.4 | | 0.7 | 0.4 | 0.0 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 28.2 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | ↰ | ↑ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 4 | 5 | 7 | 30 | 7 | 121 | 14 | 353 | 65 | 158 | 267 | 8 |
| Future Vol, veh/h | 4 | 5 | 7 | 30 | 7 | 121 | 14 | 353 | 65 | 158 | 267 | 8 |
| 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 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 5 | 8 | 33 | 8 | 132 | 15 | 384 | 71 | 172 | 290 | 9 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1159 | 1124 | 295 | 1095 | 1093 | 420 | 299 | 0 | 0 | 455 | 0 | 0 |
| Stage 1 | 639 | 639 | - | 450 | 450 | - | - | - | - | - | - | - |
| Stage 2 | 520 | 485 | - | 645 | 643 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 173 | 205 | 744 | 191 | 214 | 633 | 1262 | - | - | 1106 | - | - |
| Stage 1 | 464 | 470 | - | 589 | 572 | - | - | - | - | - | - | - |
| Stage 2 | 539 | 552 | - | 461 | 468 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 112 | 164 | 744 | 156 | 171 | 633 | 1262 | - | - | 1106 | - | - |
| Mov Cap-2 Maneuver | 112 | 164 | - | 156 | 171 | - | - | - | - | - | - | - |
| Stage 1 | 457 | 382 | - | 580 | 563 | - | - | - | - | - | - | - |
| Stage 2 | 414 | 543 | - | 366 | 380 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 23.5 | 17.6 | 0.3 | 3.2 |
| HCM LOS | C | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1262 | - | - | 212 | 156 | 552 | 1106 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | - | 0.082 | 0.209 | 0.252 | 0.155 | - | - |
| HCM Control Delay (s) | 7.9 | 0 | - | 23.5 | 34.1 | 13.7 | 8.9 | 0 | - |
| HCM Lane LOS | A | A | - | C | D | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.3 | 0.8 | 1 | 0.5 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 11.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1374 | 19 | 77 | 1191 | 42 | 48 |
| Future Vol, veh/h | 1374 | 19 | 77 | 1191 | 42 | 48 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 300 | - | 70 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1493 | 21 | 84 | 1295 | 46 | 52 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1514 | 0 | 2320 | 757 |
| Stage 1 | - | - | - | - | 1504 | - |
| Stage 2 | - | - | - | - | 816 | - |
| 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 | - | - | 437 | - | ~ 32 | 350 |
| Stage 1 | - | - | - | - | 170 | - |
| Stage 2 | - | - | - | - | 395 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 437 | - | ~ 26 | 350 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 26 | - |
| Stage 1 | - | - | - | - | 170 | - |
| Stage 2 | - | - | - | - | 319 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.9 | $ 329 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 26 | 350 | - | - | 437 | - |
| HCM Lane V/C Ratio | 1.756 | 0.149 | - | - | 0.192 | - |
| HCM Control Delay (s) | $ 685.5 | 17.1 | - | - | 15.2 | - |
| HCM Lane LOS | F | C | - | - | C | - |
| HCM 95th %tile Q(veh) | 5.5 | 0.5 | - | - | 0.7 | - |

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

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 112 | 790 | 94 | 1040 | 207 | 275 | 196 | 242 | 165 |
| Future Volume (vph) | 112 | 790 | 94 | 1040 | 207 | 275 | 196 | 242 | 165 |
| Turn Type | Prot | NA | Prot | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | | | | | 6 | 4 | | 8 | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 15.0 | 3.0 | 15.0 | 15.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Minimum Split (s) | 10.5 | 37.0 | 10.5 | 37.0 | 37.0 | 10.5 | 34.7 | 10.5 | 34.7 |
| Total Split (s) | 22.0 | 44.0 | 22.0 | 44.0 | 44.0 | 19.0 | 35.0 | 19.0 | 35.0 |
| Total Split (%) | 18.3% | 36.7% | 18.3% | 36.7% | 36.7% | 15.8% | 29.2% | 15.8% | 29.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.7 | 4.7 | 4.7 | 4.7 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 6.7 | 6.7 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | C-Min | None | None | None | Max |
| Act Effct Green (s) | 9.8 | 42.7 | 9.3 | 42.2 | 42.2 | 41.8 | 29.5 | 39.4 | 28.3 |
| Actuated g/C Ratio | 0.08 | 0.36 | 0.08 | 0.35 | 0.35 | 0.35 | 0.25 | 0.33 | 0.24 |
| v/c Ratio | 0.45 | 0.86 | 0.42 | 1.01 | 0.35 | 0.88 | 0.40 | 0.37 | 0.45 |
| Control Delay | 67.4 | 36.5 | 57.3 | 66.4 | 5.1 | 57.4 | 27.7 | 25.8 | 17.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 67.4 | 36.5 | 57.3 | 66.4 | 5.1 | 57.4 | 27.7 | 25.8 | 17.8 |
| LOS | E | D | E | E | A | E | C | C | B |
| Approach Delay | | 39.8 | | 56.3 | | | 41.4 | | 20.8 |
| Approach LOS | | D | | E | | | D | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 8 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 105 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.01 | |
| Intersection Signal Delay: 43.3 | Intersection LOS: D |
| Intersection Capacity Utilization 81.8% | ICU Level of Service D |
| Analysis Period (min) 15 | |

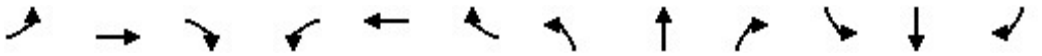
Splits and Phases: 1: Chambers Rd & E. 104th Ave

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 127 | 1068 | 113 | 1253 | 249 | 313 | 365 | 266 | 424 |
| v/c Ratio | 0.45 | 0.86 | 0.42 | 1.01 | 0.35 | 0.88 | 0.40 | 0.37 | 0.45 |
| Control Delay | 67.4 | 36.5 | 57.3 | 66.4 | 5.1 | 57.4 | 27.7 | 25.8 | 17.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 67.4 | 36.5 | 57.3 | 66.4 | 5.1 | 57.4 | 27.7 | 25.8 | 17.8 |
| Queue Length 50th (ft) | 54 | 392 | 43 | ~514 | 2 | 176 | 85 | 69 | 60 |
| Queue Length 95th (ft) | 85 | #400 | 66 | #613 | 43 | #252 | 129 | 99 | 108 |
| Internal Link Dist (ft) | | 3830 | | 955 | | | 548 | | 948 |
| Turn Bay Length (ft) | 275 | | 380 | | 350 | 290 | | 285 | |
| Base Capacity (vph) | 429 | 1241 | 429 | 1244 | 716 | 354 | 904 | 760 | 948 |
| 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 | 0.30 | 0.86 | 0.26 | 1.01 | 0.35 | 0.88 | 0.40 | 0.35 | 0.45 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 790 | 150 | 94 | 1040 | 207 | 275 | 196 | 125 | 242 | 165 | 221 |
| Future Volume (veh/h) | 112 | 790 | 150 | 94 | 1040 | 207 | 275 | 196 | 125 | 242 | 165 | 221 |
| 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 | 127 | 898 | 170 | 113 | 1253 | 0 | 312 | 223 | 142 | 266 | 181 | 243 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.83 | 0.83 | 0.83 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 186 | 1145 | 217 | 170 | 1349 | | 336 | 555 | 339 | 721 | 419 | 374 |
| Arrive On Green | 0.05 | 0.38 | 0.38 | 0.05 | 0.38 | 0.00 | 0.10 | 0.26 | 0.26 | 0.08 | 0.24 | 0.24 |
| Sat Flow, veh/h | 3456 | 2981 | 564 | 3456 | 3554 | 1585 | 1781 | 2120 | 1295 | 3456 | 1777 | 1585 |
| Grp Volume(v), veh/h | 127 | 535 | 533 | 113 | 1253 | 0 | 312 | 185 | 180 | 266 | 181 | 243 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1769 | 1728 | 1777 | 1585 | 1781 | 1777 | 1637 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 4.3 | 31.8 | 31.9 | 3.9 | 40.5 | 0.0 | 12.3 | 10.3 | 10.9 | 6.9 | 10.4 | 16.6 |
| Cycle Q Clear(g_c), s | 4.3 | 31.8 | 31.9 | 3.9 | 40.5 | 0.0 | 12.3 | 10.3 | 10.9 | 6.9 | 10.4 | 16.6 |
| Prop In Lane | 1.00 | | 0.32 | 1.00 | | 1.00 | 1.00 | | 0.79 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 186 | 683 | 680 | 170 | 1349 | | 336 | 465 | 429 | 721 | 419 | 374 |
| V/C Ratio(X) | 0.68 | 0.78 | 0.78 | 0.67 | 0.93 | | 0.93 | 0.40 | 0.42 | 0.37 | 0.43 | 0.65 |
| Avail Cap(c_a), veh/h | 432 | 683 | 680 | 432 | 1349 | | 336 | 465 | 429 | 812 | 419 | 374 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.86 | 0.86 | 0.86 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.8 | 32.6 | 32.6 | 56.1 | 35.7 | 0.0 | 38.1 | 36.5 | 36.7 | 31.0 | 39.0 | 41.4 |
| Incr Delay (d2), s/veh | 3.8 | 7.6 | 7.7 | 4.4 | 12.5 | 0.0 | 31.0 | 0.6 | 0.7 | 0.3 | 3.2 | 8.5 |
| 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 | 1.9 | 14.4 | 14.4 | 1.7 | 18.9 | 0.0 | 6.2 | 4.5 | 4.4 | 2.9 | 4.8 | 7.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.6 | 40.2 | 40.2 | 60.5 | 48.2 | 0.0 | 69.1 | 37.0 | 37.4 | 31.4 | 42.2 | 49.9 |
| LnGrp LOS | E | D | D | E | D | | E | D | D | C | D | D |
| Approach Vol, veh/h | | 1195 | | | 1366 | | | 677 | | | 690 | |
| Approach Delay, s/veh | | 42.3 | | | 49.2 | | | 51.9 | | | 40.7 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 12.9 | 53.1 | 15.9 | 38.1 | 13.4 | 52.6 | 19.0 | 35.0 |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.7 | 6.7 | 7.0 | 7.0 | 6.7 | 6.7 |
| Max Green Setting (Gmax), s | 15.0 | 37.0 | 12.3 | 28.3 | 15.0 | 37.0 | 12.3 | 28.3 |
| Max Q Clear Time (g_c+I1), s | 5.9 | 33.9 | 8.9 | 12.9 | 6.3 | 42.5 | 14.3 | 18.6 |
| Green Ext Time (p_c), s | 0.2 | 1.8 | 0.3 | 1.8 | 0.2 | 0.0 | 0.0 | 1.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 46.1 |
| HCM 6th LOS | D |

**Notes**

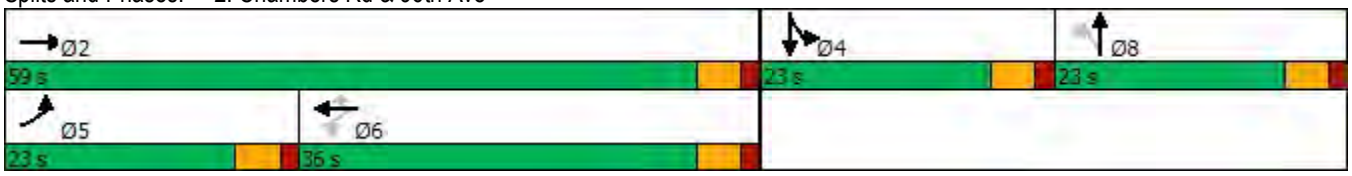
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 59 | 288 | 627 | 142 | 0 | 171 | 2 |
| Future Volume (vph) | 59 | 288 | 627 | 142 | 0 | 171 | 2 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 59.0 | 36.0 | 36.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 21.9% | 56.2% | 34.3% | 34.3% | 21.9% | 21.9% | 21.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 8.4 | 42.9 | 32.2 | 32.2 | 5.7 | 13.3 | 13.3 |
| Actuated g/C Ratio | 0.12 | 0.63 | 0.47 | 0.47 | 0.08 | 0.20 | 0.20 |
| v/c Ratio | 0.33 | 0.30 | 0.83 | 0.20 | 0.02 | 0.61 | 0.43 |
| Control Delay | 34.6 | 7.7 | 29.8 | 5.0 | 0.0 | 35.0 | 7.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 34.6 | 7.7 | 29.8 | 5.0 | 0.0 | 35.0 | 7.8 |
| LOS | C | A | C | A | A | D | A |
| Approach Delay | | 12.3 | 25.2 | | | | 21.6 |
| Approach LOS | | B | C | | | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 105 | |
| Actuated Cycle Length: 68.1 | |
| Natural Cycle: 115 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.83 | |
| Intersection Signal Delay: 21.1 | Intersection LOS: C |
| Intersection Capacity Utilization 73.5% | ICU Level of Service D |
| Analysis Period (min) 15 | |

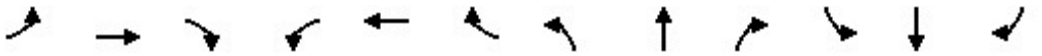
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 72 | 352 | 729 | 165 | 8 | 211 | 204 |
| v/c Ratio | 0.33 | 0.30 | 0.83 | 0.20 | 0.02 | 0.61 | 0.43 |
| Control Delay | 34.6 | 7.7 | 29.8 | 5.0 | 0.0 | 35.0 | 7.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 34.6 | 7.7 | 29.8 | 5.0 | 0.0 | 35.0 | 7.8 |
| Queue Length 50th (ft) | 28 | 53 | 256 | 5 | 0 | 80 | 1 |
| Queue Length 95th (ft) | 68 | 135 | #618 | 43 | 0 | 154 | 40 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2115 |
| Turn Bay Length (ft) | 125 | | | 300 | | | |
| Base Capacity (vph) | 481 | 1496 | 881 | 824 | 722 | 481 | 578 |
| 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 | 0.15 | 0.24 | 0.83 | 0.20 | 0.01 | 0.44 | 0.35 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 59 | 288 | 1 | 0 | 627 | 142 | 0 | 0 | 3 | 171 | 2 | 164 |
| Future Volume (veh/h) | 59 | 288 | 1 | 0 | 627 | 142 | 0 | 0 | 3 | 171 | 2 | 164 |
| 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 | 72 | 351 | 1 | 0 | 729 | 165 | 0 | 0 | 8 | 211 | 2 | 202 |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.86 | 0.86 | 0.86 | 0.38 | 0.38 | 0.38 | 0.81 | 0.81 | 0.81 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 137 | 1095 | 3 | 0 | 811 | 687 | 0 | 0 | 16 | 304 | 3 | 268 |
| Arrive On Green | 0.08 | 0.59 | 0.59 | 0.00 | 0.43 | 0.43 | 0.00 | 0.00 | 0.01 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1781 | 1864 | 5 | 0 | 1870 | 1585 | 0 | 0 | 1585 | 1781 | 16 | 1572 |
| Grp Volume(v), veh/h | 72 | 0 | 352 | 0 | 729 | 165 | 0 | 0 | 8 | 211 | 0 | 204 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1869 | 0 | 1870 | 1585 | 0 | 0 | 1585 | 1781 | 0 | 1587 |
| Q Serve(g_s), s | 2.5 | 0.0 | 6.2 | 0.0 | 23.5 | 4.3 | 0.0 | 0.0 | 0.3 | 7.2 | 0.0 | 7.9 |
| Cycle Q Clear(g_c), s | 2.5 | 0.0 | 6.2 | 0.0 | 23.5 | 4.3 | 0.0 | 0.0 | 0.3 | 7.2 | 0.0 | 7.9 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 137 | 0 | 1099 | 0 | 811 | 687 | 0 | 0 | 16 | 304 | 0 | 271 |
| V/C Ratio(X) | 0.52 | 0.00 | 0.32 | 0.00 | 0.90 | 0.24 | 0.00 | 0.00 | 0.49 | 0.69 | 0.00 | 0.75 |
| Avail Cap(c_a), veh/h | 494 | 0 | 1556 | 0 | 894 | 757 | 0 | 0 | 440 | 494 | 0 | 440 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 28.8 | 0.0 | 6.8 | 0.0 | 17.1 | 11.6 | 0.0 | 0.0 | 31.9 | 25.3 | 0.0 | 25.6 |
| Incr Delay (d2), s/veh | 3.1 | 0.0 | 0.2 | 0.0 | 11.3 | 0.2 | 0.0 | 0.0 | 20.7 | 2.8 | 0.0 | 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 | 1.1 | 0.0 | 2.0 | 0.0 | 11.3 | 1.4 | 0.0 | 0.0 | 0.2 | 3.0 | 0.0 | 3.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 31.9 | 0.0 | 7.0 | 0.0 | 28.3 | 11.8 | 0.0 | 0.0 | 52.6 | 28.1 | 0.0 | 29.8 |
| LnGrp LOS | C | A | A | A | C | B | A | A | D | C | A | C |
| Approach Vol, veh/h | | 424 | | | 894 | | | 8 | | | 415 | |
| Approach Delay, s/veh | | 11.2 | | | 25.3 | | | 52.6 | | | 29.0 | |
| Approach LOS | | B | | | C | | | D | | | C | |

| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 43.1 | | 16.1 | 10.0 | 33.1 | | 5.7 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 54.0 | | 18.0 | 18.0 | 31.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 8.2 | | 9.9 | 4.5 | 25.5 | | 2.3 | | | | |
| Green Ext Time (p_c), s | | 2.4 | | 1.2 | 0.1 | 2.7 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 22.8 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 9.3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 73 | 11 | 31 | 62 | 9 | 145 | 13 | 300 | 35 | 126 | 297 | 26 |
| Future Vol, veh/h | 73 | 11 | 31 | 62 | 9 | 145 | 13 | 300 | 35 | 126 | 297 | 26 |
| 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 | 150 | - | - | 100 | - | - | 235 | - | - | 235 | - | 135 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 79 | 12 | 34 | 67 | 10 | 158 | 14 | 326 | 38 | 137 | 323 | 28 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1054 | 989 | 323 | 1007 | 998 | 345 | 351 | 0 | 0 | 364 | 0 | 0 |
| Stage 1 | 597 | 597 | - | 373 | 373 | - | - | - | - | - | - | - |
| Stage 2 | 457 | 392 | - | 634 | 625 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 204 | 247 | 718 | 219 | 244 | 698 | 1208 | - | - | 1195 | - | - |
| Stage 1 | 490 | 491 | - | 648 | 618 | - | - | - | - | - | - | - |
| Stage 2 | 583 | 606 | - | 467 | 477 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 138 | 216 | 718 | 181 | 213 | 698 | 1208 | - | - | 1195 | - | - |
| Mov Cap-2 Maneuver | 138 | 216 | - | 181 | 213 | - | - | - | - | - | - | - |
| Stage 1 | 484 | 435 | - | 640 | 611 | - | - | - | - | - | - | - |
| Stage 2 | 439 | 599 | - | 383 | 422 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 44.2 | 19.7 | 0.3 | 2.4 |
| HCM LOS | E | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1208 | - | - | 138 | 446 | 181 | 616 | 1195 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | - | 0.575 | 0.102 | 0.372 | 0.272 | 0.115 | - | - |
| HCM Control Delay (s) | 8 | - | - | 61.5 | 14 | 36.2 | 13 | 8.4 | - | - |
| HCM Lane LOS | A | - | - | F | B | E | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 2.9 | 0.3 | 1.6 | 1.1 | 0.4 | - | - |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 1172 | 46 | 1428 | 180 | 81 |
| Future Volume (vph) | 1172 | 46 | 1428 | 180 | 81 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 22.5 | 22.5 | 35.0 | 35.0 |
| Total Split (s) | 83.0 | 83.0 | 83.0 | 37.0 | 37.0 |
| Total Split (%) | 69.2% | 69.2% | 69.2% | 30.8% | 30.8% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Max | C-Max | C-Max | None | None |
| Act Effct Green (s) | 87.4 | 87.4 | 87.4 | 18.6 | 18.6 |
| Actuated g/C Ratio | 0.73 | 0.73 | 0.73 | 0.16 | 0.16 |
| v/c Ratio | 0.51 | 0.21 | 0.60 | 0.72 | 0.29 |
| Control Delay | 8.4 | 4.8 | 4.5 | 62.3 | 14.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.4 | 4.8 | 4.5 | 62.3 | 14.5 |
| LOS | A | A | A | E | B |
| Approach Delay | 8.4 | | 4.5 | 47.5 | |
| Approach LOS | A | | A | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.72 | |
| Intersection Signal Delay: 9.9 | Intersection LOS: A |
| Intersection Capacity Utilization 61.1% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1308 | 50 | 1552 | 196 | 88 |
| v/c Ratio | 0.51 | 0.21 | 0.60 | 0.72 | 0.29 |
| Control Delay | 8.4 | 4.8 | 4.5 | 62.3 | 14.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.4 | 4.8 | 4.5 | 62.3 | 14.5 |
| Queue Length 50th (ft) | 201 | 6 | 104 | 146 | 9 |
| Queue Length 95th (ft) | 304 | m9 | m126 | 214 | 53 |
| Internal Link Dist (ft) | 491 | | 3830 | 1801 | |
| Turn Bay Length (ft) | | 300 | | 70 | |
| Base Capacity (vph) | 2569 | 242 | 2578 | 442 | 452 |
| 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 | 0.51 | 0.21 | 0.60 | 0.44 | 0.19 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 1172 | 31 | 46 | 1428 | 180 | 81 |
| Future Volume (veh/h) | 1172 | 31 | 46 | 1428 | 180 | 81 |
| 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 | 1274 | 34 | 50 | 1552 | 196 | 88 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 2663 | 71 | 318 | 2676 | 232 | 207 |
| Arrive On Green | 0.75 | 0.75 | 0.75 | 0.75 | 0.13 | 0.13 |
| Sat Flow, veh/h | 3629 | 94 | 421 | 3647 | 1781 | 1585 |
| Grp Volume(v), veh/h | 640 | 668 | 50 | 1552 | 196 | 88 |
| Grp Sat Flow(s),veh/h/ln | 1777 | 1853 | 421 | 1777 | 1781 | 1585 |
| Q Serve(g_s), s | 16.7 | 16.7 | 6.3 | 23.0 | 12.9 | 6.1 |
| Cycle Q Clear(g_c), s | 16.7 | 16.7 | 23.0 | 23.0 | 12.9 | 6.1 |
| Prop In Lane | | 0.05 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1338 | 1396 | 318 | 2676 | 232 | 207 |
| V/C Ratio(X) | 0.48 | 0.48 | 0.16 | 0.58 | 0.84 | 0.43 |
| Avail Cap(c_a), veh/h | 1338 | 1396 | 318 | 2676 | 445 | 396 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.13 | 0.13 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 5.7 | 5.7 | 10.2 | 6.5 | 51.0 | 48.0 |
| Incr Delay (d2), s/veh | 1.2 | 1.2 | 0.1 | 0.1 | 8.1 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.8 | 6.0 | 0.6 | 7.4 | 6.3 | 2.5 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 6.9 | 6.9 | 10.3 | 6.6 | 59.1 | 49.4 |
| LnGrp LOS | A | A | B | A | E | D |
| Approach Vol, veh/h | 1308 | | | 1602 | 284 | |
| Approach Delay, s/veh | 6.9 | | | 6.7 | 56.1 | |
| Approach LOS | A | | | A | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 97.4 | | 22.6 | | 97.4 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 76.0 | | 30.0 | | 76.0 |
| Max Q Clear Time (g_c+I1), s | | 18.7 | | 14.9 | | 25.0 |
| Green Ext Time (p_c), s | | 13.1 | | 0.7 | | 21.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 11.2 |
| HCM 6th LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 26 | 0 | 19 | 10 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 26 | 0 | 19 | 10 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 28 | 0 | 21 | 11 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 110 | 81 | 11 | 81 | 81 | 28 | 11 | 0 | 0 | 28 | 0 | 0 |
| Stage 1 | 53 | 53 | - | 28 | 28 | - | - | - | - | - | - | - |
| Stage 2 | 57 | 28 | - | 53 | 53 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 868 | 809 | 1070 | 907 | 809 | 1047 | 1608 | - | - | 1585 | - | - |
| Stage 1 | 960 | 851 | - | 989 | 872 | - | - | - | - | - | - | - |
| Stage 2 | 955 | 872 | - | 960 | 851 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 812 | 798 | 1070 | 898 | 798 | 1047 | 1608 | - | - | 1585 | - | - |
| Mov Cap-2 Maneuver | 812 | 798 | - | 898 | 798 | - | - | - | - | - | - | - |
| Stage 1 | 960 | 840 | - | 989 | 872 | - | - | - | - | - | - | - |
| Stage 2 | 902 | 872 | - | 948 | 840 | - | - | - | - | - | - | - |

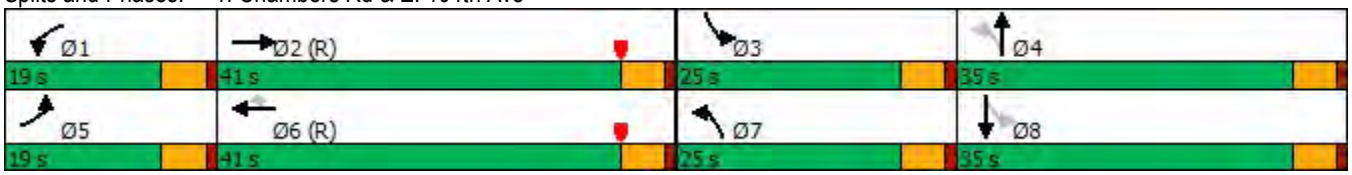
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.6 | 0 | 4.8 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1608 | - | - | - | 1047 | 1585 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.055 | 0.013 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.6 | 7.3 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | 0 | - | - |

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 239 | 874 | 116 | 879 | 277 | 262 | 300 | 335 | 306 |
| Future Volume (vph) | 239 | 874 | 116 | 879 | 277 | 262 | 300 | 335 | 306 |
| Turn Type | Prot | NA | Prot | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | | | | | 6 | 4 | | 8 | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 12.5 | 24.0 | 11.0 | 24.5 | 24.5 | 11.0 | 24.0 | 11.0 | 24.5 |
| Total Split (s) | 19.0 | 41.0 | 19.0 | 41.0 | 41.0 | 25.0 | 35.0 | 25.0 | 35.0 |
| Total Split (%) | 15.8% | 34.2% | 15.8% | 34.2% | 34.2% | 20.8% | 29.2% | 20.8% | 29.2% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | C-Min | None | None | None | None |
| Act Effct Green (s) | 14.6 | 50.1 | 10.6 | 46.1 | 46.1 | 42.9 | 24.2 | 35.8 | 20.6 |
| Actuated g/C Ratio | 0.12 | 0.42 | 0.09 | 0.38 | 0.38 | 0.36 | 0.20 | 0.30 | 0.17 |
| v/c Ratio | 0.66 | 0.86 | 0.50 | 0.84 | 0.43 | 0.83 | 0.66 | 0.60 | 0.75 |
| Control Delay | 61.8 | 34.8 | 57.5 | 41.8 | 4.9 | 49.1 | 43.2 | 30.8 | 51.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 61.8 | 34.8 | 57.5 | 41.8 | 4.9 | 49.1 | 43.2 | 30.8 | 51.3 |
| LOS | E | C | E | D | A | D | D | C | D |
| Approach Delay | | 39.7 | | 35.2 | | | 45.4 | | 42.1 |
| Approach LOS | | D | | D | | | D | | D |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 1 (1%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.86 | |
| Intersection Signal Delay: 39.5 | Intersection LOS: D |
| Intersection Capacity Utilization 78.1% | ICU Level of Service D |
| Analysis Period (min) 15 | |

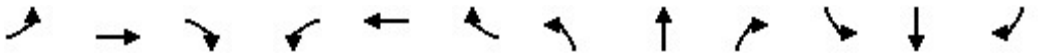
Splits and Phases: 1: Chambers Rd & E. 104th Ave



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 275 | 1250 | 151 | 1142 | 360 | 291 | 474 | 381 | 465 |
| v/c Ratio | 0.66 | 0.86 | 0.50 | 0.84 | 0.43 | 0.83 | 0.66 | 0.60 | 0.75 |
| Control Delay | 61.8 | 34.8 | 57.5 | 41.8 | 4.9 | 49.1 | 43.2 | 30.8 | 51.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 61.8 | 34.8 | 57.5 | 41.8 | 4.9 | 49.1 | 43.2 | 30.8 | 51.3 |
| Queue Length 50th (ft) | 115 | 331 | 58 | 427 | 0 | 166 | 157 | 105 | 168 |
| Queue Length 95th (ft) | 155 | #430 | 77 | #493 | 27 | #263 | 207 | 127 | 208 |
| Internal Link Dist (ft) | | 3830 | | 955 | | | 548 | | 948 |
| Turn Bay Length (ft) | 275 | | 380 | | 350 | 290 | | 285 | |
| Base Capacity (vph) | 438 | 1448 | 400 | 1359 | 829 | 368 | 884 | 772 | 879 |
| 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 | 0.63 | 0.86 | 0.38 | 0.84 | 0.43 | 0.79 | 0.54 | 0.49 | 0.53 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 239 | 874 | 213 | 116 | 879 | 277 | 262 | 300 | 127 | 335 | 306 | 103 |
| Future Volume (veh/h) | 239 | 874 | 213 | 116 | 879 | 277 | 262 | 300 | 127 | 335 | 306 | 103 |
| 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 | 275 | 1005 | 245 | 151 | 1142 | 0 | 291 | 333 | 141 | 381 | 348 | 117 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.77 | 0.77 | 0.77 | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 334 | 1299 | 316 | 211 | 1502 | | 359 | 492 | 204 | 640 | 430 | 142 |
| Arrive On Green | 0.10 | 0.46 | 0.46 | 0.06 | 0.42 | 0.00 | 0.15 | 0.20 | 0.20 | 0.11 | 0.16 | 0.16 |
| Sat Flow, veh/h | 3456 | 2835 | 689 | 3456 | 3554 | 1585 | 1781 | 2447 | 1017 | 3456 | 2623 | 868 |
| Grp Volume(v), veh/h | 275 | 629 | 621 | 151 | 1142 | 0 | 291 | 240 | 234 | 381 | 234 | 231 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1746 | 1728 | 1777 | 1585 | 1781 | 1777 | 1687 | 1728 | 1777 | 1714 |
| Q Serve(g_s), s | 9.4 | 35.6 | 35.9 | 5.1 | 32.8 | 0.0 | 15.8 | 15.0 | 15.4 | 10.7 | 15.2 | 15.6 |
| Cycle Q Clear(g_c), s | 9.4 | 35.6 | 35.9 | 5.1 | 32.8 | 0.0 | 15.8 | 15.0 | 15.4 | 10.7 | 15.2 | 15.6 |
| Prop In Lane | 1.00 | | 0.39 | 1.00 | | 1.00 | 1.00 | | 0.60 | 1.00 | | 0.51 |
| Lane Grp Cap(c), veh/h | 334 | 814 | 800 | 211 | 1502 | | 359 | 357 | 339 | 640 | 292 | 281 |
| V/C Ratio(X) | 0.82 | 0.77 | 0.78 | 0.72 | 0.76 | | 0.81 | 0.67 | 0.69 | 0.60 | 0.80 | 0.82 |
| Avail Cap(c_a), veh/h | 403 | 814 | 800 | 403 | 1502 | | 388 | 444 | 422 | 825 | 444 | 429 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.73 | 0.73 | 0.73 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.2 | 27.3 | 27.3 | 55.3 | 29.5 | 0.0 | 34.2 | 44.3 | 44.5 | 35.9 | 48.3 | 48.5 |
| Incr Delay (d2), s/veh | 8.3 | 5.2 | 5.4 | 4.5 | 3.7 | 0.0 | 11.6 | 2.8 | 3.5 | 0.9 | 6.1 | 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 | 4.3 | 15.3 | 15.2 | 2.3 | 14.0 | 0.0 | 7.8 | 6.7 | 6.7 | 4.5 | 7.1 | 7.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 61.5 | 32.5 | 32.7 | 59.8 | 33.2 | 0.0 | 45.8 | 47.1 | 47.9 | 36.8 | 54.3 | 55.9 |
| LnGrp LOS | E | C | C | E | C | | D | D | D | D | D | E |
| Approach Vol, veh/h | | 1525 | | | 1293 | | | 765 | | | 846 | |
| Approach Delay, s/veh | | 37.8 | | | 36.3 | | | 46.9 | | | 46.9 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 12.3 | 60.0 | 18.6 | 29.1 | 16.6 | 55.7 | 23.0 | 24.7 |
| Change Period (Y+Rc), s | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Max Green Setting (Gmax), s | 14.0 | 36.0 | 20.0 | 30.0 | 14.0 | 36.0 | 20.0 | 30.0 |
| Max Q Clear Time (g_c+I1), s | 7.1 | 37.9 | 12.7 | 17.4 | 11.4 | 34.8 | 17.8 | 17.6 |
| Green Ext Time (p_c), s | 0.2 | 0.0 | 0.8 | 2.1 | 0.2 | 0.8 | 0.2 | 2.1 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 40.6 |
| HCM 6th LOS | D |

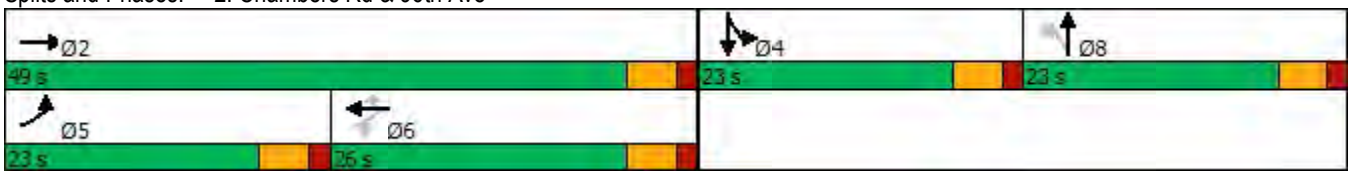
**Notes**

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 237 | 749 | 569 | 159 | 1 | 173 | 1 |
| Future Volume (vph) | 237 | 749 | 569 | 159 | 1 | 173 | 1 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 14.2 | 40.8 | 21.5 | 21.5 | 5.8 | 12.6 | 12.6 |
| Actuated g/C Ratio | 0.22 | 0.62 | 0.33 | 0.33 | 0.09 | 0.19 | 0.19 |
| v/c Ratio | 0.64 | 0.66 | 0.98 | 0.26 | 0.03 | 0.59 | 0.21 |
| Control Delay | 32.8 | 13.3 | 58.8 | 5.5 | 28.0 | 32.9 | 8.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 32.8 | 13.3 | 58.8 | 5.5 | 28.0 | 32.9 | 8.6 |
| LOS | C | B | E | A | C | C | A |
| Approach Delay | | 18.0 | 47.1 | | 28.0 | | 26.0 |
| Approach LOS | | B | D | | C | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 95 | |
| Actuated Cycle Length: 65.3 | |
| Natural Cycle: 105 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.98 | |
| Intersection Signal Delay: 29.9 | Intersection LOS: C |
| Intersection Capacity Utilization 98.1% | ICU Level of Service F |
| Analysis Period (min) 15 | |

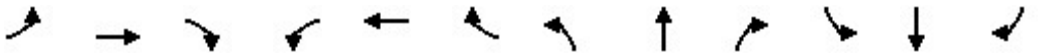
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 244 | 772 | 599 | 167 | 4 | 199 | 78 |
| v/c Ratio | 0.64 | 0.66 | 0.98 | 0.26 | 0.03 | 0.59 | 0.21 |
| Control Delay | 32.8 | 13.3 | 58.8 | 5.5 | 28.0 | 32.9 | 8.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 32.8 | 13.3 | 58.8 | 5.5 | 28.0 | 32.9 | 8.6 |
| Queue Length 50th (ft) | 84 | 152 | 222 | 0 | 1 | 69 | 0 |
| Queue Length 95th (ft) | 194 | 463 | #599 | 46 | 6 | 153 | 32 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2115 |
| Turn Bay Length (ft) | 125 | | | 300 | | | |
| Base Capacity (vph) | 498 | 1283 | 612 | 632 | 490 | 498 | 502 |
| 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 | 0.60 | 0.98 | 0.26 | 0.01 | 0.40 | 0.16 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 237 | 749 | 0 | 0 | 569 | 159 | 0 | 1 | 1 | 173 | 1 | 67 |
| Future Volume (veh/h) | 237 | 749 | 0 | 0 | 569 | 159 | 0 | 1 | 1 | 173 | 1 | 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 | | 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 | 244 | 772 | 0 | 0 | 599 | 167 | 0 | 2 | 2 | 199 | 1 | 77 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.50 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 306 | 1118 | 0 | 0 | 643 | 545 | 0 | 5 | 5 | 266 | 3 | 234 |
| Arrive On Green | 0.17 | 0.60 | 0.00 | 0.00 | 0.34 | 0.34 | 0.00 | 0.01 | 0.01 | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 0 | 1870 | 1585 | 0 | 858 | 858 | 1781 | 20 | 1568 |
| Grp Volume(v), veh/h | 244 | 772 | 0 | 0 | 599 | 167 | 0 | 0 | 4 | 199 | 0 | 78 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 0 | 1870 | 1585 | 0 | 0 | 1716 | 1781 | 0 | 1588 |
| Q Serve(g_s), s | 8.0 | 17.1 | 0.0 | 0.0 | 18.8 | 4.7 | 0.0 | 0.0 | 0.1 | 6.5 | 0.0 | 2.7 |
| Cycle Q Clear(g_c), s | 8.0 | 17.1 | 0.0 | 0.0 | 18.8 | 4.7 | 0.0 | 0.0 | 0.1 | 6.5 | 0.0 | 2.7 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 0.50 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 306 | 1118 | 0 | 0 | 643 | 545 | 0 | 0 | 9 | 266 | 0 | 237 |
| V/C Ratio(X) | 0.80 | 0.69 | 0.00 | 0.00 | 0.93 | 0.31 | 0.00 | 0.00 | 0.43 | 0.75 | 0.00 | 0.33 |
| Avail Cap(c_a), veh/h | 528 | 1356 | 0 | 0 | 647 | 548 | 0 | 0 | 509 | 528 | 0 | 471 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 24.1 | 8.4 | 0.0 | 0.0 | 19.2 | 14.6 | 0.0 | 0.0 | 30.1 | 24.7 | 0.0 | 23.1 |
| Incr Delay (d2), s/veh | 4.8 | 1.2 | 0.0 | 0.0 | 20.2 | 0.3 | 0.0 | 0.0 | 29.0 | 4.2 | 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 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.5 | 5.5 | 0.0 | 0.0 | 10.8 | 1.6 | 0.0 | 0.0 | 0.1 | 2.8 | 0.0 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 28.9 | 9.5 | 0.0 | 0.0 | 39.4 | 14.9 | 0.0 | 0.0 | 59.1 | 28.9 | 0.0 | 23.9 |
| LnGrp LOS | C | A | A | A | D | B | A | A | E | C | A | C |
| Approach Vol, veh/h | | 1016 | | | 766 | | | 4 | | | 277 | |
| Approach Delay, s/veh | | 14.2 | | | 34.1 | | | 59.1 | | | 27.5 | |
| Approach LOS | | B | | | C | | | E | | | C | |

| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 41.3 | | 14.1 | 15.4 | 25.9 | | 5.3 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 19.1 | | 8.5 | 10.0 | 20.8 | | 2.1 | | | | |
| Green Ext Time (p_c), s | | 6.1 | | 0.7 | 0.4 | 0.1 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 23.4 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 10.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 51 | 5 | 17 | 33 | 8 | 132 | 46 | 403 | 71 | 172 | 327 | 80 |
| Future Vol, veh/h | 51 | 5 | 17 | 33 | 8 | 132 | 46 | 403 | 71 | 172 | 327 | 80 |
| 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 | 150 | - | - | 100 | - | - | 235 | - | - | 235 | - | 135 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 55 | 5 | 18 | 36 | 9 | 143 | 50 | 438 | 77 | 187 | 355 | 87 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1382 | 1344 | 355 | 1361 | 1393 | 477 | 442 | 0 | 0 | 515 | 0 | 0 |
| Stage 1 | 729 | 729 | - | 577 | 577 | - | - | - | - | - | - | - |
| Stage 2 | 653 | 615 | - | 784 | 816 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 121 | 152 | 689 | 125 | 142 | 588 | 1118 | - | - | 1051 | - | - |
| Stage 1 | 414 | 428 | - | 502 | 502 | - | - | - | - | - | - | - |
| Stage 2 | 456 | 482 | - | 386 | 391 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 72 | 119 | 689 | 98 | 111 | 588 | 1118 | - | - | 1051 | - | - |
| Mov Cap-2 Maneuver | 72 | 119 | - | 98 | 111 | - | - | - | - | - | - | - |
| Stage 1 | 395 | 352 | - | 479 | 479 | - | - | - | - | - | - | - |
| Stage 2 | 323 | 460 | - | 304 | 321 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 106.2 | 24.9 | 0.7 | 2.7 |
| HCM LOS | F | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1118 | - | - | 72 | 330 | 98 | 472 | 1051 | - | - |
| HCM Lane V/C Ratio | 0.045 | - | - | 0.77 | 0.072 | 0.366 | 0.322 | 0.178 | - | - |
| HCM Control Delay (s) | 8.4 | - | - | 144.7 | 16.8 | 61.6 | 16.2 | 9.2 | - | - |
| HCM Lane LOS | A | - | - | F | C | F | C | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 3.6 | 0.2 | 1.5 | 1.4 | 0.6 | - | - |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 1540 | 99 | 1323 | 92 | 61 |
| Future Volume (vph) | 1540 | 99 | 1323 | 92 | 61 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 25.0 | 25.0 | 35.0 | 35.0 |
| Total Split (s) | 82.0 | 82.0 | 82.0 | 38.0 | 38.0 |
| Total Split (%) | 68.3% | 68.3% | 68.3% | 31.7% | 31.7% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Max | C-Max | C-Max | None | None |
| Act Effct Green (s) | 93.9 | 93.9 | 93.9 | 12.1 | 12.1 |
| Actuated g/C Ratio | 0.78 | 0.78 | 0.78 | 0.10 | 0.10 |
| v/c Ratio | 0.65 | 0.73 | 0.52 | 0.56 | 0.35 |
| Control Delay | 7.5 | 33.6 | 3.0 | 62.7 | 35.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.5 | 33.6 | 3.0 | 62.7 | 35.2 |
| LOS | A | C | A | E | D |
| Approach Delay | 7.5 | | 5.1 | 51.8 | |
| Approach LOS | A | | A | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 140 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.73 | |
| Intersection Signal Delay: 8.5 | Intersection LOS: A |
| Intersection Capacity Utilization 73.7% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1779 | 108 | 1438 | 100 | 66 |
| v/c Ratio | 0.65 | 0.73 | 0.52 | 0.56 | 0.35 |
| Control Delay | 7.5 | 33.6 | 3.0 | 62.7 | 35.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.5 | 33.6 | 3.0 | 62.7 | 35.2 |
| Queue Length 50th (ft) | 263 | 20 | 64 | 75 | 27 |
| Queue Length 95th (ft) | 394 | m58 | 78 | 128 | 69 |
| Internal Link Dist (ft) | 491 | | 3830 | 1801 | |
| Turn Bay Length (ft) | | 300 | | 70 | |
| Base Capacity (vph) | 2745 | 147 | 2768 | 457 | 430 |
| 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 | 0.65 | 0.73 | 0.52 | 0.22 | 0.15 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 1540 | 97 | 99 | 1323 | 92 | 61 |
| Future Volume (veh/h) | 1540 | 97 | 99 | 1323 | 92 | 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 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 1674 | 105 | 108 | 1438 | 100 | 66 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 2746 | 171 | 225 | 2872 | 134 | 119 |
| Arrive On Green | 0.81 | 0.81 | 0.81 | 0.81 | 0.08 | 0.08 |
| Sat Flow, veh/h | 3491 | 212 | 267 | 3647 | 1781 | 1585 |
| Grp Volume(v), veh/h | 870 | 909 | 108 | 1438 | 100 | 66 |
| Grp Sat Flow(s),veh/h/ln | 1777 | 1832 | 267 | 1777 | 1781 | 1585 |
| Q Serve(g_s), s | 22.1 | 22.7 | 31.0 | 15.6 | 6.6 | 4.8 |
| Cycle Q Clear(g_c), s | 22.1 | 22.7 | 53.7 | 15.6 | 6.6 | 4.8 |
| Prop In Lane | | 0.12 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1436 | 1481 | 225 | 2872 | 134 | 119 |
| V/C Ratio(X) | 0.61 | 0.61 | 0.48 | 0.50 | 0.75 | 0.55 |
| Avail Cap(c_a), veh/h | 1436 | 1481 | 225 | 2872 | 460 | 409 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.43 | 0.43 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 4.3 | 4.4 | 14.6 | 3.7 | 54.4 | 53.6 |
| Incr Delay (d2), s/veh | 1.9 | 1.9 | 3.1 | 0.3 | 8.0 | 4.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.7 | 7.2 | 2.0 | 4.4 | 3.3 | 2.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 6.2 | 6.3 | 17.7 | 4.0 | 62.4 | 57.5 |
| LnGrp LOS | A | A | B | A | E | E |
| Approach Vol, veh/h | 1779 | | | 1546 | 166 | |
| Approach Delay, s/veh | 6.3 | | | 4.9 | 60.5 | |
| Approach LOS | A | | | A | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 104.0 | | 16.0 | | 104.0 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 75.0 | | 31.0 | | 75.0 |
| Max Q Clear Time (g_c+I1), s | | 24.7 | | 8.6 | | 55.7 |
| Green Ext Time (p_c), s | | 23.3 | | 0.4 | | 13.1 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 8.3 |
| HCM 6th LOS | A |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 19 | 0 | 61 | 31 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 19 | 0 | 61 | 31 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 21 | 0 | 66 | 34 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 208 | 187 | 34 | 187 | 187 | 21 | 34 | 0 | 0 | 21 | 0 | 0 |
| Stage 1 | 166 | 166 | - | 21 | 21 | - | - | - | - | - | - | - |
| Stage 2 | 42 | 21 | - | 166 | 166 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 749 | 708 | 1039 | 774 | 708 | 1056 | 1578 | - | - | 1595 | - | - |
| Stage 1 | 836 | 761 | - | 998 | 878 | - | - | - | - | - | - | - |
| Stage 2 | 972 | 878 | - | 836 | 761 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 697 | 678 | 1039 | 749 | 678 | 1056 | 1578 | - | - | 1595 | - | - |
| Mov Cap-2 Maneuver | 697 | 678 | - | 749 | 678 | - | - | - | - | - | - | - |
| Stage 1 | 836 | 729 | - | 998 | 878 | - | - | - | - | - | - | - |
| Stage 2 | 934 | 878 | - | 801 | 729 | - | - | - | - | - | - | - |

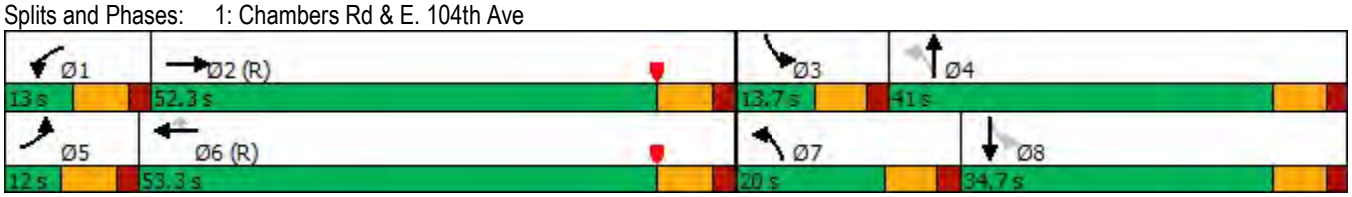
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.5 | 0 | 4.9 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1578 | - | - | - | 1056 | 1595 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.039 | 0.042 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.5 | 7.4 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 | 0.1 | - | - |

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 112 | 790 | 100 | 1040 | 207 | 305 | 200 | 242 | 166 |
| Future Volume (vph) | 112 | 790 | 100 | 1040 | 207 | 305 | 200 | 242 | 166 |
| Turn Type | Prot | NA | Prot | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | | | | | 6 | 4 | | 8 | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 12.0 | 37.0 | 12.0 | 37.0 | 37.0 | 12.0 | 34.7 | 11.7 | 34.7 |
| Total Split (s) | 12.0 | 52.3 | 13.0 | 53.3 | 53.3 | 20.0 | 41.0 | 13.7 | 34.7 |
| Total Split (%) | 10.0% | 43.6% | 10.8% | 44.4% | 44.4% | 16.7% | 34.2% | 11.4% | 28.9% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.7 | 4.7 | 4.7 | 4.7 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 6.7 | 6.7 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | C-Min | None | None | None | None |
| Act Effct Green (s) | 9.9 | 50.9 | 9.4 | 50.4 | 50.4 | 38.7 | 24.7 | 24.8 | 17.2 |
| Actuated g/C Ratio | 0.08 | 0.42 | 0.08 | 0.42 | 0.42 | 0.32 | 0.21 | 0.21 | 0.14 |
| v/c Ratio | 0.45 | 0.73 | 0.45 | 0.84 | 0.31 | 1.18 | 0.49 | 0.55 | 0.76 |
| Control Delay | 76.6 | 24.8 | 57.9 | 38.2 | 4.0 | 143.7 | 27.0 | 36.1 | 44.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 76.6 | 24.8 | 57.9 | 38.2 | 4.0 | 143.7 | 27.0 | 36.1 | 44.5 |
| LOS | E | C | E | D | A | F | C | D | D |
| Approach Delay | | 30.2 | | 34.4 | | | 81.9 | | 41.3 |
| Approach LOS | | C | | C | | | F | | D |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 8 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 100 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.18 | |
| Intersection Signal Delay: 42.6 | Intersection LOS: D |
| Intersection Capacity Utilization 84.3% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Chambers Rd & E. 104th Ave

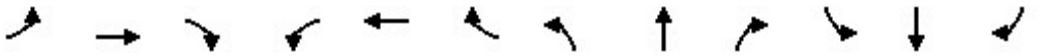


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 127 | 1079 | 120 | 1253 | 249 | 347 | 390 | 266 | 425 |
| v/c Ratio | 0.45 | 0.73 | 0.45 | 0.84 | 0.31 | 1.18 | 0.49 | 0.55 | 0.76 |
| Control Delay | 76.6 | 24.8 | 57.9 | 38.2 | 4.0 | 143.7 | 27.0 | 36.1 | 44.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 76.6 | 24.8 | 57.9 | 38.2 | 4.0 | 143.7 | 27.0 | 36.1 | 44.5 |
| Queue Length 50th (ft) | 54 | 347 | 46 | 442 | 0 | ~285 | 85 | 79 | 124 |
| Queue Length 95th (ft) | 86 | 462 | 71 | 511 | 38 | #429 | 122 | 105 | 171 |
| Internal Link Dist (ft) | | 2590 | | 955 | | | 548 | | 948 |
| Turn Bay Length (ft) | 275 | | 380 | | 350 | 290 | | 285 | |
| Base Capacity (vph) | 284 | 1477 | 268 | 1485 | 808 | 294 | 1055 | 486 | 842 |
| 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 | 0.45 | 0.73 | 0.45 | 0.84 | 0.31 | 1.18 | 0.37 | 0.55 | 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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 790 | 159 | 100 | 1040 | 207 | 305 | 200 | 143 | 242 | 166 | 221 |
| Future Volume (veh/h) | 112 | 790 | 159 | 100 | 1040 | 207 | 305 | 200 | 143 | 242 | 166 | 221 |
| 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 | 127 | 898 | 181 | 120 | 1253 | 0 | 347 | 227 | 162 | 266 | 182 | 243 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.83 | 0.83 | 0.83 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 144 | 1275 | 257 | 172 | 1567 | | 286 | 466 | 318 | 569 | 317 | 282 |
| Arrive On Green | 0.08 | 0.87 | 0.87 | 0.05 | 0.44 | 0.00 | 0.11 | 0.23 | 0.23 | 0.06 | 0.18 | 0.18 |
| Sat Flow, veh/h | 3456 | 2947 | 594 | 3456 | 3554 | 1585 | 1781 | 2019 | 1380 | 3456 | 1777 | 1585 |
| Grp Volume(v), veh/h | 127 | 541 | 538 | 120 | 1253 | 0 | 347 | 199 | 190 | 266 | 182 | 243 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1763 | 1728 | 1777 | 1585 | 1781 | 1777 | 1622 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 4.4 | 12.6 | 12.6 | 4.1 | 36.5 | 0.0 | 13.3 | 11.6 | 12.3 | 7.0 | 11.3 | 17.9 |
| Cycle Q Clear(g_c), s | 4.4 | 12.6 | 12.6 | 4.1 | 36.5 | 0.0 | 13.3 | 11.6 | 12.3 | 7.0 | 11.3 | 17.9 |
| Prop In Lane | 1.00 | | 0.34 | 1.00 | | 1.00 | 1.00 | | 0.85 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 144 | 769 | 763 | 172 | 1567 | | 286 | 410 | 374 | 569 | 317 | 282 |
| V/C Ratio(X) | 0.88 | 0.70 | 0.70 | 0.70 | 0.80 | | 1.21 | 0.48 | 0.51 | 0.47 | 0.57 | 0.86 |
| Avail Cap(c_a), veh/h | 144 | 769 | 763 | 173 | 1567 | | 286 | 508 | 464 | 569 | 415 | 370 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.86 | 0.86 | 0.86 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 54.7 | 5.4 | 5.4 | 56.1 | 29.0 | 0.0 | 39.3 | 40.0 | 40.2 | 38.5 | 45.1 | 47.9 |
| Incr Delay (d2), s/veh | 38.1 | 4.6 | 4.7 | 11.5 | 4.4 | 0.0 | 124.3 | 0.9 | 1.1 | 0.6 | 1.6 | 14.7 |
| 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 | 2.5 | 3.1 | 3.1 | 2.0 | 15.5 | 0.0 | 11.9 | 5.1 | 4.9 | 3.2 | 5.0 | 8.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 92.8 | 10.1 | 10.1 | 67.6 | 33.3 | 0.0 | 163.7 | 40.9 | 41.3 | 39.1 | 46.8 | 62.6 |
| LnGrp LOS | F | B | B | E | C | | F | D | D | D | D | E |
| Approach Vol, veh/h | | 1206 | | | 1373 | | | 736 | | | 691 | |
| Approach Delay, s/veh | | 18.8 | | | 36.3 | | | 98.9 | | | 49.4 | |
| Approach LOS | | B | | | D | | | F | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.0 | 58.9 | 13.7 | 34.4 | 12.0 | 59.9 | 20.0 | 28.1 |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.7 | 6.7 | 7.0 | 7.0 | 6.7 | 6.7 |
| Max Green Setting (Gmax), s | 6.0 | 45.3 | 7.0 | 34.3 | 5.0 | 46.3 | 13.3 | 28.0 |
| Max Q Clear Time (g_c+I1), s | 6.1 | 14.6 | 9.0 | 14.3 | 6.4 | 38.5 | 15.3 | 19.9 |
| Green Ext Time (p_c), s | 0.0 | 7.5 | 0.0 | 2.1 | 0.0 | 4.6 | 0.0 | 1.5 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 44.8 |
| HCM 6th LOS | D |

**Notes**

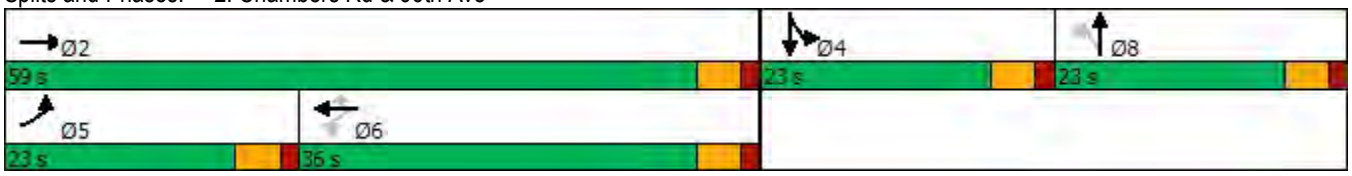
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 88 | 288 | 627 | 155 | 0 | 205 | 2 |
| Future Volume (vph) | 88 | 288 | 627 | 155 | 0 | 205 | 2 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 59.0 | 36.0 | 36.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 21.9% | 56.2% | 34.3% | 34.3% | 21.9% | 21.9% | 21.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 9.9 | 43.8 | 31.9 | 31.9 | 5.7 | 16.0 | 16.0 |
| Actuated g/C Ratio | 0.14 | 0.61 | 0.44 | 0.44 | 0.08 | 0.22 | 0.22 |
| v/c Ratio | 0.44 | 0.31 | 0.88 | 0.23 | 0.02 | 0.64 | 0.52 |
| Control Delay | 37.1 | 8.3 | 36.5 | 5.4 | 0.0 | 36.1 | 7.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.1 | 8.3 | 36.5 | 5.4 | 0.0 | 36.1 | 7.4 |
| LOS | D | A | D | A | A | D | A |
| Approach Delay | | 15.0 | 30.3 | | | | 20.4 |
| Approach LOS | | B | C | | | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 105 | |
| Actuated Cycle Length: 71.8 | |
| Natural Cycle: 115 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.88 | |
| Intersection Signal Delay: 23.7 | Intersection LOS: C |
| Intersection Capacity Utilization 78.7% | ICU Level of Service D |
| Analysis Period (min) 15 | |

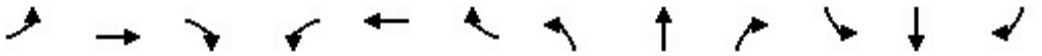
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 107 | 352 | 729 | 180 | 8 | 253 | 307 |
| v/c Ratio | 0.44 | 0.31 | 0.88 | 0.23 | 0.02 | 0.64 | 0.52 |
| Control Delay | 37.1 | 8.3 | 36.5 | 5.4 | 0.0 | 36.1 | 7.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.1 | 8.3 | 36.5 | 5.4 | 0.0 | 36.1 | 7.4 |
| Queue Length 50th (ft) | 46 | 66 | 306 | 6 | 0 | 102 | 1 |
| Queue Length 95th (ft) | 93 | 134 | #643 | 46 | 0 | 190 | 44 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2572 |
| Turn Bay Length (ft) | 70 | | | 300 | | | |
| Base Capacity (vph) | 457 | 1432 | 828 | 790 | 692 | 457 | 635 |
| 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 | 0.23 | 0.25 | 0.88 | 0.23 | 0.01 | 0.55 | 0.48 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 88 | 288 | 1 | 0 | 627 | 155 | 0 | 0 | 3 | 205 | 2 | 247 |
| Future Volume (veh/h) | 88 | 288 | 1 | 0 | 627 | 155 | 0 | 0 | 3 | 205 | 2 | 247 |
| 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 | 107 | 351 | 1 | 0 | 729 | 180 | 0 | 0 | 8 | 253 | 2 | 305 |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.86 | 0.86 | 0.86 | 0.38 | 0.38 | 0.38 | 0.81 | 0.81 | 0.81 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 156 | 1055 | 3 | 0 | 769 | 652 | 0 | 0 | 16 | 395 | 2 | 350 |
| Arrive On Green | 0.09 | 0.57 | 0.57 | 0.00 | 0.41 | 0.41 | 0.00 | 0.00 | 0.01 | 0.22 | 0.22 | 0.22 |
| Sat Flow, veh/h | 1781 | 1864 | 5 | 0 | 1870 | 1585 | 0 | 0 | 1585 | 1781 | 10 | 1576 |
| Grp Volume(v), veh/h | 107 | 0 | 352 | 0 | 729 | 180 | 0 | 0 | 8 | 253 | 0 | 307 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1869 | 0 | 1870 | 1585 | 0 | 0 | 1585 | 1781 | 0 | 1587 |
| Q Serve(g_s), s | 4.3 | 0.0 | 7.5 | 0.0 | 27.9 | 5.6 | 0.0 | 0.0 | 0.4 | 9.6 | 0.0 | 13.9 |
| Cycle Q Clear(g_c), s | 4.3 | 0.0 | 7.5 | 0.0 | 27.9 | 5.6 | 0.0 | 0.0 | 0.4 | 9.6 | 0.0 | 13.9 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 156 | 0 | 1058 | 0 | 769 | 652 | 0 | 0 | 16 | 395 | 0 | 352 |
| V/C Ratio(X) | 0.69 | 0.00 | 0.33 | 0.00 | 0.95 | 0.28 | 0.00 | 0.00 | 0.49 | 0.64 | 0.00 | 0.87 |
| Avail Cap(c_a), veh/h | 431 | 0 | 1358 | 0 | 780 | 661 | 0 | 0 | 384 | 431 | 0 | 384 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.9 | 0.0 | 8.6 | 0.0 | 21.1 | 14.5 | 0.0 | 0.0 | 36.6 | 26.2 | 0.0 | 27.9 |
| Incr Delay (d2), s/veh | 5.2 | 0.0 | 0.2 | 0.0 | 20.4 | 0.2 | 0.0 | 0.0 | 21.3 | 2.8 | 0.0 | 18.2 |
| 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 | 2.0 | 0.0 | 2.7 | 0.0 | 15.4 | 1.9 | 0.0 | 0.0 | 0.2 | 4.1 | 0.0 | 6.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 38.2 | 0.0 | 8.8 | 0.0 | 41.5 | 14.8 | 0.0 | 0.0 | 57.9 | 29.0 | 0.0 | 46.1 |
| LnGrp LOS | D | A | A | A | D | B | A | A | E | C | A | D |
| Approach Vol, veh/h | | 459 | | | 909 | | | 8 | | | 560 | |
| Approach Delay, s/veh | | 15.6 | | | 36.2 | | | 57.9 | | | 38.4 | |
| Approach LOS | | B | | | D | | | E | | | D | |

| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 47.1 | | 21.5 | 11.5 | 35.6 | | 5.8 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 54.0 | | 18.0 | 18.0 | 31.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 9.5 | | 15.9 | 6.3 | 29.9 | | 2.4 | | | | |
| Green Ext Time (p_c), s | | 2.4 | | 0.6 | 0.2 | 0.6 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 32.1 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 9.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 73 | 11 | 31 | 62 | 9 | 145 | 13 | 308 | 35 | 126 | 323 | 26 |
| Future Vol, veh/h | 73 | 11 | 31 | 62 | 9 | 145 | 13 | 308 | 35 | 126 | 323 | 26 |
| 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 | 150 | - | - | 100 | - | - | 235 | - | - | 235 | - | 135 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 79 | 12 | 34 | 67 | 10 | 158 | 14 | 335 | 38 | 137 | 351 | 28 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1091 | 1026 | 351 | 1044 | 1035 | 354 | 379 | 0 | 0 | 373 | 0 | 0 |
| Stage 1 | 625 | 625 | - | 382 | 382 | - | - | - | - | - | - | - |
| Stage 2 | 466 | 401 | - | 662 | 653 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 192 | 235 | 692 | 207 | 232 | 690 | 1179 | - | - | 1185 | - | - |
| Stage 1 | 473 | 477 | - | 640 | 613 | - | - | - | - | - | - | - |
| Stage 2 | 577 | 601 | - | 451 | 464 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 129 | 205 | 692 | 170 | 203 | 690 | 1179 | - | - | 1185 | - | - |
| Mov Cap-2 Maneuver | 129 | 205 | - | 170 | 203 | - | - | - | - | - | - | - |
| Stage 1 | 467 | 422 | - | 632 | 606 | - | - | - | - | - | - | - |
| Stage 2 | 433 | 594 | - | 369 | 410 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 49.5 | 20.7 | 0.3 | 2.2 |
| HCM LOS | E | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1179 | - | - | 129 | 427 | 170 | 605 | 1185 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | - | 0.615 | 0.107 | 0.396 | 0.277 | 0.116 | - | - |
| HCM Control Delay (s) | 8.1 | - | - | 69.7 | 14.4 | 39.4 | 13.2 | 8.4 | - | - |
| HCM Lane LOS | A | - | - | F | B | E | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 3.2 | 0.4 | 1.7 | 1.1 | 0.4 | - | - |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 1181 | 46 | 1458 | 188 | 81 |
| Future Volume (vph) | 1181 | 46 | 1458 | 188 | 81 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 25.0 | 25.0 | 35.0 | 35.0 |
| Total Split (s) | 83.0 | 83.0 | 83.0 | 37.0 | 37.0 |
| Total Split (%) | 69.2% | 69.2% | 69.2% | 30.8% | 30.8% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Max | C-Max | C-Max | None | None |
| Act Effct Green (s) | 86.9 | 86.9 | 86.9 | 19.1 | 19.1 |
| Actuated g/C Ratio | 0.72 | 0.72 | 0.72 | 0.16 | 0.16 |
| v/c Ratio | 0.52 | 0.21 | 0.62 | 0.73 | 0.28 |
| Control Delay | 8.7 | 5.0 | 10.6 | 62.2 | 14.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.7 | 5.0 | 10.6 | 62.2 | 14.8 |
| LOS | A | A | B | E | B |
| Approach Delay | 8.7 | | 10.4 | 47.9 | |
| Approach LOS | A | | B | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.73 | |
| Intersection Signal Delay: 13.1 | Intersection LOS: B |
| Intersection Capacity Utilization 62.4% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1320 | 50 | 1585 | 204 | 88 |
| v/c Ratio | 0.52 | 0.21 | 0.62 | 0.73 | 0.28 |
| Control Delay | 8.7 | 5.0 | 10.6 | 62.2 | 14.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.7 | 5.0 | 10.6 | 62.2 | 14.8 |
| Queue Length 50th (ft) | 208 | 10 | 462 | 152 | 10 |
| Queue Length 95th (ft) | 314 | m14 | m511 | 221 | 54 |
| Internal Link Dist (ft) | 443 | | 2590 | 1245 | |
| Turn Bay Length (ft) | | 300 | | 70 | |
| Base Capacity (vph) | 2553 | 236 | 2562 | 442 | 450 |
| 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 | 0.52 | 0.21 | 0.62 | 0.46 | 0.20 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 1181 | 33 | 46 | 1458 | 188 | 81 |
| Future Volume (veh/h) | 1181 | 33 | 46 | 1458 | 188 | 81 |
| 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 | 1284 | 36 | 50 | 1585 | 204 | 88 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 2643 | 74 | 311 | 2660 | 240 | 214 |
| Arrive On Green | 0.75 | 0.75 | 0.50 | 0.50 | 0.13 | 0.13 |
| Sat Flow, veh/h | 3624 | 99 | 416 | 3647 | 1781 | 1585 |
| Grp Volume(v), veh/h | 646 | 674 | 50 | 1585 | 204 | 88 |
| Grp Sat Flow(s),veh/h/ln | 1777 | 1853 | 416 | 1777 | 1781 | 1585 |
| Q Serve(g_s), s | 17.2 | 17.3 | 9.3 | 38.1 | 13.4 | 6.1 |
| Cycle Q Clear(g_c), s | 17.2 | 17.3 | 26.6 | 38.1 | 13.4 | 6.1 |
| Prop In Lane | | 0.05 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1330 | 1387 | 311 | 2660 | 240 | 214 |
| V/C Ratio(X) | 0.49 | 0.49 | 0.16 | 0.60 | 0.85 | 0.41 |
| Avail Cap(c_a), veh/h | 1330 | 1387 | 311 | 2660 | 445 | 396 |
| HCM Platoon Ratio | 1.00 | 1.00 | 0.67 | 0.67 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.28 | 0.28 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 6.0 | 6.0 | 19.7 | 17.0 | 50.7 | 47.6 |
| Incr Delay (d2), s/veh | 1.3 | 1.2 | 0.3 | 0.3 | 8.2 | 1.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.0 | 6.3 | 1.0 | 16.7 | 6.5 | 2.5 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 7.2 | 7.2 | 20.0 | 17.3 | 58.9 | 48.8 |
| LnGrp LOS | A | A | C | B | E | D |
| Approach Vol, veh/h | 1320 | | | 1635 | 292 | |
| Approach Delay, s/veh | 7.2 | | | 17.4 | 55.8 | |
| Approach LOS | A | | | B | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 96.8 | | 23.2 | | 96.8 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 76.0 | | 30.0 | | 76.0 |
| Max Q Clear Time (g_c+I1), s | | 19.3 | | 15.4 | | 40.1 |
| Green Ext Time (p_c), s | | 13.3 | | 0.8 | | 18.6 |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 16.7 |
| HCM 6th LOS | | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 26 | 19 | 22 | 10 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 26 | 19 | 22 | 10 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 28 | 21 | 24 | 11 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 131 | 108 | 11 | 98 | 98 | 39 | 11 | 0 | 0 | 49 | 0 | 0 |
| Stage 1 | 59 | 59 | - | 39 | 39 | - | - | - | - | - | - | - |
| Stage 2 | 72 | 49 | - | 59 | 59 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 841 | 782 | 1070 | 884 | 792 | 1033 | 1608 | - | - | 1558 | - | - |
| Stage 1 | 953 | 846 | - | 976 | 862 | - | - | - | - | - | - | - |
| Stage 2 | 938 | 854 | - | 953 | 846 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 778 | 770 | 1070 | 874 | 780 | 1033 | 1608 | - | - | 1558 | - | - |
| Mov Cap-2 Maneuver | 778 | 770 | - | 874 | 780 | - | - | - | - | - | - | - |
| Stage 1 | 953 | 833 | - | 976 | 862 | - | - | - | - | - | - | - |
| Stage 2 | 878 | 854 | - | 939 | 833 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.7 | 0 | 5.1 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1608 | - | - | - | 1033 | 1558 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.064 | 0.015 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.7 | 7.3 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | 0 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.5 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 52 | 26 | 8 | 569 | 450 | 16 |
| Future Vol, veh/h | 52 | 26 | 8 | 569 | 450 | 16 |
| 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 | 50 | 175 | - | - | 135 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 57 | 28 | 9 | 618 | 489 | 17 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1125 | 489 | 506 | 0 | - | 0 |
| Stage 1 | 489 | - | - | - | - | - |
| Stage 2 | 636 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 227 | 579 | 1059 | - | - | - |
| Stage 1 | 616 | - | - | - | - | - |
| Stage 2 | 527 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 225 | 579 | 1059 | - | - | - |
| Mov Cap-2 Maneuver | 225 | - | - | - | - | - |
| Stage 1 | 611 | - | - | - | - | - |
| Stage 2 | 527 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 21.4 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1059 | - | 225 | 579 | - | - |
| HCM Lane V/C Ratio | 0.008 | - | 0.251 | 0.049 | - | - |
| HCM Control Delay (s) | 8.4 | - | 26.3 | 11.5 | - | - |
| HCM Lane LOS | A | - | D | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1 | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.8 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 26 | 8 | 16 | 52 | 4 |
| Future Vol, veh/h | 2 | 26 | 8 | 16 | 52 | 4 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 28 | 9 | 17 | 57 | 4 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 26 | 0 | - | 0 | 50 | 18 |
| Stage 1 | - | - | - | - | 18 | - |
| Stage 2 | - | - | - | - | 32 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1588 | - | - | - | 959 | 1061 |
| Stage 1 | - | - | - | - | 1005 | - |
| Stage 2 | - | - | - | - | 991 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1588 | - | - | - | 958 | 1061 |
| Mov Cap-2 Maneuver | - | - | - | - | 958 | - |
| Stage 1 | - | - | - | - | 1004 | - |
| Stage 2 | - | - | - | - | 991 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.5 | 0 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1588 | - | - | - | 965 |
| HCM Lane V/C Ratio | 0.001 | - | - | - | 0.063 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 1 | 2 | 0 | 0 | 4 | 8 | 0 | 0 | 0 | 26 | 0 | 4 |
| Future Vol, veh/h | 1 | 2 | 0 | 0 | 4 | 8 | 0 | 0 | 0 | 26 | 0 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 2 | 0 | 0 | 4 | 9 | 0 | 0 | 0 | 28 | 0 | 4 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 13 | 0 | 0 | 2 | 0 | 0 | 15 | 17 | 2 | 13 | 13 | 9 |
| Stage 1 | - | - | - | - | - | - | 4 | 4 | - | 9 | 9 | - |
| Stage 2 | - | - | - | - | - | - | 11 | 13 | - | 4 | 4 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1606 | - | - | 1620 | - | - | 1001 | 877 | 1082 | 1004 | 881 | 1073 |
| Stage 1 | - | - | - | - | - | - | 1018 | 892 | - | 1012 | 888 | - |
| Stage 2 | - | - | - | - | - | - | 1010 | 885 | - | 1018 | 892 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1606 | - | - | 1620 | - | - | 996 | 876 | 1082 | 1003 | 880 | 1073 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 996 | 876 | - | 1003 | 880 | - |
| Stage 1 | - | - | - | - | - | - | 1017 | 891 | - | 1011 | 888 | - |
| Stage 2 | - | - | - | - | - | - | 1006 | 885 | - | 1017 | 891 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 2.4 | 0 | 0 | 8.7 |
| HCM LOS | | | A | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | - | 1606 | - | - | 1620 | - | - | 1012 |
| HCM Lane V/C Ratio | - | 0.001 | - | - | - | - | - | 0.032 |
| HCM Control Delay (s) | 0 | 7.2 | 0 | - | 0 | - | - | 8.7 |
| HCM Lane LOS | A | A | A | - | A | - | - | A |
| HCM 95th %tile Q(veh) | - | 0 | - | - | 0 | - | - | 0.1 |

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 239 | 874 | 134 | 879 | 277 | 280 | 303 | 335 | 311 |
| Future Volume (vph) | 239 | 874 | 134 | 879 | 277 | 280 | 303 | 335 | 311 |
| Turn Type | Prot | NA | Prot | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | | | | | 6 | 4 | | 8 | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 24.0 | 11.0 | 24.5 | 24.5 | 11.0 | 24.0 | 11.0 | 24.5 |
| Total Split (s) | 17.0 | 56.5 | 13.0 | 52.5 | 52.5 | 26.0 | 33.5 | 17.0 | 24.5 |
| Total Split (%) | 14.2% | 47.1% | 10.8% | 43.8% | 43.8% | 21.7% | 27.9% | 14.2% | 20.4% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | Max | C-Max | Max | C-Max | C-Max | Max | None | Max | Max |
| Act Effct Green (s) | 12.0 | 51.5 | 8.0 | 47.5 | 47.5 | 45.5 | 28.5 | 31.5 | 19.5 |
| Actuated g/C Ratio | 0.10 | 0.43 | 0.07 | 0.40 | 0.40 | 0.38 | 0.24 | 0.26 | 0.16 |
| v/c Ratio | 0.80 | 0.86 | 0.76 | 0.82 | 0.43 | 0.83 | 0.58 | 0.63 | 0.81 |
| Control Delay | 82.5 | 29.7 | 76.6 | 38.1 | 4.1 | 50.3 | 38.7 | 32.6 | 57.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 82.5 | 29.7 | 76.6 | 38.1 | 4.1 | 50.3 | 38.7 | 32.6 | 57.1 |
| LOS | F | C | E | D | A | D | D | C | E |
| Approach Delay | | 39.0 | | 34.8 | | | 43.2 | | 46.2 |
| Approach LOS | | D | | C | | | D | | D |

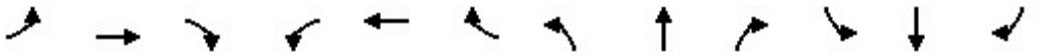
| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.86 | |
| Intersection Signal Delay: 39.5 | Intersection LOS: D |
| Intersection Capacity Utilization 80.2% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Chambers Rd & E. 104th Ave

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 275 | 1287 | 174 | 1142 | 360 | 311 | 489 | 381 | 470 |
| v/c Ratio | 0.80 | 0.86 | 0.76 | 0.82 | 0.43 | 0.83 | 0.58 | 0.63 | 0.81 |
| Control Delay | 82.5 | 29.7 | 76.6 | 38.1 | 4.1 | 50.3 | 38.7 | 32.6 | 57.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 82.5 | 29.7 | 76.6 | 38.1 | 4.1 | 50.3 | 38.7 | 32.6 | 57.1 |
| Queue Length 50th (ft) | 117 | 266 | 69 | 410 | 0 | 179 | 156 | 105 | 174 |
| Queue Length 95th (ft) | #169 | 308 | 91 | 394 | 23 | #329 | 213 | 140 | #232 |
| Internal Link Dist (ft) | | 2590 | | 955 | | | 548 | | 948 |
| Turn Bay Length (ft) | 275 | | 380 | | 350 | 290 | | 285 | |
| Base Capacity (vph) | 343 | 1490 | 228 | 1400 | 844 | 373 | 844 | 603 | 580 |
| 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 | 0.80 | 0.86 | 0.76 | 0.82 | 0.43 | 0.83 | 0.58 | 0.63 | 0.81 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 239 | 874 | 245 | 134 | 879 | 277 | 280 | 303 | 137 | 335 | 311 | 103 |
| Future Volume (veh/h) | 239 | 874 | 245 | 134 | 879 | 277 | 280 | 303 | 137 | 335 | 311 | 103 |
| 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 | 275 | 1005 | 282 | 174 | 1142 | 0 | 311 | 337 | 152 | 381 | 353 | 117 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.77 | 0.77 | 0.77 | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 346 | 1177 | 329 | 230 | 1407 | | 400 | 569 | 252 | 659 | 428 | 140 |
| Arrive On Green | 0.20 | 0.86 | 0.86 | 0.07 | 0.40 | 0.00 | 0.17 | 0.24 | 0.24 | 0.10 | 0.16 | 0.16 |
| Sat Flow, veh/h | 3456 | 2743 | 766 | 3456 | 3554 | 1585 | 1781 | 2396 | 1060 | 3456 | 2633 | 860 |
| Grp Volume(v), veh/h | 275 | 649 | 638 | 174 | 1142 | 0 | 311 | 248 | 241 | 381 | 236 | 234 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1732 | 1728 | 1777 | 1585 | 1781 | 1777 | 1679 | 1728 | 1777 | 1716 |
| Q Serve(g_s), s | 9.1 | 23.1 | 23.7 | 5.9 | 34.3 | 0.0 | 16.4 | 14.9 | 15.3 | 11.0 | 15.4 | 15.8 |
| Cycle Q Clear(g_c), s | 9.1 | 23.1 | 23.7 | 5.9 | 34.3 | 0.0 | 16.4 | 14.9 | 15.3 | 11.0 | 15.4 | 15.8 |
| Prop In Lane | 1.00 | | 0.44 | 1.00 | | 1.00 | 1.00 | | 0.63 | 1.00 | | 0.50 |
| Lane Grp Cap(c), veh/h | 346 | 763 | 744 | 230 | 1407 | | 400 | 422 | 399 | 659 | 289 | 279 |
| V/C Ratio(X) | 0.80 | 0.85 | 0.86 | 0.76 | 0.81 | | 0.78 | 0.59 | 0.60 | 0.58 | 0.82 | 0.84 |
| Avail Cap(c_a), veh/h | 346 | 763 | 744 | 230 | 1407 | | 400 | 422 | 399 | 659 | 289 | 279 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.71 | 0.71 | 0.71 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.8 | 6.5 | 6.5 | 55.0 | 32.3 | 0.0 | 32.1 | 40.6 | 40.7 | 36.9 | 48.5 | 48.7 |
| Incr Delay (d2), s/veh | 12.7 | 8.5 | 9.1 | 20.4 | 5.2 | 0.0 | 13.8 | 2.1 | 2.6 | 3.7 | 22.2 | 24.8 |
| 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 | 4.5 | 4.6 | 3.2 | 15.0 | 0.0 | 8.4 | 6.6 | 6.5 | 4.9 | 8.5 | 8.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.5 | 15.0 | 15.6 | 75.4 | 37.5 | 0.0 | 45.9 | 42.7 | 43.3 | 40.6 | 70.7 | 73.6 |
| LnGrp LOS | E | B | B | E | D | | D | D | D | D | E | E |
| Approach Vol, veh/h | | 1562 | | | 1316 | | | 800 | | | 851 | |
| Approach Delay, s/veh | | 23.1 | | | 42.5 | | | 44.1 | | | 58.0 | |
| Approach LOS | | C | | | D | | | D | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.0 | 56.5 | 17.0 | 33.5 | 17.0 | 52.5 | 26.0 | 24.5 |
| Change Period (Y+Rc), s | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Max Green Setting (Gmax), s | 8.0 | 51.5 | 12.0 | 28.5 | 12.0 | 47.5 | 21.0 | 19.5 |
| Max Q Clear Time (g_c+I1), s | 7.9 | 25.7 | 13.0 | 17.3 | 11.1 | 36.3 | 18.4 | 17.8 |
| Green Ext Time (p_c), s | 0.0 | 9.3 | 0.0 | 2.1 | 0.1 | 5.5 | 0.3 | 0.5 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 39.0 |
| HCM 6th LOS | D |

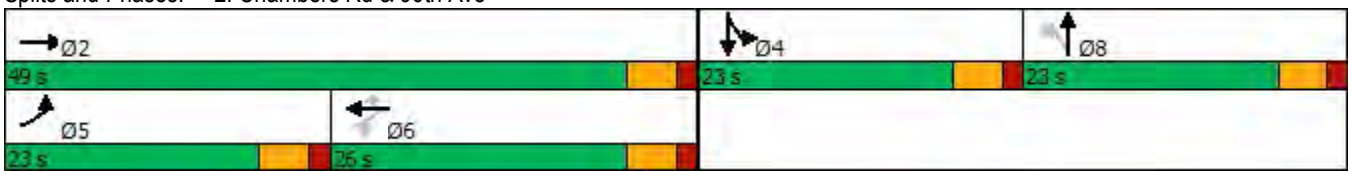
**Notes**

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 332 | 749 | 569 | 199 | 1 | 197 | 1 |
| Future Volume (vph) | 332 | 749 | 569 | 199 | 1 | 197 | 1 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 18.2 | 44.4 | 21.2 | 21.2 | 5.7 | 13.7 | 13.7 |
| Actuated g/C Ratio | 0.26 | 0.63 | 0.30 | 0.30 | 0.08 | 0.20 | 0.20 |
| v/c Ratio | 0.75 | 0.65 | 1.06 | 0.33 | 0.03 | 0.66 | 0.34 |
| Control Delay | 37.8 | 13.3 | 84.0 | 5.4 | 28.5 | 36.3 | 7.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.8 | 13.3 | 84.0 | 5.4 | 28.5 | 36.3 | 7.6 |
| LOS | D | B | F | A | C | D | A |
| Approach Delay | | 20.8 | 63.7 | | 28.5 | | 25.1 |
| Approach LOS | | C | E | | C | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 95 | |
| Actuated Cycle Length: 70.1 | |
| Natural Cycle: 105 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 1.06 | |
| Intersection Signal Delay: 36.6 | Intersection LOS: D |
| Intersection Capacity Utilization 99.4% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 2: Chambers Rd & 96th Ave

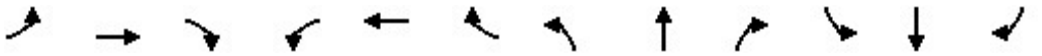


| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 342 | 772 | 599 | 209 | 4 | 226 | 145 |
| v/c Ratio | 0.75 | 0.65 | 1.06 | 0.33 | 0.03 | 0.66 | 0.34 |
| Control Delay | 37.8 | 13.3 | 84.0 | 5.4 | 28.5 | 36.3 | 7.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.8 | 13.3 | 84.0 | 5.4 | 28.5 | 36.3 | 7.6 |
| Queue Length 50th (ft) | 129 | 164 | ~276 | 0 | 1 | 86 | 0 |
| Queue Length 95th (ft) | #327 | 463 | #599 | 51 | 6 | 172 | 42 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2572 |
| Turn Bay Length (ft) | 70 | | | 300 | | | |
| Base Capacity (vph) | 459 | 1180 | 563 | 624 | 451 | 459 | 517 |
| 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 | 0.75 | 0.65 | 1.06 | 0.33 | 0.01 | 0.49 | 0.28 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 332 | 749 | 0 | 0 | 569 | 199 | 0 | 1 | 1 | 197 | 1 | 125 |
| Future Volume (veh/h) | 332 | 749 | 0 | 0 | 569 | 199 | 0 | 1 | 1 | 197 | 1 | 125 |
| 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 | 342 | 772 | 0 | 0 | 599 | 209 | 0 | 2 | 2 | 226 | 1 | 144 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.50 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 393 | 1135 | 0 | 0 | 584 | 495 | 0 | 5 | 5 | 293 | 2 | 259 |
| Arrive On Green | 0.22 | 0.61 | 0.00 | 0.00 | 0.31 | 0.31 | 0.00 | 0.01 | 0.01 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 0 | 1870 | 1585 | 0 | 858 | 858 | 1781 | 11 | 1576 |
| Grp Volume(v), veh/h | 342 | 772 | 0 | 0 | 599 | 209 | 0 | 0 | 4 | 226 | 0 | 145 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 0 | 1870 | 1585 | 0 | 0 | 1716 | 1781 | 0 | 1587 |
| Q Serve(g_s), s | 12.5 | 18.6 | 0.0 | 0.0 | 21.0 | 7.0 | 0.0 | 0.0 | 0.2 | 8.2 | 0.0 | 5.7 |
| Cycle Q Clear(g_c), s | 12.5 | 18.6 | 0.0 | 0.0 | 21.0 | 7.0 | 0.0 | 0.0 | 0.2 | 8.2 | 0.0 | 5.7 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 0.50 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 393 | 1135 | 0 | 0 | 584 | 495 | 0 | 0 | 9 | 293 | 0 | 261 |
| V/C Ratio(X) | 0.87 | 0.68 | 0.00 | 0.00 | 1.03 | 0.42 | 0.00 | 0.00 | 0.44 | 0.77 | 0.00 | 0.55 |
| Avail Cap(c_a), veh/h | 477 | 1223 | 0 | 0 | 584 | 495 | 0 | 0 | 459 | 477 | 0 | 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 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 25.3 | 8.8 | 0.0 | 0.0 | 23.1 | 18.3 | 0.0 | 0.0 | 33.4 | 26.9 | 0.0 | 25.8 |
| Incr Delay (d2), s/veh | 13.8 | 1.4 | 0.0 | 0.0 | 44.1 | 0.6 | 0.0 | 0.0 | 29.3 | 4.3 | 0.0 | 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 | 6.5 | 6.3 | 0.0 | 0.0 | 15.6 | 2.5 | 0.0 | 0.0 | 0.1 | 3.5 | 0.0 | 2.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.1 | 10.3 | 0.0 | 0.0 | 67.2 | 18.9 | 0.0 | 0.0 | 62.6 | 31.2 | 0.0 | 27.7 |
| LnGrp LOS | D | B | A | A | F | B | A | A | E | C | A | C |
| Approach Vol, veh/h | | 1114 | | | 808 | | | 4 | | | 371 | |
| Approach Delay, s/veh | | 19.1 | | | 54.7 | | | 62.6 | | | 29.8 | |
| Approach LOS | | B | | | D | | | E | | | C | |

| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 45.8 | | 16.1 | 19.8 | 26.0 | | 5.4 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 20.6 | | 10.2 | 14.5 | 23.0 | | 2.2 | | | | |
| Green Ext Time (p_c), s | | 6.0 | | 0.9 | 0.4 | 0.0 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 33.4 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 11.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 51 | 5 | 17 | 33 | 8 | 132 | 46 | 430 | 71 | 172 | 343 | 80 |
| Future Vol, veh/h | 51 | 5 | 17 | 33 | 8 | 132 | 46 | 430 | 71 | 172 | 343 | 80 |
| 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 | 150 | - | - | 100 | - | - | 235 | - | - | 235 | - | 135 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 55 | 5 | 18 | 36 | 9 | 143 | 50 | 467 | 77 | 187 | 373 | 87 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1429 | 1391 | 373 | 1408 | 1440 | 506 | 460 | 0 | 0 | 544 | 0 | 0 |
| Stage 1 | 747 | 747 | - | 606 | 606 | - | - | - | - | - | - | - |
| Stage 2 | 682 | 644 | - | 802 | 834 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 112 | 142 | 673 | 116 | 133 | 566 | 1101 | - | - | 1025 | - | - |
| Stage 1 | 405 | 420 | - | 484 | 487 | - | - | - | - | - | - | - |
| Stage 2 | 440 | 468 | - | 378 | 383 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 65 | 111 | 673 | 90 | 104 | 566 | 1101 | - | - | 1025 | - | - |
| Mov Cap-2 Maneuver | 65 | 111 | - | 90 | 104 | - | - | - | - | - | - | - |
| Stage 1 | 387 | 344 | - | 462 | 465 | - | - | - | - | - | - | - |
| Stage 2 | 308 | 447 | - | 296 | 313 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 128.8 | 27 | 0.7 | 2.7 |
| HCM LOS | F | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1101 | - | - | 65 | 313 | 90 | 451 | 1025 | - | - |
| HCM Lane V/C Ratio | 0.045 | - | - | 0.853 | 0.076 | 0.399 | 0.337 | 0.182 | - | - |
| HCM Control Delay (s) | 8.4 | - | - | 176.8 | 17.5 | 69.3 | 17 | 9.3 | - | - |
| HCM Lane LOS | A | - | - | F | C | F | C | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 4 | 0.2 | 1.6 | 1.5 | 0.7 | - | - |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 1572 | 99 | 1341 | 98 | 61 |
| Future Volume (vph) | 1572 | 99 | 1341 | 98 | 61 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 25.0 | 25.0 | 35.0 | 35.0 |
| Total Split (s) | 82.0 | 82.0 | 82.0 | 38.0 | 38.0 |
| Total Split (%) | 68.3% | 68.3% | 68.3% | 31.7% | 31.7% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Max | C-Max | C-Max | None | None |
| Act Effct Green (s) | 93.4 | 93.4 | 93.4 | 12.6 | 12.6 |
| Actuated g/C Ratio | 0.78 | 0.78 | 0.78 | 0.10 | 0.10 |
| v/c Ratio | 0.67 | 0.81 | 0.53 | 0.58 | 0.35 |
| Control Delay | 8.0 | 56.9 | 16.8 | 62.8 | 35.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.0 | 56.9 | 16.8 | 62.8 | 35.9 |
| LOS | A | E | B | E | D |
| Approach Delay | 8.0 | | 19.6 | 52.5 | |
| Approach LOS | A | | B | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.81 | |
| Intersection Signal Delay: 15.3 | Intersection LOS: B |
| Intersection Capacity Utilization 75.2% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1824 | 108 | 1458 | 107 | 66 |
| v/c Ratio | 0.67 | 0.81 | 0.53 | 0.58 | 0.35 |
| Control Delay | 8.0 | 56.9 | 16.8 | 62.8 | 35.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.0 | 56.9 | 16.8 | 62.8 | 35.9 |
| Queue Length 50th (ft) | 284 | 80 | 435 | 80 | 28 |
| Queue Length 95th (ft) | 425 | m#99 | 561 | 134 | 70 |
| Internal Link Dist (ft) | 443 | | 2590 | 1245 | |
| Turn Bay Length (ft) | | 300 | | 70 | |
| Base Capacity (vph) | 2732 | 134 | 2754 | 457 | 428 |
| 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 | 0.67 | 0.81 | 0.53 | 0.23 | 0.15 |

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.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 1572 | 106 | 99 | 1341 | 98 | 61 |
| Future Volume (veh/h) | 1572 | 106 | 99 | 1341 | 98 | 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 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 1709 | 115 | 108 | 1458 | 107 | 66 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 2719 | 181 | 214 | 2858 | 141 | 125 |
| Arrive On Green | 0.80 | 0.80 | 1.00 | 1.00 | 0.08 | 0.08 |
| Sat Flow, veh/h | 3475 | 226 | 256 | 3647 | 1781 | 1585 |
| Grp Volume(v), veh/h | 891 | 933 | 108 | 1458 | 107 | 66 |
| Grp Sat Flow(s),veh/h/ln | 1777 | 1830 | 256 | 1777 | 1781 | 1585 |
| Q Serve(g_s), s | 23.6 | 24.4 | 27.0 | 0.0 | 7.1 | 4.8 |
| Cycle Q Clear(g_c), s | 23.6 | 24.4 | 51.5 | 0.0 | 7.1 | 4.8 |
| Prop In Lane | | 0.12 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1429 | 1471 | 214 | 2858 | 141 | 125 |
| V/C Ratio(X) | 0.62 | 0.63 | 0.51 | 0.51 | 0.76 | 0.53 |
| Avail Cap(c_a), veh/h | 1429 | 1471 | 214 | 2858 | 460 | 409 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.47 | 0.47 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 4.6 | 4.7 | 6.5 | 0.0 | 54.1 | 53.1 |
| Incr Delay (d2), s/veh | 2.1 | 2.1 | 4.0 | 0.3 | 8.1 | 3.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.1 | 6.5 | 1.2 | 0.1 | 3.5 | 2.0 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 6.7 | 6.8 | 10.5 | 0.3 | 62.2 | 56.5 |
| LnGrp LOS | A | A | B | A | E | E |
| Approach Vol, veh/h | 1824 | | | 1566 | 173 | |
| Approach Delay, s/veh | 6.7 | | | 1.0 | 60.0 | |
| Approach LOS | A | | | A | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 103.5 | | 16.5 | | 103.5 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 75.0 | | 31.0 | | 75.0 |
| Max Q Clear Time (g_c+I1), s | | 26.4 | | 9.1 | | 53.5 |
| Green Ext Time (p_c), s | | 20.7 | | 0.5 | | 13.4 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 6.8 |
| HCM 6th LOS | A |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ⇕ | | | ⇕ | | | ⇕ | | | ⇕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 19 | 0 | 70 | 31 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 19 | 0 | 70 | 31 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 21 | 0 | 76 | 34 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 231 | 207 | 34 | 207 | 207 | 21 | 34 | 0 | 0 | 21 | 0 | 0 |
| Stage 1 | 186 | 186 | - | 21 | 21 | - | - | - | - | - | - | - |
| Stage 2 | 45 | 21 | - | 186 | 186 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 724 | 690 | 1039 | 751 | 690 | 1056 | 1578 | - | - | 1595 | - | - |
| Stage 1 | 816 | 746 | - | 998 | 878 | - | - | - | - | - | - | - |
| Stage 2 | 969 | 878 | - | 816 | 746 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 666 | 656 | 1039 | 723 | 656 | 1056 | 1578 | - | - | 1595 | - | - |
| Mov Cap-2 Maneuver | 666 | 656 | - | 723 | 656 | - | - | - | - | - | - | - |
| Stage 1 | 816 | 709 | - | 998 | 878 | - | - | - | - | - | - | - |
| Stage 2 | 926 | 878 | - | 776 | 709 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.6 | 0 | 5.1 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1578 | - | - | - | 1056 | 1595 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.044 | 0.048 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.6 | 7.4 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.2 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 16 | 27 | 603 | 612 | 55 |
| Future Vol, veh/h | 32 | 16 | 27 | 603 | 612 | 55 |
| 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 | 50 | 175 | - | - | 135 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 35 | 17 | 29 | 655 | 665 | 60 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1378 | 665 | 725 | 0 | - | 0 |
| Stage 1 | 665 | - | - | - | - | - |
| Stage 2 | 713 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 160 | 460 | 878 | - | - | - |
| Stage 1 | 511 | - | - | - | - | - |
| Stage 2 | 486 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 155 | 460 | 878 | - | - | - |
| Mov Cap-2 Maneuver | 155 | - | - | - | - | - |
| Stage 1 | 494 | - | - | - | - | - |
| Stage 2 | 486 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 27.6 | 0.4 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 878 | - | 155 | 460 | - | - |
| HCM Lane V/C Ratio | 0.033 | - | 0.224 | 0.038 | - | - |
| HCM Control Delay (s) | 9.2 | - | 34.8 | 13.1 | - | - |
| HCM Lane LOS | A | - | D | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.8 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.6 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 16 | 27 | 55 | 32 | 3 |
| Future Vol, veh/h | 5 | 16 | 27 | 55 | 32 | 3 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 17 | 29 | 60 | 35 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 89 | 0 | - | 0 | 86 | 59 |
| Stage 1 | - | - | - | - | 59 | - |
| Stage 2 | - | - | - | - | 27 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1506 | - | - | - | 915 | 1007 |
| Stage 1 | - | - | - | - | 964 | - |
| Stage 2 | - | - | - | - | 996 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1506 | - | - | - | 912 | 1007 |
| Mov Cap-2 Maneuver | - | - | - | - | 912 | - |
| Stage 1 | - | - | - | - | 961 | - |
| Stage 2 | - | - | - | - | 996 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1.8 | 0 | 9.1 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1506 | - | - | - | 919 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.041 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 9.1 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 4 | 5 | 0 | 0 | 3 | 27 | 0 | 0 | 0 | 16 | 0 | 2 |
| Future Vol, veh/h | 4 | 5 | 0 | 0 | 3 | 27 | 0 | 0 | 0 | 16 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 5 | 0 | 0 | 3 | 29 | 0 | 0 | 0 | 17 | 0 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 32 | 0 | 0 | 5 | 0 | 0 | 32 | 45 | 5 | 31 | 31 | 18 |
| Stage 1 | - | - | - | - | - | - | 13 | 13 | - | 18 | 18 | - |
| Stage 2 | - | - | - | - | - | - | 19 | 32 | - | 13 | 13 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1580 | - | - | 1616 | - | - | 976 | 847 | 1078 | 977 | 862 | 1061 |
| Stage 1 | - | - | - | - | - | - | 1007 | 885 | - | 1001 | 880 | - |
| Stage 2 | - | - | - | - | - | - | 1000 | 868 | - | 1007 | 885 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1580 | - | - | 1616 | - | - | 972 | 844 | 1078 | 975 | 859 | 1061 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 972 | 844 | - | 975 | 859 | - |
| Stage 1 | - | - | - | - | - | - | 1004 | 882 | - | 998 | 880 | - |
| Stage 2 | - | - | - | - | - | - | 998 | 868 | - | 1004 | 882 | - |

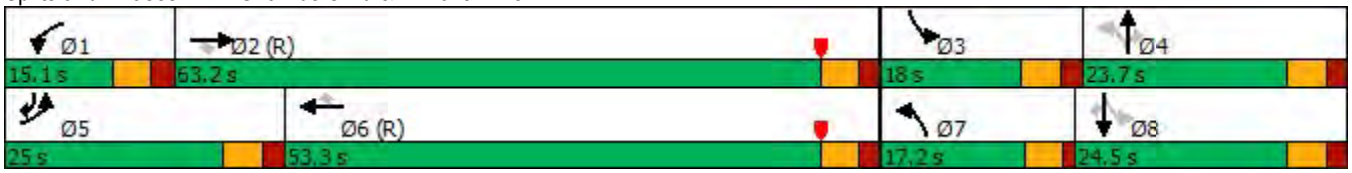
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 3.2 | 0 | 0 | 8.7 |
| HCM LOS | | | A | A |

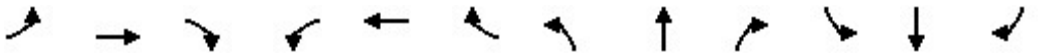
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | - | 1580 | - | - | 1616 | - | - | 984 |
| HCM Lane V/C Ratio | - | 0.003 | - | - | - | - | - | 0.02 |
| HCM Control Delay (s) | 0 | 7.3 | 0 | - | 0 | - | - | 8.7 |
| HCM Lane LOS | A | A | A | - | A | - | - | A |
| HCM 95th %tile Q(veh) | - | 0 | - | - | 0 | - | - | 0.1 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 160 | 1120 | 205 | 130 | 1480 | 295 | 375 | 275 | 160 | 345 | 230 | 315 |
| Future Volume (vph) | 160 | 1120 | 205 | 130 | 1480 | 295 | 375 | 275 | 160 | 345 | 230 | 315 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 7 | 4 | | 3 | 8 | 5 |
| Permitted Phases | | | 2 | | | 6 | 4 | | 4 | 8 | | 8 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 7 | 4 | 4 | 3 | 8 | 5 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 23.5 | 10.5 | 24.5 | 24.5 | 9.5 | 23.5 | 23.5 | 10.5 | 24.5 | 10.5 |
| Total Split (s) | 25.0 | 63.2 | 63.2 | 15.1 | 53.3 | 53.3 | 17.2 | 23.7 | 23.7 | 18.0 | 24.5 | 25.0 |
| Total Split (%) | 20.8% | 52.7% | 52.7% | 12.6% | 44.4% | 44.4% | 14.3% | 19.8% | 19.8% | 15.0% | 20.4% | 20.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | None | None | None | None |
| Act Effct Green (s) | 12.1 | 61.0 | 61.0 | 9.3 | 58.1 | 58.1 | 29.0 | 15.3 | 15.3 | 28.5 | 16.1 | 33.7 |
| Actuated g/C Ratio | 0.10 | 0.51 | 0.51 | 0.08 | 0.48 | 0.48 | 0.24 | 0.13 | 0.13 | 0.24 | 0.13 | 0.28 |
| v/c Ratio | 0.50 | 0.47 | 0.24 | 0.53 | 0.65 | 0.34 | 0.66 | 0.66 | 0.49 | 0.69 | 0.53 | 0.70 |
| Control Delay | 60.0 | 13.3 | 2.6 | 60.9 | 25.9 | 3.4 | 37.2 | 53.2 | 10.6 | 42.5 | 52.2 | 38.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.0 | 13.3 | 2.6 | 60.9 | 25.9 | 3.4 | 37.2 | 53.2 | 10.6 | 42.5 | 52.2 | 38.3 |
| LOS | E | B | A | E | C | A | D | D | B | D | D | D |
| Approach Delay | | 16.9 | | | 24.8 | | | 37.4 | | | 43.5 | |
| Approach LOS | | B | | | C | | | D | | | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 44.6 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.70 | |
| Intersection Signal Delay: 27.8 | Intersection LOS: C |
| Intersection Capacity Utilization 71.7% | ICU Level of Service C |
| Analysis Period (min) 15 | |

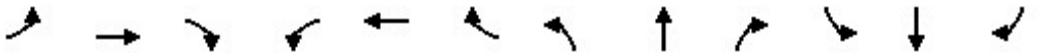
Splits and Phases: 1: Chambers Rd & E. 104th Ave





| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 174 | 1217 | 223 | 141 | 1609 | 321 | 408 | 299 | 174 | 375 | 250 | 342 |
| v/c Ratio | 0.50 | 0.47 | 0.24 | 0.53 | 0.65 | 0.34 | 0.66 | 0.66 | 0.49 | 0.69 | 0.53 | 0.70 |
| Control Delay | 60.0 | 13.3 | 2.6 | 60.9 | 25.9 | 3.4 | 37.2 | 53.2 | 10.6 | 42.5 | 52.2 | 38.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.0 | 13.3 | 2.6 | 60.9 | 25.9 | 3.4 | 37.2 | 53.2 | 10.6 | 42.5 | 52.2 | 38.3 |
| Queue Length 50th (ft) | 55 | 230 | 33 | 54 | 331 | 0 | 116 | 105 | 3 | 121 | 96 | 196 |
| Queue Length 95th (ft) | 80 | 256 | 33 | 89 | 449 | 55 | 170 | 157 | 61 | 160 | 136 | 271 |
| Internal Link Dist (ft) | | 3380 | | | 955 | | | 548 | | | 948 | |
| Turn Bay Length (ft) | 275 | | 250 | 380 | | 350 | 290 | | 250 | 285 | | 250 |
| Base Capacity (vph) | 557 | 2583 | 913 | 280 | 2462 | 932 | 620 | 536 | 387 | 542 | 560 | 584 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.31 | 0.47 | 0.24 | 0.50 | 0.65 | 0.34 | 0.66 | 0.56 | 0.45 | 0.69 | 0.45 | 0.59 |

Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 160 | 1120 | 205 | 130 | 1480 | 295 | 375 | 275 | 160 | 345 | 230 | 315 |
| Future Volume (veh/h) | 160 | 1120 | 205 | 130 | 1480 | 295 | 375 | 275 | 160 | 345 | 230 | 315 |
| 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 | 174 | 1217 | 223 | 141 | 1609 | 0 | 408 | 299 | 174 | 375 | 250 | 342 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 238 | 2572 | 799 | 197 | 2511 | | 637 | 539 | 240 | 612 | 563 | 360 |
| Arrive On Green | 0.07 | 0.50 | 0.50 | 0.06 | 0.49 | 0.00 | 0.11 | 0.15 | 0.15 | 0.10 | 0.16 | 0.16 |
| Sat Flow, veh/h | 3456 | 5106 | 1585 | 3456 | 5106 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 174 | 1217 | 223 | 141 | 1609 | 0 | 408 | 299 | 174 | 375 | 250 | 342 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1702 | 1585 | 1728 | 1702 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 5.9 | 18.6 | 9.7 | 4.8 | 28.1 | 0.0 | 11.9 | 9.4 | 12.6 | 10.9 | 7.6 | 19.0 |
| Cycle Q Clear(g_c), s | 5.9 | 18.6 | 9.7 | 4.8 | 28.1 | 0.0 | 11.9 | 9.4 | 12.6 | 10.9 | 7.6 | 19.0 |
| 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 | 238 | 2572 | 799 | 197 | 2511 | | 637 | 539 | 240 | 612 | 563 | 360 |
| V/C Ratio(X) | 0.73 | 0.47 | 0.28 | 0.72 | 0.64 | | 0.64 | 0.55 | 0.72 | 0.61 | 0.44 | 0.95 |
| Avail Cap(c_a), veh/h | 562 | 2572 | 799 | 276 | 2511 | | 637 | 539 | 240 | 612 | 563 | 360 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.85 | 0.85 | 0.85 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 54.8 | 19.4 | 17.2 | 55.6 | 22.6 | 0.0 | 37.8 | 47.1 | 48.5 | 37.7 | 45.7 | 45.7 |
| Incr Delay (d2), s/veh | 3.6 | 0.5 | 0.7 | 5.1 | 1.3 | 0.0 | 2.2 | 1.2 | 10.3 | 1.8 | 0.6 | 34.3 |
| 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 | 2.6 | 7.0 | 3.6 | 2.2 | 10.8 | 0.0 | 5.1 | 4.2 | 5.6 | 4.7 | 3.4 | 13.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 58.4 | 19.9 | 17.9 | 60.7 | 23.9 | 0.0 | 39.9 | 48.4 | 58.8 | 39.5 | 46.3 | 80.0 |
| LnGrp LOS | E | B | B | E | C | | D | D | E | D | D | E |
| Approach Vol, veh/h | | 1614 | | | 1750 | | | 881 | | | 967 | |
| Approach Delay, s/veh | | 23.8 | | | 26.9 | | | 46.5 | | | 55.6 | |
| Approach LOS | | C | | | C | | | D | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 12.3 | 66.0 | 18.0 | 23.7 | 13.8 | 64.5 | 17.2 | 24.5 |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 5.5 |
| Max Green Setting (Gmax), s | 9.6 | 57.7 | 12.5 | 18.2 | 19.5 | 47.8 | 12.7 | 19.0 |
| Max Q Clear Time (g_c+I1), s | 6.8 | 20.6 | 12.9 | 14.6 | 7.9 | 30.1 | 13.9 | 21.0 |
| Green Ext Time (p_c), s | 0.1 | 11.2 | 0.0 | 0.8 | 0.4 | 10.2 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 34.6 |
| HCM 6th LOS | C |

**Notes**

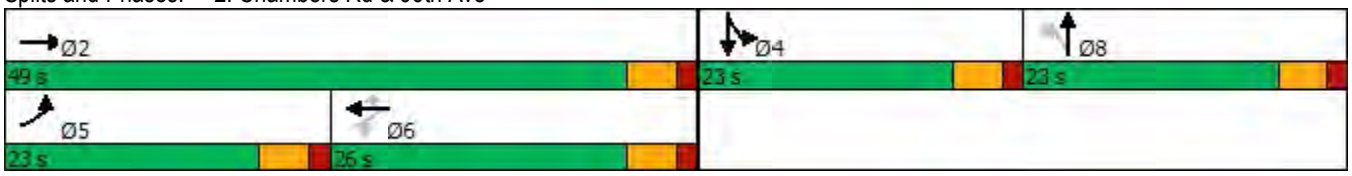
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 110 | 410 | 895 | 215 | 0 | 270 | 3 |
| Future Volume (vph) | 110 | 410 | 895 | 215 | 0 | 270 | 3 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 9.8 | 33.5 | 21.8 | 21.8 | 5.7 | 16.4 | 16.4 |
| Actuated g/C Ratio | 0.16 | 0.54 | 0.35 | 0.35 | 0.09 | 0.26 | 0.26 |
| v/c Ratio | 0.43 | 0.23 | 0.78 | 0.33 | 0.03 | 0.63 | 0.50 |
| Control Delay | 31.2 | 8.3 | 27.1 | 4.9 | 0.2 | 29.8 | 6.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.2 | 8.3 | 27.1 | 4.9 | 0.2 | 29.8 | 6.3 |
| LOS | C | A | C | A | A | C | A |
| Approach Delay | | 13.1 | 22.8 | | 0.2 | | 17.3 |
| Approach LOS | | B | C | | A | | B |

| Intersection Summary | |
|---|---|
| Cycle Length: 95 | |
| Actuated Cycle Length: 61.9 | |
| Natural Cycle: 95 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.78 | |
| Intersection Signal Delay: 19.0 | Intersection LOS: B |
| Intersection Capacity Utilization 70.3% | ICU Level of Service C |
| Analysis Period (min) 15 | |

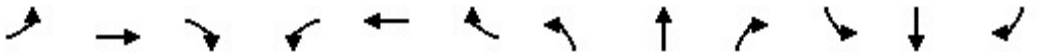
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 120 | 448 | 973 | 234 | 10 | 293 | 329 |
| v/c Ratio | 0.43 | 0.23 | 0.78 | 0.33 | 0.03 | 0.63 | 0.50 |
| Control Delay | 31.2 | 8.3 | 27.1 | 4.9 | 0.2 | 29.8 | 6.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.2 | 8.3 | 27.1 | 4.9 | 0.2 | 29.8 | 6.3 |
| Queue Length 50th (ft) | 43 | 41 | 179 | 0 | 0 | 97 | 1 |
| Queue Length 95th (ft) | 101 | 88 | #392 | 51 | 0 | #242 | 64 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2689 |
| Turn Bay Length (ft) | 425 | | | 300 | | | |
| Base Capacity (vph) | 534 | 2594 | 1247 | 709 | 667 | 534 | 706 |
| 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 | 0.22 | 0.17 | 0.78 | 0.33 | 0.01 | 0.55 | 0.47 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 110 | 410 | 2 | 0 | 895 | 215 | 0 | 0 | 5 | 270 | 3 | 300 |
| Future Volume (veh/h) | 110 | 410 | 2 | 0 | 895 | 215 | 0 | 0 | 5 | 270 | 3 | 300 |
| 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 | 120 | 446 | 2 | 0 | 973 | 234 | 0 | 0 | 10 | 293 | 3 | 326 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.50 | 0.50 | 0.50 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 179 | 1816 | 8 | 0 | 1138 | 507 | 0 | 0 | 20 | 439 | 4 | 388 |
| Arrive On Green | 0.10 | 0.50 | 0.50 | 0.00 | 0.32 | 0.32 | 0.00 | 0.00 | 0.01 | 0.25 | 0.25 | 0.25 |
| Sat Flow, veh/h | 1781 | 3628 | 16 | 0 | 3647 | 1585 | 0 | 0 | 1585 | 1781 | 14 | 1573 |
| Grp Volume(v), veh/h | 120 | 218 | 230 | 0 | 973 | 234 | 0 | 0 | 10 | 293 | 0 | 329 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1867 | 0 | 1777 | 1585 | 0 | 0 | 1585 | 1781 | 0 | 1587 |
| Q Serve(g_s), s | 4.1 | 4.4 | 4.4 | 0.0 | 16.0 | 7.4 | 0.0 | 0.0 | 0.4 | 9.3 | 0.0 | 12.3 |
| Cycle Q Clear(g_c), s | 4.1 | 4.4 | 4.4 | 0.0 | 16.0 | 7.4 | 0.0 | 0.0 | 0.4 | 9.3 | 0.0 | 12.3 |
| Prop In Lane | 1.00 | | 0.01 | 0.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 179 | 889 | 935 | 0 | 1138 | 507 | 0 | 0 | 20 | 439 | 0 | 391 |
| V/C Ratio(X) | 0.67 | 0.25 | 0.25 | 0.00 | 0.86 | 0.46 | 0.00 | 0.00 | 0.49 | 0.67 | 0.00 | 0.84 |
| Avail Cap(c_a), veh/h | 513 | 1252 | 1316 | 0 | 1195 | 533 | 0 | 0 | 457 | 513 | 0 | 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.1 | 8.9 | 8.9 | 0.0 | 19.9 | 16.9 | 0.0 | 0.0 | 30.6 | 21.2 | 0.0 | 22.4 |
| Incr Delay (d2), s/veh | 4.3 | 0.1 | 0.1 | 0.0 | 6.1 | 0.7 | 0.0 | 0.0 | 17.5 | 2.6 | 0.0 | 11.7 |
| 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 | 1.9 | 1.5 | 1.5 | 0.0 | 6.9 | 2.5 | 0.0 | 0.0 | 0.2 | 3.7 | 0.0 | 5.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 31.4 | 9.0 | 9.0 | 0.0 | 25.9 | 17.6 | 0.0 | 0.0 | 48.1 | 23.9 | 0.0 | 34.1 |
| LnGrp LOS | C | A | A | A | C | B | A | A | D | C | A | C |
| Approach Vol, veh/h | | 568 | | | 1207 | | | 10 | | | 622 | |
| Approach Delay, s/veh | | 13.8 | | | 24.3 | | | 48.1 | | | 29.3 | |
| Approach LOS | | B | | | C | | | D | | | C | |

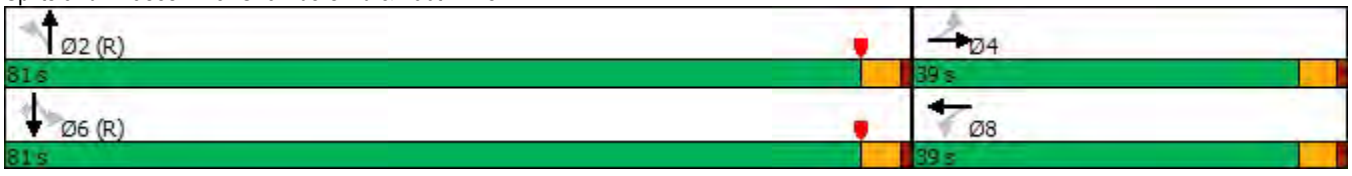
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 36.3 | | 20.4 | 11.3 | 25.0 | | 5.8 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 6.4 | | 14.3 | 6.1 | 18.0 | | 2.4 | | | | |
| Green Ext Time (p_c), s | | 2.9 | | 1.1 | 0.2 | 2.0 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 23.2 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 75 | 15 | 90 | 12 | 15 | 415 | 180 | 415 | 30 |
| Future Volume (vph) | 75 | 15 | 90 | 12 | 15 | 415 | 180 | 415 | 30 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 39.0 | 39.0 | 39.0 | 39.0 | 81.0 | 81.0 | 81.0 | 81.0 | 81.0 |
| Total Split (%) | 32.5% | 32.5% | 32.5% | 32.5% | 67.5% | 67.5% | 67.5% | 67.5% | 67.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 16.8 | 16.8 | 16.8 | 16.8 | 94.2 | 94.2 | 94.2 | 94.2 | 94.2 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | 0.14 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 |
| v/c Ratio | 1.32 | 0.22 | 0.52 | 0.57 | 0.02 | 0.35 | 0.30 | 0.31 | 0.03 |
| Control Delay | 266.0 | 18.9 | 56.2 | 12.3 | 4.3 | 5.2 | 17.1 | 15.8 | 7.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 266.0 | 18.9 | 56.2 | 12.3 | 4.3 | 5.2 | 17.1 | 15.8 | 7.6 |
| LOS | F | B | E | B | A | A | B | B | A |
| Approach Delay | | 162.6 | | 25.2 | | 5.2 | | 15.8 | |
| Approach LOS | | F | | C | | A | | B | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.32 | |
| Intersection Signal Delay: 26.7 | Intersection LOS: C |
| Intersection Capacity Utilization 67.3% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Chambers Rd & 100th Ave



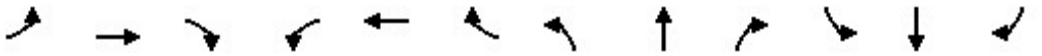
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 82 | 59 | 98 | 236 | 16 | 505 | 196 | 451 | 33 |
| v/c Ratio | 1.32 | 0.22 | 0.52 | 0.57 | 0.02 | 0.35 | 0.30 | 0.31 | 0.03 |
| Control Delay | 266.0 | 18.9 | 56.2 | 12.3 | 4.3 | 5.2 | 17.1 | 15.8 | 7.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 266.0 | 18.9 | 56.2 | 12.3 | 4.3 | 5.2 | 17.1 | 15.8 | 7.6 |
| Queue Length 50th (ft) | ~82 | 11 | 71 | 9 | 2 | 93 | 92 | 246 | 2 |
| Queue Length 95th (ft) | #162 | 46 | 118 | 77 | 10 | 190 | 201 | 394 | m25 |
| Internal Link Dist (ft) | | 1101 | | 1411 | | 2689 | | 1855 | |
| Turn Bay Length (ft) | 150 | | 100 | | 235 | | 235 | | 135 |
| Base Capacity (vph) | 127 | 507 | 384 | 618 | 701 | 1441 | 657 | 1462 | 1249 |
| 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 | 0.65 | 0.12 | 0.26 | 0.38 | 0.02 | 0.35 | 0.30 | 0.31 | 0.03 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 75 | 15 | 40 | 90 | 12 | 205 | 15 | 415 | 50 | 180 | 415 | 30 |
| Future Volume (veh/h) | 75 | 15 | 40 | 90 | 12 | 205 | 15 | 415 | 50 | 180 | 415 | 30 |
| 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 | 82 | 16 | 43 | 98 | 13 | 223 | 16 | 451 | 54 | 196 | 451 | 33 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 163 | 100 | 270 | 323 | 20 | 338 | 629 | 1149 | 138 | 585 | 1311 | 1111 |
| Arrive On Green | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Sat Flow, veh/h | 1144 | 448 | 1205 | 1344 | 88 | 1510 | 940 | 1639 | 196 | 894 | 1870 | 1585 |
| Grp Volume(v), veh/h | 82 | 0 | 59 | 98 | 0 | 236 | 16 | 0 | 505 | 196 | 451 | 33 |
| Grp Sat Flow(s),veh/h/ln | 1144 | 0 | 1653 | 1344 | 0 | 1598 | 940 | 0 | 1835 | 894 | 1870 | 1585 |
| Q Serve(g_s), s | 8.4 | 0.0 | 3.4 | 7.6 | 0.0 | 16.1 | 0.8 | 0.0 | 13.6 | 13.9 | 11.4 | 0.8 |
| Cycle Q Clear(g_c), s | 24.6 | 0.0 | 3.4 | 11.0 | 0.0 | 16.1 | 12.2 | 0.0 | 13.6 | 27.5 | 11.4 | 0.8 |
| Prop In Lane | 1.00 | | 0.73 | 1.00 | | 0.94 | 1.00 | | 0.11 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 163 | 0 | 370 | 323 | 0 | 358 | 629 | 0 | 1286 | 585 | 1311 | 1111 |
| V/C Ratio(X) | 0.50 | 0.00 | 0.16 | 0.30 | 0.00 | 0.66 | 0.03 | 0.00 | 0.39 | 0.33 | 0.34 | 0.03 |
| Avail Cap(c_a), veh/h | 235 | 0 | 475 | 408 | 0 | 460 | 629 | 0 | 1286 | 585 | 1311 | 1111 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 0.94 | 0.00 | 0.94 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.6 | 0.0 | 37.5 | 41.9 | 0.0 | 42.4 | 9.5 | 0.0 | 7.4 | 13.1 | 7.1 | 5.5 |
| Incr Delay (d2), s/veh | 2.4 | 0.0 | 0.2 | 0.5 | 0.0 | 2.3 | 0.1 | 0.0 | 0.8 | 1.5 | 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 | 2.6 | 0.0 | 1.4 | 2.6 | 0.0 | 6.7 | 0.2 | 0.0 | 5.2 | 3.0 | 4.5 | 0.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 56.0 | 0.0 | 37.7 | 42.4 | 0.0 | 44.7 | 9.6 | 0.0 | 8.3 | 14.6 | 7.8 | 5.5 |
| LnGrp LOS | E | A | D | D | A | D | A | A | A | B | A | A |
| Approach Vol, veh/h | | 141 | | | 334 | | | 521 | | | 680 | |
| Approach Delay, s/veh | | 48.3 | | | 44.0 | | | 8.3 | | | 9.7 | |
| Approach LOS | | D | | | D | | | A | | | A | |

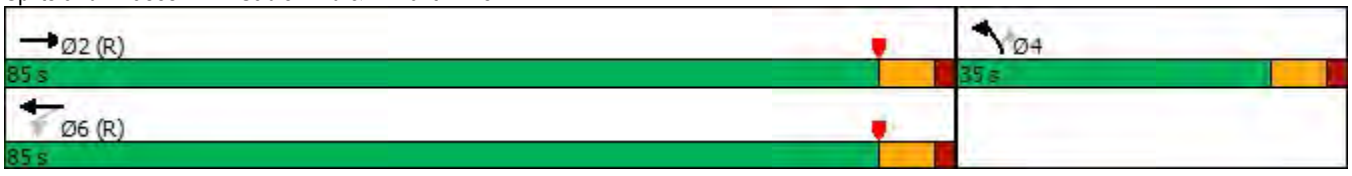
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 88.6 | | 31.4 | | 88.6 | | 31.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 76.5 | | 34.5 | | 76.5 | | 34.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.6 | | 26.6 | | 29.5 | | 18.1 | | | | |
| Green Ext Time (p_c), s | | 3.9 | | 0.3 | | 4.8 | | 1.7 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 19.3 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 1660 | 65 | 2015 | 230 | 110 |
| Future Volume (vph) | 1660 | 65 | 2015 | 230 | 110 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 25.0 | 25.0 | 35.0 | 35.0 |
| Total Split (s) | 85.0 | 85.0 | 85.0 | 35.0 | 35.0 |
| Total Split (%) | 70.8% | 70.8% | 70.8% | 29.2% | 29.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Min | C-Max | C-Max | None | None |
| Act Effct Green (s) | 84.2 | 84.2 | 84.2 | 21.8 | 21.8 |
| Actuated g/C Ratio | 0.70 | 0.70 | 0.70 | 0.18 | 0.18 |
| v/c Ratio | 0.52 | 0.59 | 0.61 | 0.78 | 0.39 |
| Control Delay | 9.5 | 27.6 | 6.9 | 62.9 | 36.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 9.5 | 27.6 | 6.9 | 62.9 | 36.5 |
| LOS | A | C | A | E | D |
| Approach Delay | 9.5 | | 7.5 | 54.3 | |
| Approach LOS | A | | A | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.78 | |
| Intersection Signal Delay: 12.2 | Intersection LOS: B |
| Intersection Capacity Utilization 67.3% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave



| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1842 | 71 | 2190 | 250 | 120 |
| v/c Ratio | 0.52 | 0.59 | 0.61 | 0.78 | 0.39 |
| Control Delay | 9.5 | 27.6 | 6.9 | 62.9 | 36.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 9.5 | 27.6 | 6.9 | 62.9 | 36.5 |
| Queue Length 50th (ft) | 220 | 18 | 205 | 186 | 64 |
| Queue Length 95th (ft) | 303 | m37 | 219 | 263 | 116 |
| Internal Link Dist (ft) | 529 | | 3380 | 1798 | |
| Turn Bay Length (ft) | | 300 | | 125 | |
| Base Capacity (vph) | 3558 | 121 | 3567 | 413 | 388 |
| 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 | 0.52 | 0.59 | 0.61 | 0.61 | 0.31 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 1660 | 35 | 65 | 2015 | 230 | 110 |
| Future Volume (veh/h) | 1660 | 35 | 65 | 2015 | 230 | 110 |
| 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 | 1804 | 38 | 71 | 2190 | 250 | 120 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 3719 | 78 | 204 | 3689 | 286 | 255 |
| Arrive On Green | 0.72 | 0.72 | 0.72 | 0.72 | 0.16 | 0.16 |
| Sat Flow, veh/h | 5315 | 108 | 251 | 5274 | 1781 | 1585 |
| Grp Volume(v), veh/h | 1193 | 649 | 71 | 2190 | 250 | 120 |
| Grp Sat Flow(s),veh/h/ln | 1702 | 1851 | 251 | 1702 | 1781 | 1585 |
| Q Serve(g_s), s | 18.0 | 18.0 | 20.2 | 25.0 | 16.4 | 8.2 |
| Cycle Q Clear(g_c), s | 18.0 | 18.0 | 38.2 | 25.0 | 16.4 | 8.2 |
| Prop In Lane | | 0.06 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 2460 | 1337 | 204 | 3689 | 286 | 255 |
| V/C Ratio(X) | 0.48 | 0.49 | 0.35 | 0.59 | 0.87 | 0.47 |
| Avail Cap(c_a), veh/h | 2460 | 1337 | 204 | 3689 | 416 | 370 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.70 | 0.70 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 7.1 | 7.1 | 15.3 | 8.1 | 49.2 | 45.7 |
| Incr Delay (d2), s/veh | 0.7 | 1.3 | 3.3 | 0.5 | 13.2 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.1 | 6.8 | 1.3 | 8.3 | 8.4 | 3.4 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 7.8 | 8.4 | 18.5 | 8.6 | 62.3 | 47.1 |
| LnGrp LOS | A | A | B | A | E | D |
| Approach Vol, veh/h | 1842 | | | 2261 | 370 | |
| Approach Delay, s/veh | 8.0 | | | 8.9 | 57.4 | |
| Approach LOS | A | | | A | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 93.7 | | 26.3 | | 93.7 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 78.0 | | 28.0 | | 78.0 |
| Max Q Clear Time (g_c+I1), s | | 20.0 | | 18.4 | | 40.2 |
| Green Ext Time (p_c), s | | 23.4 | | 0.9 | | 28.2 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 12.5 |
| HCM 6th LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 25 | 0 | 20 | 10 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 25 | 0 | 20 | 10 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 27 | 0 | 22 | 11 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 112 | 82 | 11 | 82 | 82 | 27 | 11 | 0 | 0 | 27 | 0 | 0 |
| Stage 1 | 55 | 55 | - | 27 | 27 | - | - | - | - | - | - | - |
| Stage 2 | 57 | 27 | - | 55 | 55 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 866 | 808 | 1070 | 905 | 808 | 1048 | 1608 | - | - | 1587 | - | - |
| Stage 1 | 957 | 849 | - | 990 | 873 | - | - | - | - | - | - | - |
| Stage 2 | 955 | 873 | - | 957 | 849 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 808 | 797 | 1070 | 895 | 797 | 1048 | 1608 | - | - | 1587 | - | - |
| Mov Cap-2 Maneuver | 808 | 797 | - | 895 | 797 | - | - | - | - | - | - | - |
| Stage 1 | 957 | 837 | - | 990 | 873 | - | - | - | - | - | - | - |
| Stage 2 | 901 | 873 | - | 944 | 837 | - | - | - | - | - | - | - |

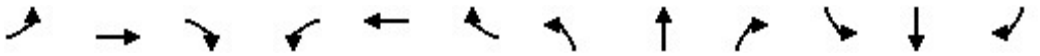
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.6 | 0 | 4.9 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1608 | - | - | - | 1048 | 1587 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.057 | 0.014 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.6 | 7.3 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | 0 | - | - |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 340 | 1240 | 285 | 145 | 1245 | 395 | 360 | 425 | 170 | 475 | 430 | 145 |
| Future Volume (vph) | 340 | 1240 | 285 | 145 | 1245 | 395 | 360 | 425 | 170 | 475 | 430 | 145 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 7 | 4 | | 3 | 8 | 5 |
| Permitted Phases | | | 2 | | | 6 | 4 | | 4 | 8 | | 8 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 7 | 4 | 4 | 3 | 8 | 5 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 23.5 | 10.5 | 24.5 | 24.5 | 9.5 | 23.5 | 23.5 | 10.5 | 24.5 | 10.5 |
| Total Split (s) | 21.7 | 48.3 | 48.3 | 15.7 | 42.3 | 42.3 | 31.0 | 31.9 | 31.9 | 24.1 | 25.0 | 21.7 |
| Total Split (%) | 18.1% | 40.3% | 40.3% | 13.1% | 35.3% | 35.3% | 25.8% | 26.6% | 26.6% | 20.1% | 20.8% | 18.1% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | None | None | None | None |
| Act Effct Green (s) | 16.6 | 48.5 | 48.5 | 10.1 | 42.0 | 42.0 | 37.6 | 21.6 | 21.6 | 43.1 | 25.4 | 47.5 |
| Actuated g/C Ratio | 0.14 | 0.40 | 0.40 | 0.08 | 0.35 | 0.35 | 0.31 | 0.18 | 0.18 | 0.36 | 0.21 | 0.40 |
| v/c Ratio | 0.78 | 0.66 | 0.38 | 0.55 | 0.76 | 0.52 | 0.58 | 0.73 | 0.43 | 0.76 | 0.62 | 0.23 |
| Control Delay | 71.6 | 26.5 | 3.3 | 60.0 | 39.0 | 5.4 | 29.4 | 53.0 | 9.5 | 35.0 | 46.7 | 8.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.6 | 26.5 | 3.3 | 60.0 | 39.0 | 5.4 | 29.4 | 53.0 | 9.5 | 35.0 | 46.7 | 8.0 |
| LOS | E | C | A | E | D | A | C | D | A | D | D | A |
| Approach Delay | | 31.2 | | | 33.2 | | | 36.3 | | | 36.1 | |
| Approach LOS | | C | | | C | | | D | | | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.78 | |
| Intersection Signal Delay: 33.6 | Intersection LOS: C |
| Intersection Capacity Utilization 77.4% | ICU Level of Service D |
| Analysis Period (min) 15 | |

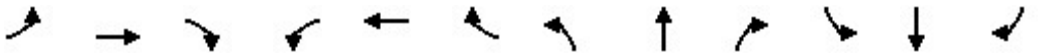
Splits and Phases: 1: Chambers Rd & E. 104th Ave



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 370 | 1348 | 310 | 158 | 1353 | 429 | 391 | 462 | 185 | 516 | 467 | 158 |
| v/c Ratio | 0.78 | 0.66 | 0.38 | 0.55 | 0.76 | 0.52 | 0.58 | 0.73 | 0.43 | 0.76 | 0.62 | 0.23 |
| Control Delay | 71.6 | 26.5 | 3.3 | 60.0 | 39.0 | 5.4 | 29.4 | 53.0 | 9.5 | 35.0 | 46.7 | 8.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.6 | 26.5 | 3.3 | 60.0 | 39.0 | 5.4 | 29.4 | 53.0 | 9.5 | 35.0 | 46.7 | 8.0 |
| Queue Length 50th (ft) | 156 | 213 | 0 | 61 | 350 | 0 | 106 | 179 | 3 | 148 | 172 | 20 |
| Queue Length 95th (ft) | #221 | 283 | 48 | 97 | 424 | 76 | 135 | 226 | 63 | 181 | 225 | 64 |
| Internal Link Dist (ft) | | 3380 | | | 955 | | | 548 | | | 948 | |
| Turn Bay Length (ft) | 275 | | 250 | 380 | | 350 | 290 | | 250 | 285 | | 250 |
| Base Capacity (vph) | 489 | 2056 | 825 | 305 | 1780 | 832 | 965 | 778 | 488 | 702 | 748 | 701 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.76 | 0.66 | 0.38 | 0.52 | 0.76 | 0.52 | 0.41 | 0.59 | 0.38 | 0.74 | 0.62 | 0.23 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 340 | 1240 | 285 | 145 | 1245 | 395 | 360 | 425 | 170 | 475 | 430 | 145 |
| Future Volume (veh/h) | 340 | 1240 | 285 | 145 | 1245 | 395 | 360 | 425 | 170 | 475 | 430 | 145 |
| 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 | 370 | 1348 | 310 | 158 | 1353 | 0 | 391 | 462 | 185 | 516 | 467 | 158 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 427 | 2300 | 714 | 215 | 1986 | | 640 | 576 | 257 | 666 | 690 | 504 |
| Arrive On Green | 0.12 | 0.45 | 0.45 | 0.06 | 0.39 | 0.00 | 0.12 | 0.16 | 0.16 | 0.14 | 0.19 | 0.19 |
| Sat Flow, veh/h | 3456 | 5106 | 1585 | 3456 | 5106 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 370 | 1348 | 310 | 158 | 1353 | 0 | 391 | 462 | 185 | 516 | 467 | 158 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1702 | 1585 | 1728 | 1702 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 12.6 | 23.7 | 16.0 | 5.4 | 26.4 | 0.0 | 11.0 | 15.0 | 13.3 | 14.6 | 14.6 | 9.1 |
| Cycle Q Clear(g_c), s | 12.6 | 23.7 | 16.0 | 5.4 | 26.4 | 0.0 | 11.0 | 15.0 | 13.3 | 14.6 | 14.6 | 9.1 |
| 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 | 427 | 2300 | 714 | 215 | 1986 | | 640 | 576 | 257 | 666 | 690 | 504 |
| V/C Ratio(X) | 0.87 | 0.59 | 0.43 | 0.73 | 0.68 | | 0.61 | 0.80 | 0.72 | 0.77 | 0.68 | 0.31 |
| Avail Cap(c_a), veh/h | 467 | 2300 | 714 | 294 | 1986 | | 995 | 782 | 349 | 712 | 690 | 504 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.74 | 0.74 | 0.74 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.6 | 24.6 | 22.5 | 55.3 | 30.5 | 0.0 | 35.7 | 48.4 | 47.7 | 35.3 | 44.8 | 31.0 |
| Incr Delay (d2), s/veh | 11.4 | 0.8 | 1.4 | 6.1 | 1.9 | 0.0 | 0.9 | 4.3 | 4.6 | 5.0 | 2.6 | 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 | 6.0 | 9.2 | 6.1 | 2.5 | 10.7 | 0.0 | 4.6 | 6.9 | 5.5 | 6.4 | 6.6 | 3.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 63.0 | 25.4 | 23.9 | 61.4 | 32.4 | 0.0 | 36.7 | 52.8 | 52.3 | 40.3 | 47.5 | 31.4 |
| LnGrp LOS | E | C | C | E | C | | D | D | D | D | D | C |
| Approach Vol, veh/h | | 2028 | | | 1511 | | | 1038 | | | 1141 | |
| Approach Delay, s/veh | | 32.1 | | | 35.4 | | | 46.6 | | | 42.0 | |
| Approach LOS | | C | | | D | | | D | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.0 | 59.6 | 22.5 | 24.9 | 20.3 | 52.2 | 18.7 | 28.8 |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 5.5 |
| Max Green Setting (Gmax), s | 10.2 | 42.8 | 18.6 | 26.4 | 16.2 | 36.8 | 26.5 | 19.5 |
| Max Q Clear Time (g_c+I1), s | 7.4 | 25.7 | 16.6 | 17.0 | 14.6 | 28.4 | 13.0 | 16.6 |
| Green Ext Time (p_c), s | 0.1 | 9.3 | 0.4 | 2.4 | 0.2 | 5.1 | 1.1 | 1.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 37.6 |
| HCM 6th LOS | D |

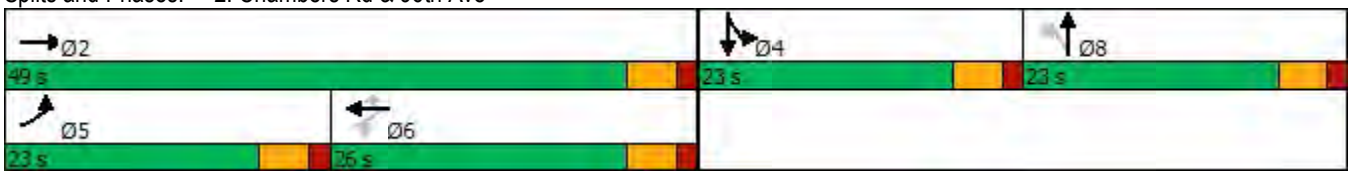
**Notes**

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 415 | 1065 | 810 | 255 | 2 | 265 | 2 |
| Future Volume (vph) | 415 | 1065 | 810 | 255 | 2 | 265 | 2 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 18.1 | 44.3 | 21.1 | 21.1 | 5.9 | 16.5 | 16.5 |
| Actuated g/C Ratio | 0.25 | 0.61 | 0.29 | 0.29 | 0.08 | 0.23 | 0.23 |
| v/c Ratio | 0.97 | 0.51 | 0.83 | 0.41 | 0.06 | 0.72 | 0.33 |
| Control Delay | 68.3 | 10.1 | 34.2 | 5.5 | 27.5 | 38.5 | 7.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 68.3 | 10.1 | 34.2 | 5.5 | 27.5 | 38.5 | 7.0 |
| LOS | E | B | C | A | C | D | A |
| Approach Delay | | 26.4 | 27.4 | | 27.5 | | 27.2 |
| Approach LOS | | C | C | | C | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 95 | |
| Actuated Cycle Length: 72.9 | |
| Natural Cycle: 105 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.97 | |
| Intersection Signal Delay: 26.9 | Intersection LOS: C |
| Intersection Capacity Utilization 85.7% | ICU Level of Service E |
| Analysis Period (min) 15 | |

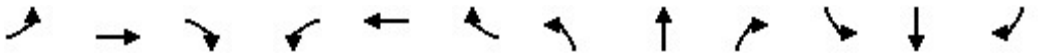
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 428 | 1098 | 853 | 268 | 8 | 288 | 160 |
| v/c Ratio | 0.97 | 0.51 | 0.83 | 0.41 | 0.06 | 0.72 | 0.33 |
| Control Delay | 68.3 | 10.1 | 34.2 | 5.5 | 27.5 | 38.5 | 7.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 68.3 | 10.1 | 34.2 | 5.5 | 27.5 | 38.5 | 7.0 |
| Queue Length 50th (ft) | 188 | 128 | 184 | 0 | 2 | 115 | 1 |
| Queue Length 95th (ft) | #438 | 256 | #353 | 57 | 8 | #259 | 48 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2689 |
| Turn Bay Length (ft) | 425 | | | 300 | | | |
| Base Capacity (vph) | 439 | 2148 | 1025 | 649 | 434 | 439 | 513 |
| 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 | 0.97 | 0.51 | 0.83 | 0.41 | 0.02 | 0.66 | 0.31 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 415 | 1065 | 0 | 0 | 810 | 255 | 0 | 2 | 2 | 265 | 2 | 145 |
| Future Volume (veh/h) | 415 | 1065 | 0 | 0 | 810 | 255 | 0 | 2 | 2 | 265 | 2 | 145 |
| 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 | 428 | 1098 | 0 | 0 | 853 | 268 | 0 | 4 | 4 | 288 | 2 | 158 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.50 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 439 | 2099 | 0 | 0 | 981 | 437 | 0 | 9 | 9 | 345 | 4 | 304 |
| Arrive On Green | 0.25 | 0.59 | 0.00 | 0.00 | 0.28 | 0.28 | 0.00 | 0.01 | 0.01 | 0.19 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1781 | 3647 | 0 | 0 | 3647 | 1585 | 0 | 858 | 858 | 1781 | 20 | 1568 |
| Grp Volume(v), veh/h | 428 | 1098 | 0 | 0 | 853 | 268 | 0 | 0 | 8 | 288 | 0 | 160 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 0 | 0 | 1777 | 1585 | 0 | 0 | 1716 | 1781 | 0 | 1588 |
| Q Serve(g_s), s | 17.4 | 13.4 | 0.0 | 0.0 | 16.7 | 10.8 | 0.0 | 0.0 | 0.3 | 11.4 | 0.0 | 6.6 |
| Cycle Q Clear(g_c), s | 17.4 | 13.4 | 0.0 | 0.0 | 16.7 | 10.8 | 0.0 | 0.0 | 0.3 | 11.4 | 0.0 | 6.6 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 0.50 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 439 | 2099 | 0 | 0 | 981 | 437 | 0 | 0 | 18 | 345 | 0 | 308 |
| V/C Ratio(X) | 0.98 | 0.52 | 0.00 | 0.00 | 0.87 | 0.61 | 0.00 | 0.00 | 0.45 | 0.83 | 0.00 | 0.52 |
| Avail Cap(c_a), veh/h | 439 | 2140 | 0 | 0 | 1021 | 456 | 0 | 0 | 423 | 439 | 0 | 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 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.3 | 8.9 | 0.0 | 0.0 | 25.2 | 23.1 | 0.0 | 0.0 | 36.0 | 28.3 | 0.0 | 26.4 |
| Incr Delay (d2), s/veh | 36.4 | 0.2 | 0.0 | 0.0 | 8.0 | 2.3 | 0.0 | 0.0 | 17.2 | 10.6 | 0.0 | 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 | 11.4 | 4.4 | 0.0 | 0.0 | 7.7 | 4.1 | 0.0 | 0.0 | 0.2 | 5.5 | 0.0 | 2.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 63.7 | 9.1 | 0.0 | 0.0 | 33.2 | 25.3 | 0.0 | 0.0 | 53.2 | 38.9 | 0.0 | 27.8 |
| LnGrp LOS | E | A | A | A | C | C | A | A | D | D | A | C |
| Approach Vol, veh/h | | 1526 | | | 1121 | | | 8 | | | 448 | |
| Approach Delay, s/veh | | 24.4 | | | 31.3 | | | 53.2 | | | 35.0 | |
| Approach LOS | | C | | | C | | | D | | | C | |

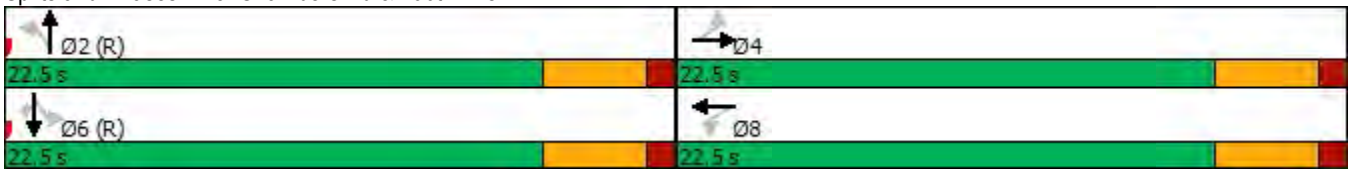
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 48.2 | | 19.2 | 23.0 | 25.2 | | 5.7 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.4 | | 13.4 | 19.4 | 18.7 | | 2.3 | | | | |
| Green Ext Time (p_c), s | | 9.5 | | 0.8 | 0.0 | 1.5 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 28.5 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 55 | 8 | 45 | 11 | 55 | 565 | 245 | 450 | 85 |
| Future Volume (vph) | 55 | 8 | 45 | 11 | 55 | 565 | 245 | 450 | 85 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (%) | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 8.4 | 8.4 | 8.4 | 8.4 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.19 | 0.19 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| v/c Ratio | 0.30 | 0.09 | 0.19 | 0.51 | 0.10 | 0.58 | 0.70 | 0.39 | 0.08 |
| Control Delay | 18.3 | 8.5 | 15.6 | 10.4 | 5.4 | 9.7 | 24.6 | 6.4 | 1.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 18.3 | 8.5 | 15.6 | 10.4 | 5.4 | 9.7 | 24.6 | 6.4 | 1.9 |
| LOS | B | A | B | B | A | A | C | A | A |
| Approach Delay | | 15.0 | | 11.4 | | 9.3 | | 11.6 | |
| Approach LOS | | B | | B | | A | | B | |

| Intersection Summary | |
|---|---|
| Cycle Length: 45 | |
| Actuated Cycle Length: 45 | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.70 | |
| Intersection Signal Delay: 10.8 | Intersection LOS: B |
| Intersection Capacity Utilization 80.6% | ICU Level of Service D |
| Analysis Period (min) 15 | |

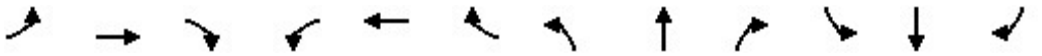
Splits and Phases: 3: Chambers Rd & 100th Ave



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 60 | 31 | 49 | 213 | 60 | 723 | 266 | 489 | 92 |
| v/c Ratio | 0.30 | 0.09 | 0.19 | 0.51 | 0.10 | 0.58 | 0.70 | 0.39 | 0.08 |
| Control Delay | 18.3 | 8.5 | 15.6 | 10.4 | 5.4 | 9.7 | 24.6 | 6.4 | 1.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 18.3 | 8.5 | 15.6 | 10.4 | 5.4 | 9.7 | 24.6 | 6.4 | 1.9 |
| Queue Length 50th (ft) | 14 | 2 | 11 | 16 | 5 | 84 | 37 | 49 | 0 |
| Queue Length 95th (ft) | 33 | 15 | 27 | 50 | 22 | #307 | #178 | 137 | 15 |
| Internal Link Dist (ft) | | 1101 | | 1411 | | 2689 | | 1855 | |
| Turn Bay Length (ft) | 150 | | 100 | | 235 | | 235 | | 135 |
| Base Capacity (vph) | 430 | 679 | 549 | 726 | 577 | 1239 | 381 | 1261 | 1101 |
| 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 | 0.14 | 0.05 | 0.09 | 0.29 | 0.10 | 0.58 | 0.70 | 0.39 | 0.08 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 8 | 20 | 45 | 11 | 185 | 55 | 565 | 100 | 245 | 450 | 85 |
| Future Volume (veh/h) | 55 | 8 | 20 | 45 | 11 | 185 | 55 | 565 | 100 | 245 | 450 | 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 | | 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 | 60 | 9 | 22 | 49 | 12 | 201 | 60 | 614 | 109 | 266 | 489 | 92 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 270 | 104 | 253 | 436 | 19 | 325 | 525 | 904 | 161 | 387 | 1094 | 927 |
| Arrive On Green | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| Sat Flow, veh/h | 1168 | 482 | 1177 | 1378 | 90 | 1509 | 833 | 1546 | 275 | 730 | 1870 | 1585 |
| Grp Volume(v), veh/h | 60 | 0 | 31 | 49 | 0 | 213 | 60 | 0 | 723 | 266 | 489 | 92 |
| Grp Sat Flow(s),veh/h/ln | 1168 | 0 | 1659 | 1378 | 0 | 1599 | 833 | 0 | 1821 | 730 | 1870 | 1585 |
| Q Serve(g_s), s | 2.2 | 0.0 | 0.7 | 1.3 | 0.0 | 5.4 | 2.0 | 0.0 | 12.3 | 14.0 | 6.6 | 1.2 |
| Cycle Q Clear(g_c), s | 7.6 | 0.0 | 0.7 | 2.0 | 0.0 | 5.4 | 8.6 | 0.0 | 12.3 | 26.3 | 6.6 | 1.2 |
| Prop In Lane | 1.00 | | 0.71 | 1.00 | | 0.94 | 1.00 | | 0.15 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 270 | 0 | 357 | 436 | 0 | 344 | 525 | 0 | 1065 | 387 | 1094 | 927 |
| V/C Ratio(X) | 0.22 | 0.00 | 0.09 | 0.11 | 0.00 | 0.62 | 0.11 | 0.00 | 0.68 | 0.69 | 0.45 | 0.10 |
| Avail Cap(c_a), veh/h | 486 | 0 | 663 | 691 | 0 | 640 | 525 | 0 | 1065 | 387 | 1094 | 927 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 0.58 | 0.00 | 0.58 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 19.4 | 0.0 | 14.1 | 14.9 | 0.0 | 16.0 | 7.7 | 0.0 | 6.4 | 16.5 | 5.3 | 4.1 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.1 | 0.1 | 0.0 | 1.8 | 0.3 | 0.0 | 2.0 | 9.5 | 1.3 | 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 | 0.6 | 0.0 | 0.2 | 0.4 | 0.0 | 1.9 | 0.3 | 0.0 | 2.8 | 3.2 | 1.6 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 19.9 | 0.0 | 14.2 | 15.0 | 0.0 | 17.8 | 7.9 | 0.0 | 8.5 | 26.0 | 6.6 | 4.3 |
| LnGrp LOS | B | A | B | B | A | B | A | A | A | C | A | A |
| Approach Vol, veh/h | | 91 | | | 262 | | | 783 | | | 847 | |
| Approach Delay, s/veh | | 17.9 | | | 17.3 | | | 8.4 | | | 12.4 | |
| Approach LOS | | B | | | B | | | A | | | B | |

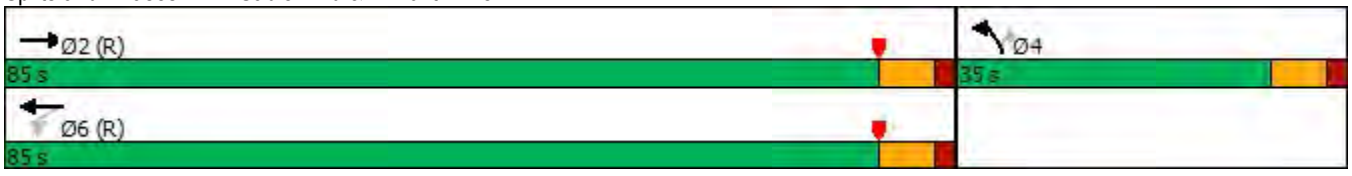
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 30.8 | | 14.2 | | 30.8 | | 14.2 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.0 | | 18.0 | | 18.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 14.3 | | 9.6 | | 28.3 | | 7.4 | | | | |
| Green Ext Time (p_c), s | | 1.7 | | 0.2 | | 0.0 | | 1.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 11.8 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 2170 | 135 | 1870 | 110 | 85 |
| Future Volume (vph) | 2170 | 135 | 1870 | 110 | 85 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 25.0 | 25.0 | 35.0 | 35.0 |
| Total Split (s) | 85.0 | 85.0 | 85.0 | 35.0 | 35.0 |
| Total Split (%) | 70.8% | 70.8% | 70.8% | 29.2% | 29.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Min | C-Max | C-Max | None | None |
| Act Effct Green (s) | 92.5 | 92.5 | 92.5 | 13.5 | 13.5 |
| Actuated g/C Ratio | 0.77 | 0.77 | 0.77 | 0.11 | 0.11 |
| v/c Ratio | 0.63 | 2.33 | 0.52 | 0.61 | 0.50 |
| Control Delay | 7.4 | 666.4 | 12.9 | 62.9 | 54.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.4 | 666.4 | 12.9 | 62.9 | 54.8 |
| LOS | A | F | B | E | D |
| Approach Delay | 7.4 | | 57.0 | 59.4 | |
| Approach LOS | A | | E | E | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 2.33 | |
| Intersection Signal Delay: 31.9 | Intersection LOS: C |
| Intersection Capacity Utilization 75.3% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave



| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 2473 | 147 | 2033 | 120 | 92 |
| v/c Ratio | 0.63 | 2.33 | 0.52 | 0.61 | 0.50 |
| Control Delay | 7.4 | 666.4 | 12.9 | 62.9 | 54.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.4 | 666.4 | 12.9 | 62.9 | 54.8 |
| Queue Length 50th (ft) | 263 | ~178 | 437 | 90 | 63 |
| Queue Length 95th (ft) | 369 | m#282 | 557 | 147 | 112 |
| Internal Link Dist (ft) | 529 | | 3380 | 1798 | |
| Turn Bay Length (ft) | | 300 | | 125 | |
| Base Capacity (vph) | 3897 | 63 | 3921 | 413 | 374 |
| 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 | 0.63 | 2.33 | 0.52 | 0.29 | 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.

m Volume for 95th percentile queue is metered by upstream signal.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 2170 | 105 | 135 | 1870 | 110 | 85 |
| Future Volume (veh/h) | 2170 | 105 | 135 | 1870 | 110 | 85 |
| 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 | 2359 | 114 | 147 | 2033 | 120 | 92 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 3974 | 191 | 142 | 4065 | 155 | 138 |
| Arrive On Green | 0.80 | 0.80 | 0.80 | 0.80 | 0.09 | 0.09 |
| Sat Flow, veh/h | 5160 | 239 | 135 | 5274 | 1781 | 1585 |
| Grp Volume(v), veh/h | 1603 | 870 | 147 | 2033 | 120 | 92 |
| Grp Sat Flow(s),veh/h/ln | 1702 | 1827 | 135 | 1702 | 1781 | 1585 |
| Q Serve(g_s), s | 21.8 | 22.2 | 73.3 | 16.2 | 7.9 | 6.7 |
| Cycle Q Clear(g_c), s | 21.8 | 22.2 | 95.5 | 16.2 | 7.9 | 6.7 |
| Prop In Lane | | 0.13 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 2710 | 1455 | 142 | 4065 | 155 | 138 |
| V/C Ratio(X) | 0.59 | 0.60 | 1.03 | 0.50 | 0.77 | 0.67 |
| Avail Cap(c_a), veh/h | 2710 | 1455 | 142 | 4065 | 416 | 370 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.68 | 0.68 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 4.7 | 4.8 | 38.8 | 4.1 | 53.6 | 53.1 |
| Incr Delay (d2), s/veh | 1.0 | 1.8 | 71.0 | 0.3 | 7.9 | 5.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.3 | 6.1 | 7.0 | 3.7 | 3.9 | 2.9 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 5.7 | 6.6 | 109.8 | 4.4 | 61.5 | 58.5 |
| LnGrp LOS | A | A | F | A | E | E |
| Approach Vol, veh/h | 2473 | | | 2180 | 212 | |
| Approach Delay, s/veh | 6.0 | | | 11.5 | 60.2 | |
| Approach LOS | A | | | B | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 102.5 | | 17.5 | | 102.5 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 78.0 | | 28.0 | | 78.0 |
| Max Q Clear Time (g_c+I1), s | | 24.2 | | 9.9 | | 97.5 |
| Green Ext Time (p_c), s | | 32.8 | | 0.6 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 10.8 |
| HCM 6th LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 20 | 0 | 60 | 30 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 20 | 0 | 60 | 30 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 22 | 0 | 65 | 33 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 207 | 185 | 33 | 185 | 185 | 22 | 33 | 0 | 0 | 22 | 0 | 0 |
| Stage 1 | 163 | 163 | - | 22 | 22 | - | - | - | - | - | - | - |
| Stage 2 | 44 | 22 | - | 163 | 163 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 751 | 709 | 1041 | 776 | 709 | 1055 | 1579 | - | - | 1593 | - | - |
| Stage 1 | 839 | 763 | - | 996 | 877 | - | - | - | - | - | - | - |
| Stage 2 | 970 | 877 | - | 839 | 763 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 697 | 679 | 1041 | 751 | 679 | 1055 | 1579 | - | - | 1593 | - | - |
| Mov Cap-2 Maneuver | 697 | 679 | - | 751 | 679 | - | - | - | - | - | - | - |
| Stage 1 | 839 | 731 | - | 996 | 877 | - | - | - | - | - | - | - |
| Stage 2 | 930 | 877 | - | 804 | 731 | - | - | - | - | - | - | - |

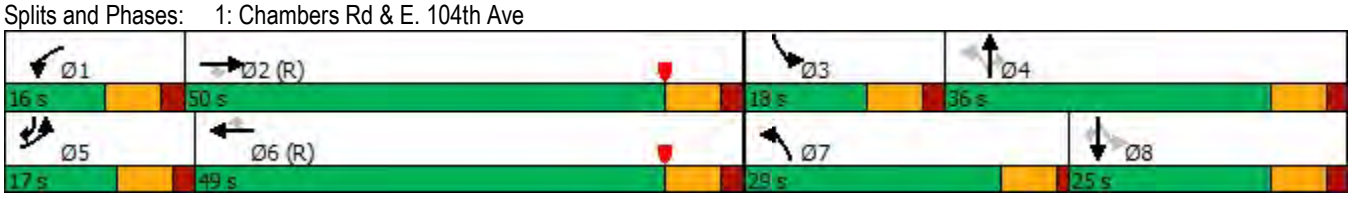
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.6 | 0 | 4.9 |
| HCM LOS | A | A | | |

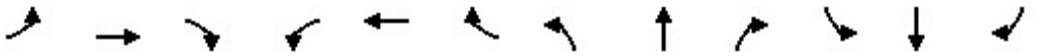
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1579 | - | - | - | 1055 | 1593 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.041 | 0.041 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.6 | 7.4 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 | 0.1 | - | - |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 160 | 1120 | 214 | 136 | 1480 | 295 | 405 | 279 | 178 | 345 | 231 | 315 |
| Future Volume (vph) | 160 | 1120 | 214 | 136 | 1480 | 295 | 405 | 279 | 178 | 345 | 231 | 315 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 7 | 4 | | 3 | 8 | 5 |
| Permitted Phases | | | 2 | | | 6 | 4 | | 4 | 8 | | 8 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 7 | 4 | 4 | 3 | 8 | 5 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 12.0 | 25.0 | 25.0 | 12.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 | 12.0 | 25.0 | 12.0 |
| Total Split (s) | 17.0 | 50.0 | 50.0 | 16.0 | 49.0 | 49.0 | 29.0 | 36.0 | 36.0 | 18.0 | 25.0 | 17.0 |
| Total Split (%) | 14.2% | 41.7% | 41.7% | 13.3% | 40.8% | 40.8% | 24.2% | 30.0% | 30.0% | 15.0% | 20.8% | 14.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 6.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| Act Effct Green (s) | 10.8 | 51.2 | 51.2 | 9.9 | 50.4 | 50.4 | 37.5 | 19.7 | 19.7 | 25.0 | 13.9 | 31.6 |
| Actuated g/C Ratio | 0.09 | 0.43 | 0.43 | 0.08 | 0.42 | 0.42 | 0.31 | 0.16 | 0.16 | 0.21 | 0.12 | 0.26 |
| v/c Ratio | 0.57 | 0.56 | 0.29 | 0.52 | 0.75 | 0.38 | 0.60 | 0.52 | 0.47 | 0.67 | 0.61 | 0.64 |
| Control Delay | 71.9 | 19.9 | 1.7 | 59.5 | 33.5 | 4.3 | 37.6 | 51.8 | 15.1 | 39.0 | 56.9 | 26.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.9 | 19.9 | 1.7 | 59.5 | 33.5 | 4.3 | 37.6 | 51.8 | 15.1 | 39.0 | 56.9 | 26.3 |
| LOS | E | B | A | E | C | A | D | D | B | D | E | C |
| Approach Delay | | 22.9 | | | 30.9 | | | 37.6 | | | 39.2 | |
| Approach LOS | | C | | | C | | | D | | | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.75 | |
| Intersection Signal Delay: 31.1 | Intersection LOS: C |
| Intersection Capacity Utilization 76.3% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Chambers Rd & E. 104th Ave

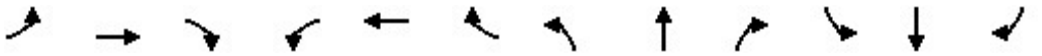




| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 174 | 1217 | 233 | 148 | 1609 | 321 | 440 | 303 | 193 | 375 | 251 | 342 |
| v/c Ratio | 0.57 | 0.56 | 0.29 | 0.52 | 0.75 | 0.38 | 0.60 | 0.52 | 0.47 | 0.67 | 0.61 | 0.64 |
| Control Delay | 71.9 | 19.9 | 1.7 | 59.5 | 33.5 | 4.3 | 37.6 | 51.8 | 15.1 | 39.0 | 56.9 | 26.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.9 | 19.9 | 1.7 | 59.5 | 33.5 | 4.3 | 37.6 | 51.8 | 15.1 | 39.0 | 56.9 | 26.3 |
| Queue Length 50th (ft) | 74 | 131 | 0 | 57 | 384 | 0 | 142 | 116 | 9 | 114 | 98 | 127 |
| Queue Length 95th (ft) | 112 | 161 | 19 | 92 | 498 | 61 | 176 | m153 | m80 | 141 | 139 | 223 |
| Internal Link Dist (ft) | | 2580 | | | 955 | | | 548 | | | 948 | |
| Turn Bay Length (ft) | 275 | | 300 | 380 | | 350 | 290 | | 250 | 285 | | 250 |
| Base Capacity (vph) | 318 | 2171 | 809 | 291 | 2134 | 850 | 838 | 855 | 517 | 556 | 530 | 535 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.55 | 0.56 | 0.29 | 0.51 | 0.75 | 0.38 | 0.53 | 0.35 | 0.37 | 0.67 | 0.47 | 0.64 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 160 | 1120 | 214 | 136 | 1480 | 295 | 405 | 279 | 178 | 345 | 231 | 315 |
| Future Volume (veh/h) | 160 | 1120 | 214 | 136 | 1480 | 295 | 405 | 279 | 178 | 345 | 231 | 315 |
| 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 | 174 | 1217 | 233 | 148 | 1609 | 0 | 440 | 303 | 193 | 375 | 251 | 342 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 228 | 2224 | 691 | 204 | 2189 | | 707 | 641 | 286 | 619 | 533 | 342 |
| Arrive On Green | 0.13 | 0.87 | 0.87 | 0.06 | 0.43 | 0.00 | 0.13 | 0.18 | 0.18 | 0.09 | 0.15 | 0.15 |
| Sat Flow, veh/h | 3456 | 5106 | 1585 | 3456 | 5106 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 174 | 1217 | 233 | 148 | 1609 | 0 | 440 | 303 | 193 | 375 | 251 | 342 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1702 | 1585 | 1728 | 1702 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 5.8 | 7.0 | 3.2 | 5.1 | 31.5 | 0.0 | 12.6 | 9.2 | 13.6 | 11.0 | 7.8 | 18.0 |
| Cycle Q Clear(g_c), s | 5.8 | 7.0 | 3.2 | 5.1 | 31.5 | 0.0 | 12.6 | 9.2 | 13.6 | 11.0 | 7.8 | 18.0 |
| 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 | 228 | 2224 | 691 | 204 | 2189 | | 707 | 641 | 286 | 619 | 533 | 342 |
| V/C Ratio(X) | 0.76 | 0.55 | 0.34 | 0.73 | 0.74 | | 0.62 | 0.47 | 0.68 | 0.61 | 0.47 | 1.00 |
| Avail Cap(c_a), veh/h | 288 | 2224 | 691 | 259 | 2189 | | 919 | 859 | 383 | 619 | 533 | 342 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.84 | 0.84 | 0.84 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.2 | 4.8 | 4.6 | 55.5 | 28.6 | 0.0 | 35.9 | 44.1 | 45.9 | 38.9 | 46.6 | 47.0 |
| Incr Delay (d2), s/veh | 7.6 | 0.8 | 1.1 | 7.2 | 2.2 | 0.0 | 0.9 | 0.5 | 2.8 | 1.7 | 0.6 | 48.4 |
| 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 | 1.7 | 1.1 | 2.4 | 12.6 | 0.0 | 5.3 | 4.0 | 5.5 | 4.8 | 3.4 | 14.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 58.8 | 5.6 | 5.7 | 62.8 | 30.8 | 0.0 | 36.9 | 44.6 | 48.7 | 40.6 | 47.3 | 95.4 |
| LnGrp LOS | E | A | A | E | C | | D | D | D | D | D | F |
| Approach Vol, veh/h | | 1624 | | | 1757 | | | 936 | | | 968 | |
| Approach Delay, s/veh | | 11.3 | | | 33.5 | | | 41.8 | | | 61.7 | |
| Approach LOS | | B | | | C | | | D | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 14.1 | 59.3 | 18.0 | 28.6 | 14.9 | 58.4 | 21.6 | 25.0 |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 6.0 | 7.0 |
| Max Green Setting (Gmax), s | 9.0 | 43.0 | 11.0 | 29.0 | 10.0 | 42.0 | 23.0 | 18.0 |
| Max Q Clear Time (g_c+I1), s | 7.1 | 9.0 | 13.0 | 15.6 | 7.8 | 33.5 | 14.6 | 20.0 |
| Green Ext Time (p_c), s | 0.1 | 11.0 | 0.0 | 2.0 | 0.1 | 5.9 | 1.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 33.3 |
| HCM 6th LOS | C |

**Notes**

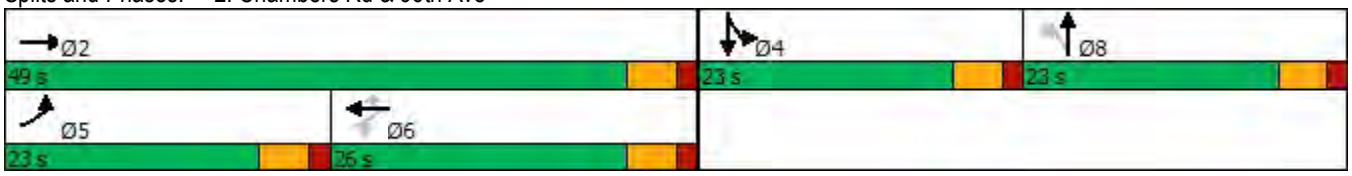
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 115 | 410 | 895 | 218 | 0 | 279 | 3 |
| Future Volume (vph) | 115 | 410 | 895 | 218 | 0 | 279 | 3 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 10.0 | 33.6 | 21.8 | 21.8 | 5.7 | 17.1 | 17.1 |
| Actuated g/C Ratio | 0.16 | 0.54 | 0.35 | 0.35 | 0.09 | 0.27 | 0.27 |
| v/c Ratio | 0.45 | 0.24 | 0.79 | 0.34 | 0.03 | 0.63 | 0.51 |
| Control Delay | 31.7 | 8.5 | 27.9 | 4.9 | 0.2 | 29.9 | 6.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.7 | 8.5 | 27.9 | 4.9 | 0.2 | 29.9 | 6.2 |
| LOS | C | A | C | A | A | C | A |
| Approach Delay | | 13.5 | 23.4 | | 0.2 | | 17.2 |
| Approach LOS | | B | C | | A | | B |

| Intersection Summary | |
|---|---|
| Cycle Length: 95 | |
| Actuated Cycle Length: 62.7 | |
| Natural Cycle: 95 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 0.79 | |
| Intersection Signal Delay: 19.3 | Intersection LOS: B |
| Intersection Capacity Utilization 70.8% | ICU Level of Service C |
| Analysis Period (min) 15 | |

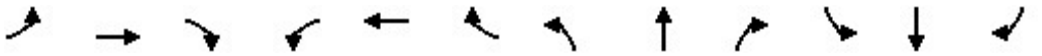
Splits and Phases: 2: Chambers Rd & 96th Ave



| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 125 | 448 | 973 | 237 | 10 | 303 | 348 |
| v/c Ratio | 0.45 | 0.24 | 0.79 | 0.34 | 0.03 | 0.63 | 0.51 |
| Control Delay | 31.7 | 8.5 | 27.9 | 4.9 | 0.2 | 29.9 | 6.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.7 | 8.5 | 27.9 | 4.9 | 0.2 | 29.9 | 6.2 |
| Queue Length 50th (ft) | 45 | 41 | 180 | 0 | 0 | 101 | 1 |
| Queue Length 95th (ft) | 104 | 88 | #394 | 51 | 0 | #255 | 66 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2584 |
| Turn Bay Length (ft) | 425 | | | 300 | | 175 | |
| Base Capacity (vph) | 526 | 2571 | 1228 | 704 | 659 | 526 | 713 |
| 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 | 0.17 | 0.79 | 0.34 | 0.02 | 0.58 | 0.49 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 115 | 410 | 2 | 0 | 895 | 218 | 0 | 0 | 5 | 279 | 3 | 317 |
| Future Volume (veh/h) | 115 | 410 | 2 | 0 | 895 | 218 | 0 | 0 | 5 | 279 | 3 | 317 |
| 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 | 125 | 446 | 2 | 0 | 973 | 237 | 0 | 0 | 10 | 303 | 3 | 345 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.50 | 0.50 | 0.50 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 183 | 1804 | 8 | 0 | 1124 | 501 | 0 | 0 | 20 | 453 | 3 | 400 |
| Arrive On Green | 0.10 | 0.50 | 0.50 | 0.00 | 0.32 | 0.32 | 0.00 | 0.00 | 0.01 | 0.25 | 0.25 | 0.25 |
| Sat Flow, veh/h | 1781 | 3628 | 16 | 0 | 3647 | 1585 | 0 | 0 | 1585 | 1781 | 14 | 1573 |
| Grp Volume(v), veh/h | 125 | 218 | 230 | 0 | 973 | 237 | 0 | 0 | 10 | 303 | 0 | 348 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1867 | 0 | 1777 | 1585 | 0 | 0 | 1585 | 1781 | 0 | 1587 |
| Q Serve(g_s), s | 4.3 | 4.5 | 4.5 | 0.0 | 16.4 | 7.7 | 0.0 | 0.0 | 0.4 | 9.7 | 0.0 | 13.3 |
| Cycle Q Clear(g_c), s | 4.3 | 4.5 | 4.5 | 0.0 | 16.4 | 7.7 | 0.0 | 0.0 | 0.4 | 9.7 | 0.0 | 13.3 |
| Prop In Lane | 1.00 | | 0.01 | 0.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 183 | 884 | 929 | 0 | 1124 | 501 | 0 | 0 | 20 | 453 | 0 | 404 |
| V/C Ratio(X) | 0.68 | 0.25 | 0.25 | 0.00 | 0.87 | 0.47 | 0.00 | 0.00 | 0.50 | 0.67 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 503 | 1227 | 1289 | 0 | 1171 | 522 | 0 | 0 | 448 | 503 | 0 | 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.6 | 9.2 | 9.2 | 0.0 | 20.5 | 17.5 | 0.0 | 0.0 | 31.3 | 21.3 | 0.0 | 22.7 |
| Incr Delay (d2), s/veh | 4.5 | 0.1 | 0.1 | 0.0 | 6.8 | 0.7 | 0.0 | 0.0 | 17.6 | 3.0 | 0.0 | 14.6 |
| 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 | 2.0 | 1.5 | 1.6 | 0.0 | 7.2 | 2.7 | 0.0 | 0.0 | 0.2 | 4.0 | 0.0 | 6.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 32.1 | 9.3 | 9.3 | 0.0 | 27.3 | 18.2 | 0.0 | 0.0 | 48.8 | 24.3 | 0.0 | 37.3 |
| LnGrp LOS | C | A | A | A | C | B | A | A | D | C | A | D |
| Approach Vol, veh/h | | 573 | | | 1210 | | | 10 | | | 651 | |
| Approach Delay, s/veh | | 14.3 | | | 25.5 | | | 48.8 | | | 31.2 | |
| Approach LOS | | B | | | C | | | D | | | C | |

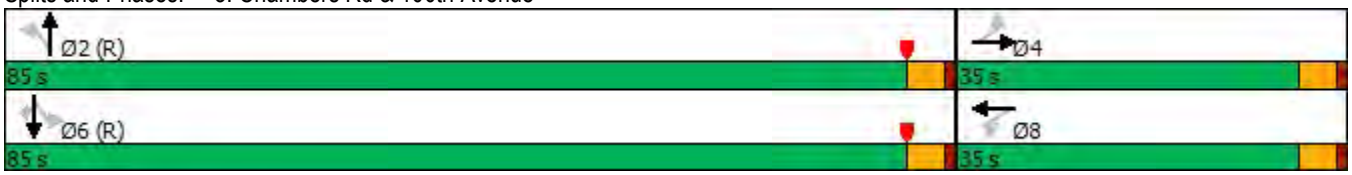
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 36.7 | | 21.2 | 11.5 | 25.2 | | 5.8 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 6.5 | | 15.3 | 6.3 | 18.4 | | 2.4 | | | | |
| Green Ext Time (p_c), s | | 2.9 | | 0.9 | 0.2 | 1.7 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 24.5 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 75 | 15 | 90 | 12 | 15 | 423 | 180 | 441 | 30 |
| Future Volume (vph) | 75 | 15 | 90 | 12 | 15 | 423 | 180 | 441 | 30 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 35.0 | 35.0 | 35.0 | 35.0 | 85.0 | 85.0 | 85.0 | 85.0 | 85.0 |
| Total Split (%) | 29.2% | 29.2% | 29.2% | 29.2% | 70.8% | 70.8% | 70.8% | 70.8% | 70.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 17.5 | 17.5 | 17.5 | 17.5 | 93.5 | 93.5 | 93.5 | 93.5 | 93.5 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.15 | 0.15 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 |
| v/c Ratio | 1.32 | 0.21 | 0.50 | 0.56 | 0.02 | 0.36 | 0.31 | 0.33 | 0.03 |
| Control Delay | 264.1 | 18.4 | 54.1 | 11.8 | 4.6 | 5.6 | 5.0 | 4.4 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 264.1 | 18.4 | 54.1 | 11.8 | 4.6 | 5.6 | 5.0 | 4.4 | 0.8 |
| LOS | F | B | D | B | A | A | A | A | A |
| Approach Delay | | 161.3 | | 24.2 | | 5.6 | | 4.4 | |
| Approach LOS | | F | | C | | A | | A | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.32 | |
| Intersection Signal Delay: 21.5 | Intersection LOS: C |
| Intersection Capacity Utilization 67.7% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Chambers Rd & 100th Avenue



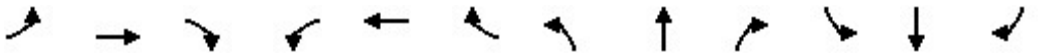
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 82 | 59 | 98 | 236 | 16 | 514 | 196 | 479 | 33 |
| v/c Ratio | 1.32 | 0.21 | 0.50 | 0.56 | 0.02 | 0.36 | 0.31 | 0.33 | 0.03 |
| Control Delay | 264.1 | 18.4 | 54.1 | 11.8 | 4.6 | 5.6 | 5.0 | 4.4 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 264.1 | 18.4 | 54.1 | 11.8 | 4.6 | 5.6 | 5.0 | 4.4 | 0.8 |
| Queue Length 50th (ft) | ~82 | 11 | 71 | 9 | 2 | 100 | 30 | 75 | 0 |
| Queue Length 95th (ft) | #161 | 46 | 116 | 76 | 10 | 203 | 57 | 116 | m4 |
| Internal Link Dist (ft) | | 625 | | 478 | | 2584 | | 1270 | |
| Turn Bay Length (ft) | 150 | | 100 | | 235 | | 235 | | 135 |
| Base Capacity (vph) | 108 | 453 | 340 | 572 | 671 | 1430 | 642 | 1451 | 1240 |
| 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 | 0.76 | 0.13 | 0.29 | 0.41 | 0.02 | 0.36 | 0.31 | 0.33 | 0.03 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 75 | 15 | 40 | 90 | 12 | 205 | 15 | 423 | 50 | 180 | 441 | 30 |
| Future Volume (veh/h) | 75 | 15 | 40 | 90 | 12 | 205 | 15 | 423 | 50 | 180 | 441 | 30 |
| 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 | 82 | 16 | 43 | 98 | 13 | 223 | 16 | 460 | 54 | 196 | 479 | 33 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 161 | 100 | 269 | 321 | 20 | 337 | 592 | 1153 | 135 | 580 | 1313 | 1113 |
| Arrive On Green | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Sat Flow, veh/h | 1144 | 448 | 1205 | 1344 | 88 | 1510 | 888 | 1643 | 193 | 887 | 1870 | 1585 |
| Grp Volume(v), veh/h | 82 | 0 | 59 | 98 | 0 | 236 | 16 | 0 | 514 | 196 | 479 | 33 |
| Grp Sat Flow(s),veh/h/ln | 1144 | 0 | 1653 | 1344 | 0 | 1598 | 888 | 0 | 1836 | 887 | 1870 | 1585 |
| Q Serve(g_s), s | 8.4 | 0.0 | 3.4 | 7.6 | 0.0 | 16.1 | 0.9 | 0.0 | 13.9 | 14.1 | 12.3 | 0.8 |
| Cycle Q Clear(g_c), s | 24.6 | 0.0 | 3.4 | 11.1 | 0.0 | 16.1 | 13.2 | 0.0 | 13.9 | 28.0 | 12.3 | 0.8 |
| Prop In Lane | 1.00 | | 0.73 | 1.00 | | 0.94 | 1.00 | | 0.11 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 161 | 0 | 369 | 321 | 0 | 357 | 592 | 0 | 1288 | 580 | 1313 | 1113 |
| V/C Ratio(X) | 0.51 | 0.00 | 0.16 | 0.31 | 0.00 | 0.66 | 0.03 | 0.00 | 0.40 | 0.34 | 0.36 | 0.03 |
| Avail Cap(c_a), veh/h | 197 | 0 | 420 | 363 | 0 | 406 | 592 | 0 | 1288 | 580 | 1313 | 1113 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 0.94 | 0.00 | 0.94 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.7 | 0.0 | 37.6 | 42.0 | 0.0 | 42.5 | 9.8 | 0.0 | 7.4 | 13.2 | 7.2 | 5.4 |
| Incr Delay (d2), s/veh | 2.5 | 0.0 | 0.2 | 0.5 | 0.0 | 3.3 | 0.1 | 0.0 | 0.9 | 1.6 | 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 | 2.5 | 0.0 | 1.4 | 2.6 | 0.0 | 6.7 | 0.2 | 0.0 | 5.0 | 2.9 | 4.5 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 56.2 | 0.0 | 37.8 | 42.5 | 0.0 | 45.8 | 9.9 | 0.0 | 8.3 | 14.8 | 8.0 | 5.5 |
| LnGrp LOS | E | A | D | D | A | D | A | A | A | B | A | A |
| Approach Vol, veh/h | | 141 | | | 334 | | | 530 | | | 708 | |
| Approach Delay, s/veh | | 48.5 | | | 44.8 | | | 8.3 | | | 9.7 | |
| Approach LOS | | D | | | D | | | A | | | A | |

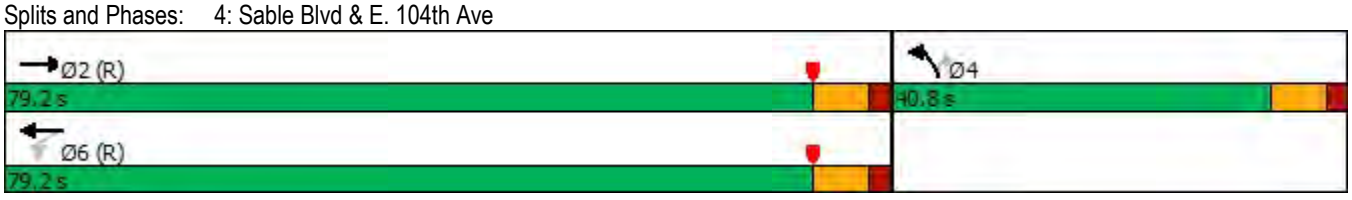
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 88.7 | | 31.3 | | 88.7 | | 31.3 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 80.5 | | 30.5 | | 80.5 | | 30.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.9 | | 26.6 | | 30.0 | | 18.1 | | | | |
| Green Ext Time (p_c), s | | 3.6 | | 0.2 | | 4.6 | | 1.4 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 19.3 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 1669 | 65 | 2045 | 238 | 110 |
| Future Volume (vph) | 1669 | 65 | 2045 | 238 | 110 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 22.5 | 22.5 | 40.5 | 40.5 |
| Total Split (s) | 79.2 | 79.2 | 79.2 | 40.8 | 40.8 |
| Total Split (%) | 66.0% | 66.0% | 66.0% | 34.0% | 34.0% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Max | C-Max | C-Max | None | None |
| Act Effct Green (s) | 83.1 | 83.1 | 83.1 | 22.9 | 22.9 |
| Actuated g/C Ratio | 0.69 | 0.69 | 0.69 | 0.19 | 0.19 |
| v/c Ratio | 0.53 | 0.61 | 0.63 | 0.77 | 0.38 |
| Control Delay | 10.2 | 49.3 | 23.5 | 60.8 | 37.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 10.2 | 49.3 | 23.5 | 60.8 | 37.9 |
| LOS | B | D | C | E | D |
| Approach Delay | 10.2 | | 24.3 | 53.6 | |
| Approach LOS | B | | C | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 117.5 (98%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.77 | |
| Intersection Signal Delay: 21.0 | Intersection LOS: C |
| Intersection Capacity Utilization 67.9% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave



| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1855 | 71 | 2223 | 259 | 120 |
| v/c Ratio | 0.53 | 0.61 | 0.63 | 0.77 | 0.38 |
| Control Delay | 10.2 | 49.3 | 23.5 | 60.8 | 37.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 10.2 | 49.3 | 23.5 | 60.8 | 37.9 |
| Queue Length 50th (ft) | 229 | 44 | 505 | 192 | 69 |
| Queue Length 95th (ft) | 326 | m86 | 674 | 267 | 118 |
| Internal Link Dist (ft) | 374 | | 2580 | 1227 | |
| Turn Bay Length (ft) | | 300 | | 125 | |
| Base Capacity (vph) | 3514 | 116 | 3523 | 498 | 458 |
| 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 | 0.53 | 0.61 | 0.63 | 0.52 | 0.26 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 1669 | 38 | 65 | 2045 | 238 | 110 |
| Future Volume (veh/h) | 1669 | 38 | 65 | 2045 | 238 | 110 |
| 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 | 1814 | 41 | 71 | 2223 | 259 | 120 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 3680 | 83 | 199 | 3658 | 297 | 265 |
| Arrive On Green | 0.72 | 0.72 | 0.72 | 0.72 | 0.17 | 0.17 |
| Sat Flow, veh/h | 5306 | 116 | 248 | 5274 | 1781 | 1585 |
| Grp Volume(v), veh/h | 1202 | 653 | 71 | 2223 | 259 | 120 |
| Grp Sat Flow(s),veh/h/ln | 1702 | 1849 | 248 | 1702 | 1781 | 1585 |
| Q Serve(g_s), s | 18.6 | 18.6 | 21.1 | 26.2 | 17.0 | 8.2 |
| Cycle Q Clear(g_c), s | 18.6 | 18.6 | 39.7 | 26.2 | 17.0 | 8.2 |
| Prop In Lane | | 0.06 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 2438 | 1325 | 199 | 3658 | 297 | 265 |
| V/C Ratio(X) | 0.49 | 0.49 | 0.36 | 0.61 | 0.87 | 0.45 |
| Avail Cap(c_a), veh/h | 2438 | 1325 | 199 | 3658 | 502 | 446 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.64 | 0.64 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 7.5 | 7.5 | 16.2 | 8.6 | 48.7 | 45.0 |
| Incr Delay (d2), s/veh | 0.7 | 1.3 | 3.2 | 0.5 | 8.6 | 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 | 5.7 | 6.5 | 1.3 | 7.9 | 8.2 | 3.3 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 8.2 | 8.8 | 19.3 | 9.0 | 57.3 | 46.3 |
| LnGrp LOS | A | A | B | A | E | D |
| Approach Vol, veh/h | 1855 | | | 2294 | 379 | |
| Approach Delay, s/veh | 8.4 | | | 9.4 | 53.8 | |
| Approach LOS | A | | | A | D | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 93.0 | | 27.0 | | 93.0 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 72.2 | | 33.8 | | 72.2 |
| Max Q Clear Time (g_c+I1), s | | 20.6 | | 19.0 | | 41.7 |
| Green Ext Time (p_c), s | | 19.4 | | 1.0 | | 22.7 |

| Intersection Summary | | | | | | |
|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 12.7 | | | |
| HCM 6th LOS | | | B | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.9 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ⇕ | | | ⇕ | | | ⇕ | | | ⇕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 25 | 0 | 23 | 10 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 25 | 0 | 23 | 10 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 27 | 0 | 25 | 11 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 122 | 88 | 11 | 88 | 88 | 27 | 11 | 0 | 0 | 27 | 0 | 0 |
| Stage 1 | 61 | 61 | - | 27 | 27 | - | - | - | - | - | - | - |
| Stage 2 | 61 | 27 | - | 61 | 61 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 853 | 802 | 1070 | 897 | 802 | 1048 | 1608 | - | - | 1587 | - | - |
| Stage 1 | 950 | 844 | - | 990 | 873 | - | - | - | - | - | - | - |
| Stage 2 | 950 | 873 | - | 950 | 844 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 787 | 789 | 1070 | 886 | 789 | 1048 | 1608 | - | - | 1587 | - | - |
| Mov Cap-2 Maneuver | 787 | 789 | - | 886 | 789 | - | - | - | - | - | - | - |
| Stage 1 | 950 | 830 | - | 990 | 873 | - | - | - | - | - | - | - |
| Stage 2 | 888 | 873 | - | 935 | 830 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.7 | 0 | 5.1 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1608 | - | - | - | 1048 | 1587 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.065 | 0.016 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.7 | 7.3 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | 0 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.9 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 72 | 26 | 8 | 680 | 595 | 26 |
| Future Vol, veh/h | 72 | 26 | 8 | 680 | 595 | 26 |
| 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 | 50 | 175 | - | - | 135 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 78 | 28 | 9 | 739 | 647 | 28 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1404 | 647 | 675 | 0 | - | 0 |
| Stage 1 | 647 | - | - | - | - | - |
| Stage 2 | 757 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 154 | 471 | 916 | - | - | - |
| Stage 1 | 521 | - | - | - | - | - |
| Stage 2 | 463 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 152 | 471 | 916 | - | - | - |
| Mov Cap-2 Maneuver | 152 | - | - | - | - | - |
| Stage 1 | 516 | - | - | - | - | - |
| Stage 2 | 463 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 41.2 | 0.1 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 916 | - | 152 | 471 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.515 | 0.06 | - | - |
| HCM Control Delay (s) | 9 | - | 51.4 | 13.1 | - | - |
| HCM Lane LOS | A | - | F | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 2.5 | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.8 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1 | 46 | 26 | 8 | 52 | 4 |
| Future Vol, veh/h | 1 | 46 | 26 | 8 | 52 | 4 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 50 | 28 | 9 | 57 | 4 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 37 | 0 | - | 0 | 85 | 33 |
| Stage 1 | - | - | - | - | 33 | - |
| Stage 2 | - | - | - | - | 52 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1574 | - | - | - | 916 | 1041 |
| Stage 1 | - | - | - | - | 989 | - |
| Stage 2 | - | - | - | - | 970 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1574 | - | - | - | 915 | 1041 |
| Mov Cap-2 Maneuver | - | - | - | - | 915 | - |
| Stage 1 | - | - | - | - | 988 | - |
| Stage 2 | - | - | - | - | 970 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.2 | 0 | 9.2 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1574 | - | - | - | 923 |
| HCM Lane V/C Ratio | 0.001 | - | - | - | 0.066 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 9.2 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ⇕ | | | ⇕ | | | ⇕ | | | ⇕ | |
| Traffic Vol, veh/h | 1 | 5 | 5 | 5 | 5 | 8 | 5 | 0 | 5 | 26 | 0 | 4 |
| Future Vol, veh/h | 1 | 5 | 5 | 5 | 5 | 8 | 5 | 0 | 5 | 26 | 0 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 5 | 5 | 5 | 5 | 9 | 5 | 0 | 5 | 28 | 0 | 4 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 14 | 0 | 0 | 10 | 0 | 0 | 32 | 34 | 8 | 32 | 32 | 10 |
| Stage 1 | - | - | - | - | - | - | 10 | 10 | - | 20 | 20 | - |
| Stage 2 | - | - | - | - | - | - | 22 | 24 | - | 12 | 12 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1604 | - | - | 1610 | - | - | 976 | 859 | 1074 | 976 | 861 | 1071 |
| Stage 1 | - | - | - | - | - | - | 1011 | 887 | - | 999 | 879 | - |
| Stage 2 | - | - | - | - | - | - | 996 | 875 | - | 1009 | 886 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1604 | - | - | 1610 | - | - | 969 | 856 | 1074 | 968 | 858 | 1071 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 969 | 856 | - | 968 | 858 | - |
| Stage 1 | - | - | - | - | - | - | 1010 | 886 | - | 998 | 876 | - |
| Stage 2 | - | - | - | - | - | - | 989 | 872 | - | 1003 | 885 | - |

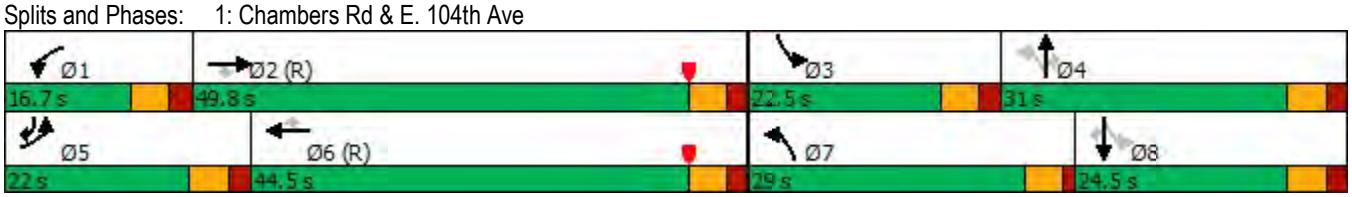
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.7 | 2 | 8.6 | 8.8 |
| HCM LOS | | | A | A |

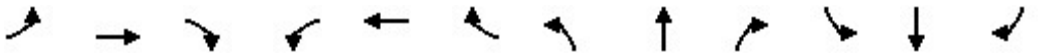
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1019 | 1604 | - | - | 1610 | - | - | 981 |
| HCM Lane V/C Ratio | 0.011 | 0.001 | - | - | 0.003 | - | - | 0.033 |
| HCM Control Delay (s) | 8.6 | 7.2 | 0 | - | 7.2 | 0 | - | 8.8 |
| HCM Lane LOS | A | A | A | - | A | A | - | A |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0.1 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 340 | 1240 | 317 | 163 | 1245 | 395 | 379 | 428 | 180 | 475 | 435 | 145 |
| Future Volume (vph) | 340 | 1240 | 317 | 163 | 1245 | 395 | 379 | 428 | 180 | 475 | 435 | 145 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 7 | 4 | | 3 | 8 | 5 |
| Permitted Phases | | | 2 | | | 6 | 4 | | 4 | 8 | | 8 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 7 | 4 | 4 | 3 | 8 | 5 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 23.5 | 10.5 | 24.5 | 24.5 | 9.5 | 23.5 | 23.5 | 10.5 | 24.5 | 10.5 |
| Total Split (s) | 22.0 | 49.8 | 49.8 | 16.7 | 44.5 | 44.5 | 29.0 | 31.0 | 31.0 | 22.5 | 24.5 | 22.0 |
| Total Split (%) | 18.3% | 41.5% | 41.5% | 13.9% | 37.1% | 37.1% | 24.2% | 25.8% | 25.8% | 18.8% | 20.4% | 18.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| Act Effct Green (s) | 16.5 | 49.2 | 49.2 | 10.7 | 43.4 | 43.4 | 38.3 | 21.5 | 21.5 | 39.9 | 23.3 | 45.3 |
| Actuated g/C Ratio | 0.14 | 0.41 | 0.41 | 0.09 | 0.36 | 0.36 | 0.32 | 0.18 | 0.18 | 0.33 | 0.19 | 0.38 |
| v/c Ratio | 0.78 | 0.65 | 0.40 | 0.58 | 0.74 | 0.52 | 0.63 | 0.73 | 0.44 | 0.80 | 0.69 | 0.24 |
| Control Delay | 74.3 | 24.4 | 2.0 | 60.4 | 37.1 | 6.1 | 32.8 | 55.6 | 12.4 | 39.0 | 50.6 | 8.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 74.3 | 24.4 | 2.0 | 60.4 | 37.1 | 6.1 | 32.8 | 55.6 | 12.4 | 39.0 | 50.6 | 8.8 |
| LOS | E | C | A | E | D | A | C | E | B | D | D | A |
| Approach Delay | | 29.6 | | | 32.4 | | | 39.0 | | | 39.6 | |
| Approach LOS | | C | | | C | | | D | | | D | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.80 | |
| Intersection Signal Delay: 33.9 | Intersection LOS: C |
| Intersection Capacity Utilization 77.5% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Chambers Rd & E. 104th Ave

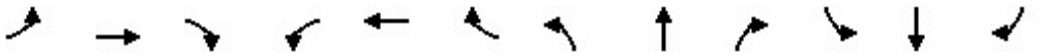




| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 370 | 1348 | 345 | 177 | 1353 | 429 | 412 | 465 | 196 | 516 | 473 | 158 |
| v/c Ratio | 0.78 | 0.65 | 0.40 | 0.58 | 0.74 | 0.52 | 0.63 | 0.73 | 0.44 | 0.80 | 0.69 | 0.24 |
| Control Delay | 74.3 | 24.4 | 2.0 | 60.4 | 37.1 | 6.1 | 32.8 | 55.6 | 12.4 | 39.0 | 50.6 | 8.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 74.3 | 24.4 | 2.0 | 60.4 | 37.1 | 6.1 | 32.8 | 55.6 | 12.4 | 39.0 | 50.6 | 8.8 |
| Queue Length 50th (ft) | 144 | 280 | 0 | 68 | 342 | 11 | 122 | 186 | 14 | 151 | 178 | 21 |
| Queue Length 95th (ft) | #211 | 287 | 25 | 106 | 412 | 91 | m157 | m234 | m69 | 189 | 239 | 67 |
| Internal Link Dist (ft) | | 2580 | | | 955 | | | 548 | | | 948 | |
| Turn Bay Length (ft) | 275 | | 300 | 380 | | 350 | 290 | | 250 | 285 | | 250 |
| Base Capacity (vph) | 487 | 2086 | 853 | 327 | 1839 | 832 | 880 | 752 | 487 | 654 | 687 | 674 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.76 | 0.65 | 0.40 | 0.54 | 0.74 | 0.52 | 0.47 | 0.62 | 0.40 | 0.79 | 0.69 | 0.23 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 340 | 1240 | 317 | 163 | 1245 | 395 | 379 | 428 | 180 | 475 | 435 | 145 |
| Future Volume (veh/h) | 340 | 1240 | 317 | 163 | 1245 | 395 | 379 | 428 | 180 | 475 | 435 | 145 |
| 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 | 370 | 1348 | 345 | 177 | 1353 | 0 | 412 | 465 | 196 | 516 | 473 | 158 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 422 | 2282 | 708 | 235 | 2005 | | 641 | 576 | 257 | 657 | 666 | 491 |
| Arrive On Green | 0.24 | 0.89 | 0.89 | 0.07 | 0.39 | 0.00 | 0.12 | 0.16 | 0.16 | 0.14 | 0.19 | 0.19 |
| Sat Flow, veh/h | 3456 | 5106 | 1585 | 3456 | 5106 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 370 | 1348 | 345 | 177 | 1353 | 0 | 412 | 465 | 196 | 516 | 473 | 158 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1702 | 1585 | 1728 | 1702 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 12.4 | 7.1 | 4.9 | 6.0 | 26.3 | 0.0 | 11.6 | 15.1 | 14.2 | 14.7 | 15.0 | 9.2 |
| Cycle Q Clear(g_c), s | 12.4 | 7.1 | 4.9 | 6.0 | 26.3 | 0.0 | 11.6 | 15.1 | 14.2 | 14.7 | 15.0 | 9.2 |
| 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 | 422 | 2282 | 708 | 235 | 2005 | | 641 | 576 | 257 | 657 | 666 | 491 |
| V/C Ratio(X) | 0.88 | 0.59 | 0.49 | 0.75 | 0.67 | | 0.64 | 0.81 | 0.76 | 0.79 | 0.71 | 0.32 |
| Avail Cap(c_a), veh/h | 475 | 2282 | 708 | 323 | 2005 | | 922 | 755 | 337 | 663 | 666 | 491 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.72 | 0.72 | 0.72 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 44.5 | 3.9 | 3.8 | 54.9 | 30.1 | 0.0 | 35.7 | 48.5 | 48.1 | 35.7 | 45.7 | 31.8 |
| Incr Delay (d2), s/veh | 11.8 | 0.8 | 1.7 | 6.4 | 1.8 | 0.0 | 1.1 | 4.9 | 7.3 | 6.1 | 3.5 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.2 | 1.5 | 1.4 | 2.8 | 10.6 | 0.0 | 4.9 | 7.0 | 6.0 | 6.6 | 6.8 | 3.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 56.2 | 4.7 | 5.5 | 61.4 | 31.9 | 0.0 | 36.7 | 53.4 | 55.4 | 41.9 | 49.2 | 32.1 |
| LnGrp LOS | E | A | A | E | C | | D | D | E | D | D | C |
| Approach Vol, veh/h | | 2063 | | | 1530 | | | 1073 | | | 1147 | |
| Approach Delay, s/veh | | 14.1 | | | 35.3 | | | 47.4 | | | 43.6 | |
| Approach LOS | | B | | | D | | | D | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.7 | 59.1 | 22.3 | 24.9 | 20.2 | 52.6 | 19.2 | 28.0 |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 5.5 |
| Max Green Setting (Gmax), s | 11.2 | 44.3 | 17.0 | 25.5 | 16.5 | 39.0 | 24.5 | 19.0 |
| Max Q Clear Time (g_c+I1), s | 8.0 | 9.1 | 16.7 | 17.1 | 14.4 | 28.3 | 13.6 | 17.0 |
| Green Ext Time (p_c), s | 0.1 | 13.4 | 0.1 | 2.3 | 0.3 | 6.2 | 1.1 | 0.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 31.6 |
| HCM 6th LOS | C |

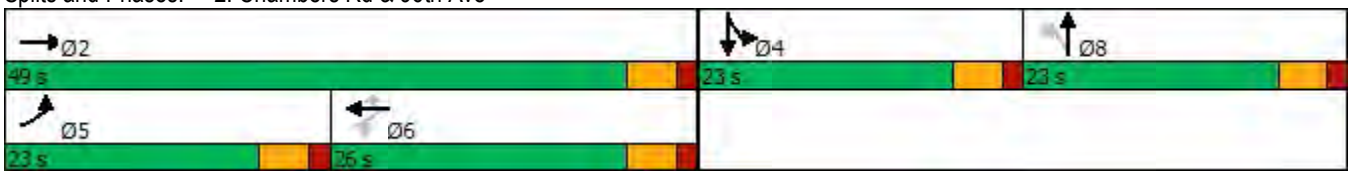
**Notes**

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Traffic Volume (vph) | 433 | 1065 | 810 | 264 | 2 | 270 | 2 |
| Future Volume (vph) | 433 | 1065 | 810 | 264 | 2 | 270 | 2 |
| Turn Type | Prot | NA | NA | Perm | NA | Split | NA |
| Protected Phases | 5 | 2 | 6 | | 8 | 4 | 4 |
| Permitted Phases | | | | 6 | | | |
| Detector Phase | 5 | 2 | 6 | 6 | 8 | 4 | 4 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| Total Split (s) | 23.0 | 49.0 | 26.0 | 26.0 | 23.0 | 23.0 | 23.0 |
| Total Split (%) | 24.2% | 51.6% | 27.4% | 27.4% | 24.2% | 24.2% | 24.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | | Lag | Lag | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | |
| Recall Mode | None | Min | None | None | None | None | None |
| Act Effct Green (s) | 18.1 | 44.2 | 21.1 | 21.1 | 5.9 | 16.7 | 16.7 |
| Actuated g/C Ratio | 0.25 | 0.61 | 0.29 | 0.29 | 0.08 | 0.23 | 0.23 |
| v/c Ratio | 1.02 | 0.51 | 0.83 | 0.42 | 0.06 | 0.73 | 0.35 |
| Control Delay | 79.0 | 10.2 | 34.4 | 5.6 | 27.5 | 38.8 | 6.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 79.0 | 10.2 | 34.4 | 5.6 | 27.5 | 38.8 | 6.9 |
| LOS | E | B | C | A | C | D | A |
| Approach Delay | | 30.0 | 27.3 | | 27.5 | | 27.0 |
| Approach LOS | | C | C | | C | | C |

| Intersection Summary | |
|---|---|
| Cycle Length: 95 | |
| Actuated Cycle Length: 73 | |
| Natural Cycle: 105 | |
| Control Type: Semi Act-Uncoord | |
| Maximum v/c Ratio: 1.02 | |
| Intersection Signal Delay: 28.6 | Intersection LOS: C |
| Intersection Capacity Utilization 86.0% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 2: Chambers Rd & 96th Ave

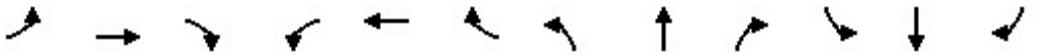


| Lane Group | EBL | EBT | WBT | WBR | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 446 | 1098 | 853 | 278 | 8 | 293 | 172 |
| v/c Ratio | 1.02 | 0.51 | 0.83 | 0.42 | 0.06 | 0.73 | 0.35 |
| Control Delay | 79.0 | 10.2 | 34.4 | 5.6 | 27.5 | 38.8 | 6.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 79.0 | 10.2 | 34.4 | 5.6 | 27.5 | 38.8 | 6.9 |
| Queue Length 50th (ft) | ~201 | 128 | 184 | 0 | 2 | 117 | 1 |
| Queue Length 95th (ft) | #462 | 256 | #353 | 58 | 8 | #266 | 50 |
| Internal Link Dist (ft) | | 1966 | 2271 | | 176 | | 2584 |
| Turn Bay Length (ft) | 425 | | | 300 | | 175 | |
| Base Capacity (vph) | 438 | 2143 | 1023 | 655 | 433 | 438 | 521 |
| 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 | 1.02 | 0.51 | 0.83 | 0.42 | 0.02 | 0.67 | 0.33 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 433 | 1065 | 0 | 0 | 810 | 264 | 0 | 2 | 2 | 270 | 2 | 156 |
| Future Volume (veh/h) | 433 | 1065 | 0 | 0 | 810 | 264 | 0 | 2 | 2 | 270 | 2 | 156 |
| 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 | 446 | 1098 | 0 | 0 | 853 | 278 | 0 | 4 | 4 | 293 | 2 | 170 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.50 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 437 | 2093 | 0 | 0 | 979 | 436 | 0 | 9 | 9 | 350 | 4 | 308 |
| Arrive On Green | 0.25 | 0.59 | 0.00 | 0.00 | 0.28 | 0.28 | 0.00 | 0.01 | 0.01 | 0.20 | 0.20 | 0.20 |
| Sat Flow, veh/h | 1781 | 3647 | 0 | 0 | 3647 | 1585 | 0 | 858 | 858 | 1781 | 18 | 1569 |
| Grp Volume(v), veh/h | 446 | 1098 | 0 | 0 | 853 | 278 | 0 | 0 | 8 | 293 | 0 | 172 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 0 | 0 | 1777 | 1585 | 0 | 0 | 1716 | 1781 | 0 | 1588 |
| Q Serve(g_s), s | 18.0 | 13.5 | 0.0 | 0.0 | 16.8 | 11.3 | 0.0 | 0.0 | 0.3 | 11.6 | 0.0 | 7.2 |
| Cycle Q Clear(g_c), s | 18.0 | 13.5 | 0.0 | 0.0 | 16.8 | 11.3 | 0.0 | 0.0 | 0.3 | 11.6 | 0.0 | 7.2 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.00 | | 0.50 | 1.00 | | 0.99 |
| Lane Grp Cap(c), veh/h | 437 | 2093 | 0 | 0 | 979 | 436 | 0 | 0 | 18 | 350 | 0 | 312 |
| V/C Ratio(X) | 1.02 | 0.52 | 0.00 | 0.00 | 0.87 | 0.64 | 0.00 | 0.00 | 0.45 | 0.84 | 0.00 | 0.55 |
| Avail Cap(c_a), veh/h | 437 | 2131 | 0 | 0 | 1017 | 454 | 0 | 0 | 421 | 437 | 0 | 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 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.7 | 9.0 | 0.0 | 0.0 | 25.3 | 23.4 | 0.0 | 0.0 | 36.1 | 28.3 | 0.0 | 26.6 |
| Incr Delay (d2), s/veh | 48.4 | 0.2 | 0.0 | 0.0 | 8.2 | 2.8 | 0.0 | 0.0 | 17.2 | 11.1 | 0.0 | 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 | 13.1 | 4.4 | 0.0 | 0.0 | 7.8 | 4.3 | 0.0 | 0.0 | 0.2 | 5.7 | 0.0 | 2.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 76.0 | 9.2 | 0.0 | 0.0 | 33.5 | 26.2 | 0.0 | 0.0 | 53.3 | 39.5 | 0.0 | 28.1 |
| LnGrp LOS | F | A | A | A | C | C | A | A | D | D | A | C |
| Approach Vol, veh/h | | 1544 | | | 1131 | | | 8 | | | 465 | |
| Approach Delay, s/veh | | 28.5 | | | 31.7 | | | 53.3 | | | 35.3 | |
| Approach LOS | | C | | | C | | | D | | | D | |

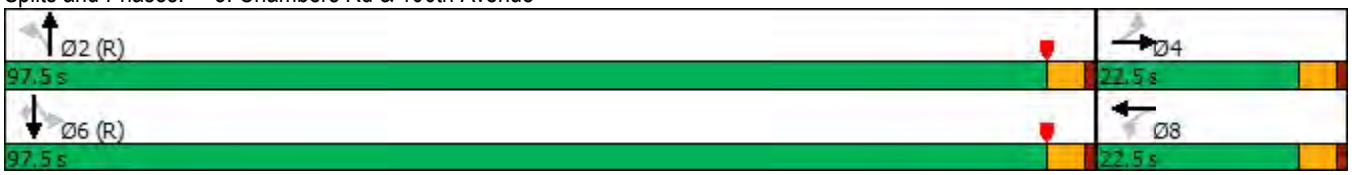
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 48.2 | | 19.4 | 23.0 | 25.2 | | 5.8 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | 5.0 | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | | 18.0 | 18.0 | 21.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.5 | | 13.6 | 20.0 | 18.8 | | 2.3 | | | | |
| Green Ext Time (p_c), s | | 9.5 | | 0.8 | 0.0 | 1.4 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 30.7 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 55 | 8 | 45 | 11 | 55 | 592 | 245 | 466 | 85 |
| Future Volume (vph) | 55 | 8 | 45 | 11 | 55 | 592 | 245 | 466 | 85 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 97.5 | 97.5 | 97.5 | 97.5 | 97.5 |
| Total Split (%) | 18.8% | 18.8% | 18.8% | 18.8% | 81.3% | 81.3% | 81.3% | 81.3% | 81.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 15.5 | 15.5 | 15.5 | 15.5 | 95.5 | 95.5 | 95.5 | 95.5 | 95.5 |
| Actuated g/C Ratio | 0.13 | 0.13 | 0.13 | 0.13 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| v/c Ratio | 0.97 | 0.13 | 0.28 | 0.56 | 0.09 | 0.52 | 0.55 | 0.34 | 0.07 |
| Control Delay | 157.5 | 23.5 | 49.9 | 13.6 | 3.5 | 5.9 | 11.8 | 2.7 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 157.5 | 23.5 | 49.9 | 13.6 | 3.5 | 5.9 | 11.8 | 2.7 | 0.2 |
| LOS | F | C | D | B | A | A | B | A | A |
| Approach Delay | | 111.9 | | 20.4 | | 5.8 | | 5.2 | |
| Approach LOS | | F | | C | | A | | A | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.97 | |
| Intersection Signal Delay: 12.2 | Intersection LOS: B |
| Intersection Capacity Utilization 82.0% | ICU Level of Service D |
| Analysis Period (min) 15 | |

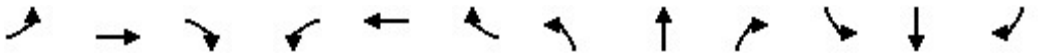
Splits and Phases: 3: Chambers Rd & 100th Avenue



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 60 | 31 | 49 | 213 | 60 | 752 | 266 | 507 | 92 |
| v/c Ratio | 0.97 | 0.13 | 0.28 | 0.56 | 0.09 | 0.52 | 0.55 | 0.34 | 0.07 |
| Control Delay | 157.5 | 23.5 | 49.9 | 13.6 | 3.5 | 5.9 | 11.8 | 2.7 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 157.5 | 23.5 | 49.9 | 13.6 | 3.5 | 5.9 | 11.8 | 2.7 | 0.2 |
| Queue Length 50th (ft) | 46 | 6 | 34 | 8 | 9 | 179 | 40 | 61 | 0 |
| Queue Length 95th (ft) | #130 | 35 | 73 | 80 | 20 | 251 | 125 | 73 | m1 |
| Internal Link Dist (ft) | | 625 | | 478 | | 2584 | | 1270 | |
| Turn Bay Length (ft) | 150 | | 100 | | 235 | | 235 | | 135 |
| Base Capacity (vph) | 72 | 268 | 205 | 410 | 669 | 1454 | 486 | 1482 | 1278 |
| 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 | 0.83 | 0.12 | 0.24 | 0.52 | 0.09 | 0.52 | 0.55 | 0.34 | 0.07 |

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.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 8 | 20 | 45 | 11 | 185 | 55 | 592 | 100 | 245 | 466 | 85 |
| Future Volume (veh/h) | 55 | 8 | 20 | 45 | 11 | 185 | 55 | 592 | 100 | 245 | 466 | 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 | | 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 | 60 | 9 | 22 | 49 | 12 | 201 | 60 | 643 | 109 | 266 | 507 | 92 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 83 | 72 | 177 | 244 | 14 | 226 | 677 | 1208 | 205 | 499 | 1450 | 1228 |
| Arrive On Green | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Sat Flow, veh/h | 1168 | 482 | 1177 | 1378 | 90 | 1509 | 892 | 1559 | 264 | 711 | 1870 | 1585 |
| Grp Volume(v), veh/h | 60 | 0 | 31 | 49 | 0 | 213 | 60 | 0 | 752 | 266 | 507 | 92 |
| Grp Sat Flow(s),veh/h/ln | 1168 | 0 | 1659 | 1378 | 0 | 1599 | 892 | 0 | 1823 | 711 | 1870 | 1585 |
| Q Serve(g_s), s | 2.3 | 0.0 | 1.9 | 3.8 | 0.0 | 15.7 | 2.7 | 0.0 | 19.0 | 27.5 | 10.0 | 1.7 |
| Cycle Q Clear(g_c), s | 18.0 | 0.0 | 1.9 | 5.8 | 0.0 | 15.7 | 12.7 | 0.0 | 19.0 | 46.4 | 10.0 | 1.7 |
| Prop In Lane | 1.00 | | 0.71 | 1.00 | | 0.94 | 1.00 | | 0.14 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 83 | 0 | 249 | 244 | 0 | 240 | 677 | 0 | 1413 | 499 | 1450 | 1228 |
| V/C Ratio(X) | 0.73 | 0.00 | 0.12 | 0.20 | 0.00 | 0.89 | 0.09 | 0.00 | 0.53 | 0.53 | 0.35 | 0.07 |
| Avail Cap(c_a), veh/h | 83 | 0 | 249 | 244 | 0 | 240 | 677 | 0 | 1413 | 499 | 1450 | 1228 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 0.53 | 0.00 | 0.53 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 59.6 | 0.0 | 44.2 | 46.7 | 0.0 | 50.0 | 6.1 | 0.0 | 5.2 | 14.1 | 4.2 | 3.2 |
| Incr Delay (d2), s/veh | 27.1 | 0.0 | 0.2 | 0.4 | 0.0 | 30.6 | 0.1 | 0.0 | 0.8 | 4.1 | 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 | 2.4 | 0.0 | 0.8 | 1.3 | 0.0 | 8.3 | 0.5 | 0.0 | 6.2 | 4.8 | 3.5 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 86.6 | 0.0 | 44.4 | 47.1 | 0.0 | 80.6 | 6.3 | 0.0 | 5.9 | 18.1 | 4.8 | 3.3 |
| LnGrp LOS | F | A | D | D | A | F | A | A | A | B | A | A |
| Approach Vol, veh/h | | 91 | | | 262 | | | 812 | | | 865 | |
| Approach Delay, s/veh | | 72.2 | | | 74.3 | | | 6.0 | | | 8.8 | |
| Approach LOS | | E | | | E | | | A | | | A | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 97.5 | | 22.5 | | 97.5 | | 22.5 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 93.0 | | 18.0 | | 93.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 21.0 | | 20.0 | | 48.4 | | 17.7 | | | | |
| Green Ext Time (p_c), s | | 7.5 | | 0.0 | | 7.1 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 18.9 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Traffic Volume (vph) | 2202 | 135 | 1889 | 115 | 85 |
| Future Volume (vph) | 2202 | 135 | 1889 | 115 | 85 |
| Turn Type | NA | Perm | NA | Prot | Perm |
| Protected Phases | 2 | | 6 | 4 | |
| Permitted Phases | | 6 | | | 4 |
| Detector Phase | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 37.0 | 22.5 | 22.5 | 35.0 | 35.0 |
| Total Split (s) | 82.0 | 82.0 | 82.0 | 38.0 | 38.0 |
| Total Split (%) | 68.3% | 68.3% | 68.3% | 31.7% | 31.7% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Recall Mode | C-Max | C-Max | C-Max | None | None |
| Act Effct Green (s) | 92.2 | 92.2 | 92.2 | 13.8 | 13.8 |
| Actuated g/C Ratio | 0.77 | 0.77 | 0.77 | 0.12 | 0.12 |
| v/c Ratio | 0.65 | 2.41 | 0.53 | 0.62 | 0.49 |
| Control Delay | 7.8 | 693.4 | 9.1 | 62.9 | 55.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.8 | 693.4 | 9.1 | 62.9 | 55.1 |
| LOS | A | F | A | E | E |
| Approach Delay | 7.8 | | 54.9 | 59.6 | |
| Approach LOS | A | | D | E | |

| Intersection Summary | |
|---|---|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 2.41 | |
| Intersection Signal Delay: 31.1 | Intersection LOS: C |
| Intersection Capacity Utilization 76.4% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 4: Sable Blvd & E. 104th Ave

| Lane Group | EBT | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 2517 | 147 | 2053 | 125 | 92 |
| v/c Ratio | 0.65 | 2.41 | 0.53 | 0.62 | 0.49 |
| Control Delay | 7.8 | 693.4 | 9.1 | 62.9 | 55.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.8 | 693.4 | 9.1 | 62.9 | 55.1 |
| Queue Length 50th (ft) | 276 | ~177 | 416 | 94 | 64 |
| Queue Length 95th (ft) | 389 | m#289 | 476 | 151 | 113 |
| Internal Link Dist (ft) | 374 | | 2580 | 1227 | |
| Turn Bay Length (ft) | | 300 | | 125 | |
| Base Capacity (vph) | 3882 | 61 | 3905 | 457 | 412 |
| 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 | 0.65 | 2.41 | 0.53 | 0.27 | 0.22 |

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.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 2202 | 114 | 135 | 1889 | 115 | 85 |
| Future Volume (veh/h) | 2202 | 114 | 135 | 1889 | 115 | 85 |
| 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 | 2393 | 124 | 147 | 2053 | 125 | 92 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 3944 | 203 | 137 | 4049 | 161 | 143 |
| Arrive On Green | 0.79 | 0.79 | 0.53 | 0.53 | 0.09 | 0.09 |
| Sat Flow, veh/h | 5141 | 255 | 129 | 5274 | 1781 | 1585 |
| Grp Volume(v), veh/h | 1631 | 886 | 147 | 2053 | 125 | 92 |
| Grp Sat Flow(s),veh/h/ln | 1702 | 1824 | 129 | 1702 | 1781 | 1585 |
| Q Serve(g_s), s | 22.9 | 23.4 | 71.7 | 30.9 | 8.2 | 6.7 |
| Cycle Q Clear(g_c), s | 22.9 | 23.4 | 95.2 | 30.9 | 8.2 | 6.7 |
| Prop In Lane | | 0.14 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 2700 | 1447 | 137 | 4049 | 161 | 143 |
| V/C Ratio(X) | 0.60 | 0.61 | 1.07 | 0.51 | 0.78 | 0.64 |
| Avail Cap(c_a), veh/h | 2700 | 1447 | 137 | 4049 | 460 | 409 |
| HCM Platoon Ratio | 1.00 | 1.00 | 0.67 | 0.67 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.69 | 0.69 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 4.9 | 5.0 | 55.5 | 13.1 | 53.4 | 52.7 |
| Incr Delay (d2), s/veh | 1.0 | 1.9 | 84.2 | 0.3 | 7.8 | 4.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.7 | 7.7 | 7.5 | 13.0 | 4.0 | 2.9 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 5.9 | 6.9 | 139.7 | 13.4 | 61.2 | 57.5 |
| LnGrp LOS | A | A | F | B | E | E |
| Approach Vol, veh/h | 2517 | | | 2200 | 217 | |
| Approach Delay, s/veh | 6.3 | | | 21.8 | 59.6 | |
| Approach LOS | A | | | C | E | |

| Timer - Assigned Phs | | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | | 102.2 | | 17.8 | | 102.2 |
| Change Period (Y+Rc), s | | 7.0 | | 7.0 | | 7.0 |
| Max Green Setting (Gmax), s | | 75.0 | | 31.0 | | 75.0 |
| Max Q Clear Time (g_c+I1), s | | 25.4 | | 10.2 | | 97.2 |
| Green Ext Time (p_c), s | | 35.6 | | 0.6 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 15.6 |
| HCM 6th LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 20 | 0 | 69 | 30 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 20 | 0 | 69 | 30 | 0 |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 22 | 0 | 75 | 33 | 0 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 230 | 205 | 33 | 205 | 205 | 22 | 33 | 0 | 0 | 22 | 0 | 0 |
| Stage 1 | 183 | 183 | - | 22 | 22 | - | - | - | - | - | - | - |
| Stage 2 | 47 | 22 | - | 183 | 183 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 725 | 691 | 1041 | 753 | 691 | 1055 | 1579 | - | - | 1593 | - | - |
| Stage 1 | 819 | 748 | - | 996 | 877 | - | - | - | - | - | - | - |
| Stage 2 | 967 | 877 | - | 819 | 748 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 666 | 658 | 1041 | 725 | 658 | 1055 | 1579 | - | - | 1593 | - | - |
| Mov Cap-2 Maneuver | 666 | 658 | - | 725 | 658 | - | - | - | - | - | - | - |
| Stage 1 | 819 | 712 | - | 996 | 877 | - | - | - | - | - | - | - |
| Stage 2 | 922 | 877 | - | 780 | 712 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 8.6 | 0 | 5.1 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1579 | - | - | - | 1055 | 1593 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.046 | 0.047 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 8.6 | 7.4 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 42 | 16 | 27 | 765 | 720 | 75 |
| Future Vol, veh/h | 42 | 16 | 27 | 765 | 720 | 75 |
| 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 | 50 | 175 | - | - | 135 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 46 | 17 | 29 | 832 | 783 | 82 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1673 | 783 | 865 | 0 | - | 0 |
| Stage 1 | 783 | - | - | - | - | - |
| Stage 2 | 890 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 105 | 394 | 778 | - | - | - |
| Stage 1 | 450 | - | - | - | - | - |
| Stage 2 | 401 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 101 | 394 | 778 | - | - | - |
| Mov Cap-2 Maneuver | 101 | - | - | - | - | - |
| Stage 1 | 433 | - | - | - | - | - |
| Stage 2 | 401 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 52.7 | 0.3 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 778 | - | 101 | 394 | - | - |
| HCM Lane V/C Ratio | 0.038 | - | 0.452 | 0.044 | - | - |
| HCM Control Delay (s) | 9.8 | - | 67.2 | 14.6 | - | - |
| HCM Lane LOS | A | - | F | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 1.9 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.2 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 26 | 75 | 27 | 32 | 3 |
| Future Vol, veh/h | 5 | 26 | 75 | 27 | 32 | 3 |
| 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, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 28 | 82 | 29 | 35 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 111 | 0 | - | 0 | 135 | 97 |
| Stage 1 | - | - | - | - | 97 | - |
| Stage 2 | - | - | - | - | 38 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1479 | - | - | - | 859 | 959 |
| Stage 1 | - | - | - | - | 927 | - |
| Stage 2 | - | - | - | - | 984 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1479 | - | - | - | 856 | 959 |
| Mov Cap-2 Maneuver | - | - | - | - | 856 | - |
| Stage 1 | - | - | - | - | 924 | - |
| Stage 2 | - | - | - | - | 984 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1.2 | 0 | 9.4 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1479 | - | - | - | 864 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.044 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 9.4 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4 |

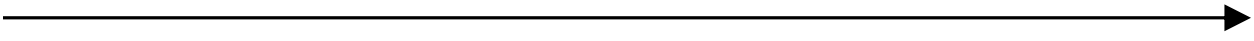
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 5 | 5 | 5 | 5 | 27 | 5 | 0 | 5 | 16 | 0 | 3 |
| Future Vol, veh/h | 5 | 5 | 5 | 5 | 5 | 27 | 5 | 0 | 5 | 16 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 5 | 5 | 5 | 5 | 29 | 5 | 0 | 5 | 17 | 0 | 3 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 34 | 0 | 0 | 10 | 0 | 0 | 49 | 62 | 8 | 50 | 50 | 20 |
| Stage 1 | - | - | - | - | - | - | 18 | 18 | - | 30 | 30 | - |
| Stage 2 | - | - | - | - | - | - | 31 | 44 | - | 20 | 20 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1578 | - | - | 1610 | - | - | 951 | 829 | 1074 | 950 | 841 | 1058 |
| Stage 1 | - | - | - | - | - | - | 1001 | 880 | - | 987 | 870 | - |
| Stage 2 | - | - | - | - | - | - | 986 | 858 | - | 999 | 879 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1578 | - | - | 1610 | - | - | 943 | 824 | 1074 | 941 | 836 | 1058 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 943 | 824 | - | 941 | 836 | - |
| Stage 1 | - | - | - | - | - | - | 998 | 877 | - | 984 | 867 | - |
| Stage 2 | - | - | - | - | - | - | 980 | 855 | - | 991 | 876 | - |

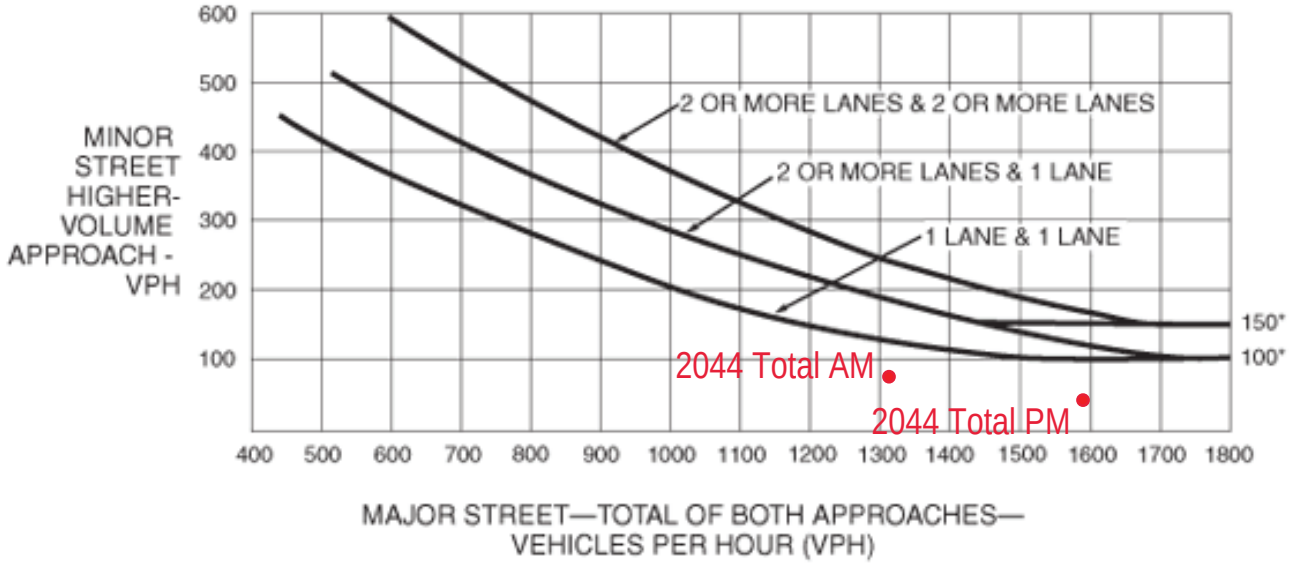
| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 2.4 | 1 | 8.6 | 8.8 |
| HCM LOS | | | A | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1004 | 1578 | - | - | 1610 | - | - | 958 |
| HCM Lane V/C Ratio | 0.011 | 0.003 | - | - | 0.003 | - | - | 0.022 |
| HCM Control Delay (s) | 8.6 | 7.3 | 0 | - | 7.2 | 0 | - | 8.8 |
| HCM Lane LOS | A | A | A | - | A | A | - | A |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0.1 |

*MUTCD Peak Hour Signal Warrant*
*102nd Avenue & Chambers Road*



## Figure 4C-3. Warrant 3, Peak Hour



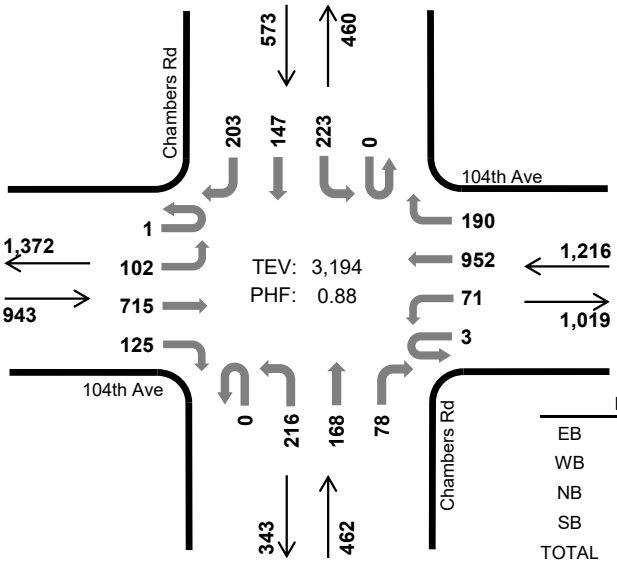

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

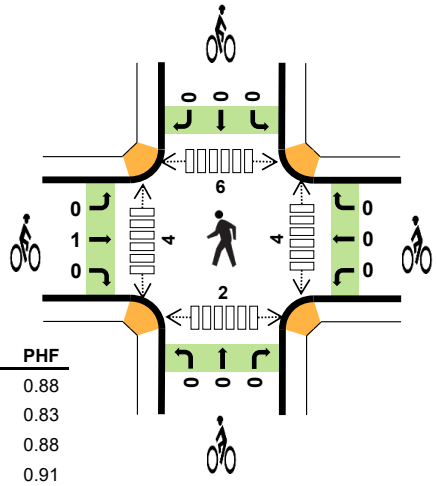
*Traffic Count Data Sheets*

# Chambers Rd
# 104th Ave

**Date: 11/14/2023**
**Count Period: 7:00 AM to 9:00 AM**
**Peak Hour: 7:30 AM to 8:30 AM**

Peak Hour




| | HV %: | PHF |
|---|---|---|
| EB | 5.3% | 0.88 |
| WB | 2.8% | 0.83 |
| NB | 3.2% | 0.88 |
| SB | 2.1% | 0.91 |
| TOTAL | 3.5% | 0.88 |

## Two-Hour Count Summaries

| Interval Start | | 104th Ave Eastbound | | | | 104th Ave Westbound | | | | Chambers Rd Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | | 0 | 7 | 146 | 18 | 0 | 3 | 185 | 30 | 0 | 35 | 45 | 8 | 0 | 32 | 47 | 32 | 588 | 0 |
| 7:15 AM | | 0 | 15 | 173 | 29 | 0 | 11 | 202 | 28 | 0 | 42 | 36 | 15 | 0 | 46 | 45 | 55 | 697 | 0 |
| **7:30 AM** | | **0** | **26** | **198** | **43** | **0** | **10** | **206** | **40** | **0** | **65** | **31** | **28** | **0** | **42** | **36** | **65** | **790** | 0 |
| **7:45 AM** | | **0** | **38** | **186** | **28** | **0** | **29** | **292** | **45** | **0** | **48** | **58** | **26** | **0** | **58** | **40** | **60** | **908** | 2,983 |
| **8:00 AM** | | **1** | **20** | **142** | **25** | **3** | **19** | **264** | **51** | **0** | **57** | **42** | **15** | **0** | **68** | **35** | **49** | **791** | 3,186 |
| **8:15 AM** | | **0** | **18** | **189** | **29** | **0** | **13** | **190** | **54** | **0** | **46** | **37** | **9** | **0** | **55** | **36** | **29** | **705** | **3,194** |
| 8:30 AM | | 0 | 24 | 132 | 25 | 0 | 9 | 150 | 39 | 0 | 32 | 31 | 4 | 0 | 59 | 45 | 23 | 573 | 2,977 |
| 8:45 AM | | 0 | 23 | 122 | 22 | 0 | 5 | 143 | 32 | 0 | 28 | 25 | 11 | 0 | 26 | 24 | 29 | 490 | 2,559 |
| Count Total | | 1 | 171 | 1,288 | 219 | 3 | 99 | 1,632 | 319 | 0 | 353 | 305 | 116 | 0 | 386 | 308 | 342 | 5,542 | 0 |
| **Peak Hour** | **All** | **1** | **102** | **715** | **125** | **3** | **71** | **952** | **190** | **0** | **216** | **168** | **78** | **0** | **223** | **147** | **203** | **3,194** | **0** |
| | **HV** | **0** | **5** | **41** | **4** | **0** | **2** | **25** | **7** | **0** | **5** | **9** | **1** | **0** | **5** | **5** | **2** | **111** | **0** |
| | **HV%** | **0%** | **5%** | **6%** | **3%** | **0%** | **3%** | **3%** | **4%** | **-** | **2%** | **5%** | **1%** | **-** | **2%** | **3%** | **1%** | **3%** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 16 | 5 | 3 | 2 | *26* | 0 | 0 | 0 | 0 | *0* | 1 | 0 | 2 | 0 | *3* |
| 7:15 AM | 13 | 4 | 3 | 5 | *25* | 0 | 0 | 0 | 0 | *0* | 1 | 1 | 1 | 0 | *3* |
| **7:30 AM** | **16** | **9** | **3** | **3** | ***31*** | **1** | **0** | **0** | **0** | ***1*** | **3** | **0** | **3** | **1** | *7* |
| **7:45 AM** | **13** | **10** | **3** | **6** | ***32*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **3** | **1** | **0** | *4* |
| **8:00 AM** | **7** | **6** | **7** | **1** | ***21*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **2** | **0** | *3* |
| **8:15 AM** | **14** | **9** | **2** | **2** | ***27*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **1** | **0** | **1** | ***2*** |
| 8:30 AM | 7 | 6 | 2 | 1 | *16* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 1 | *1* |
| 8:45 AM | 9 | 6 | 1 | 2 | *18* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 1 | *1* |
| Count Total | 95 | 55 | 24 | 22 | *196* | 1 | 0 | 0 | 0 | *1* | 6 | 5 | 9 | 4 | *24* |
| **Peak Hour** | **50** | **34** | **15** | **12** | ***111*** | **1** | **0** | **0** | **0** | ***1*** | **4** | **4** | **6** | **2** | ***16*** |

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## Two-Hour Count Summaries - Heavy Vehicles

| Interval Start | 104th Ave Eastbound | | | | 104th Ave Westbound | | | | Chambers Rd Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 16 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 0 | 26 | 0 |
| 7:15 AM | 0 | 1 | 10 | 2 | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 0 | 2 | 1 | 2 | 25 | 0 |
| **7:30 AM** | **0** | **1** | **13** | **2** | **0** | **0** | **8** | **1** | **0** | **1** | **1** | **1** | **0** | **2** | **1** | **0** | **31** | 0 |
| **7:45 AM** | **0** | **4** | **7** | **2** | **0** | **2** | **6** | **2** | **0** | **1** | **2** | **0** | **0** | **1** | **3** | **2** | **32** | 114 |
| **8:00 AM** | **0** | **0** | **7** | **0** | **0** | **0** | **6** | **0** | **0** | **2** | **5** | **0** | **0** | **1** | **0** | **0** | **21** | 109 |
| **8:15 AM** | **0** | **0** | **14** | **0** | **0** | **0** | **5** | **4** | **0** | **1** | **1** | **0** | **0** | **1** | **1** | **0** | **27** | **111** |
| 8:30 AM | 0 | 1 | 5 | 1 | 0 | 0 | 4 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 16 | 96 |
| 8:45 AM | 0 | 2 | 7 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 18 | 82 |
| Count Total | 0 | 9 | 79 | 7 | 0 | 3 | 39 | 13 | 0 | 8 | 13 | 3 | 0 | 8 | 9 | 5 | 196 | 0 |
| **Peak Hour** | **0** | **5** | **41** | **4** | **0** | **2** | **25** | **7** | **0** | **5** | **9** | **1** | **0** | **5** | **5** | **2** | **111** | **0** |

## Two-Hour Count Summaries - Bikes

| Interval Start | 104th Ave Eastbound | | | 104th Ave Westbound | | | Chambers Rd Northbound | | | Chambers Rd Southbound | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **7:30 AM** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | 0 |
| **7:45 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 1 |
| **8:00 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 1 |
| **8:15 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Peak Hour** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** |

*Note: U-Turn volumes for bikes are included in Left-Turn, if any.*

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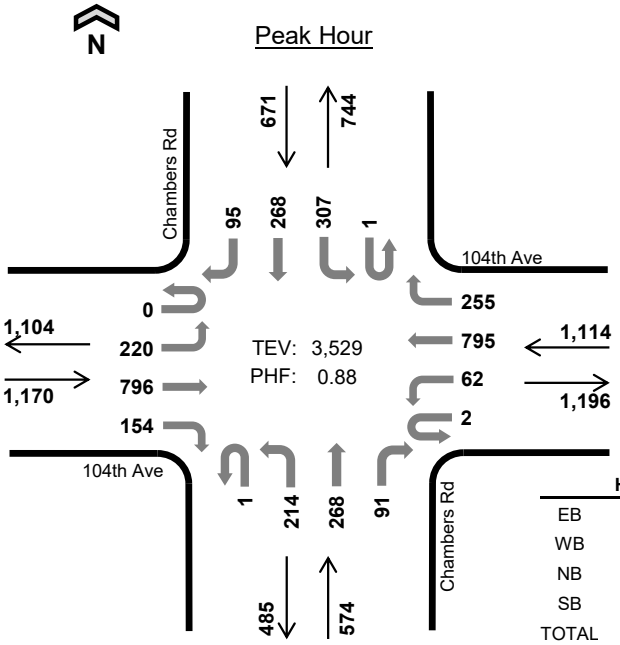
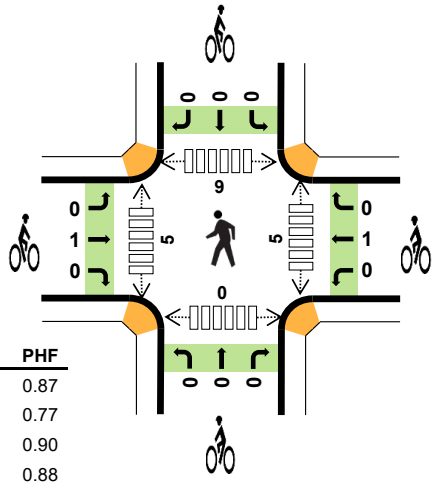
# Chambers Rd
# 104th Ave

**Date:** 11/14/2023
**Count Period:** 4:00 PM to 6:00 PM
**Peak Hour:** 4:15 PM to 5:15 PM




| | HV %: | PHF |
|---|---|---|
| EB | 1.1% | 0.87 |
| WB | 3.0% | 0.77 |
| NB | 0.7% | 0.90 |
| SB | 1.0% | 0.88 |
| TOTAL | 1.6% | 0.88 |




## Two-Hour Count Summaries

| Interval Start | 104th Ave Eastbound | | | | 104th Ave Westbound | | | | Chambers Rd Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 51 | 175 | 31 | 0 | 15 | 178 | 48 | 2 | 45 | 45 | 15 | 0 | 79 | 58 | 23 | 765 | 0 |
| **4:15 PM** | **0** | **42** | **193** | **36** | **0** | **18** | **181** | **48** | **1** | **43** | **63** | **17** | **0** | **84** | **78** | **19** | **823** | 0 |
| **4:30 PM** | **0** | **56** | **191** | **30** | **2** | **14** | **200** | **59** | **0** | **59** | **66** | **29** | **0** | **73** | **61** | **16** | **856** | 0 |
| **4:45 PM** | **0** | **76** | **216** | **43** | **0** | **16** | **261** | **84** | **0** | **62** | **75** | **23** | **1** | **66** | **57** | **26** | **1,006** | 3,450 |
| **5:00 PM** | **0** | **46** | **196** | **45** | **0** | **14** | **153** | **64** | **0** | **50** | **64** | **22** | **0** | **84** | **72** | **34** | **844** | **3,529** |
| 5:15 PM | 0 | 55 | 205 | 38 | 0 | 12 | 159 | 60 | 0 | 42 | 49 | 18 | 2 | 65 | 58 | 22 | 785 | 3,491 |
| 5:30 PM | 0 | 67 | 163 | 21 | 0 | 10 | 147 | 69 | 0 | 51 | 66 | 24 | 0 | 64 | 68 | 21 | 771 | 3,406 |
| 5:45 PM | 0 | 56 | 156 | 28 | 0 | 11 | 135 | 57 | 0 | 45 | 43 | 14 | 0 | 76 | 51 | 30 | 702 | 3,102 |
| Count Total | 0 | 449 | 1,495 | 272 | 2 | 110 | 1,414 | 489 | 3 | 397 | 471 | 162 | 3 | 591 | 503 | 191 | 6,552 | 0 |
| **Peak Hour All** | **0** | **220** | **796** | **154** | **2** | **62** | **795** | **255** | **1** | **214** | **268** | **91** | **1** | **307** | **268** | **95** | **3,529** | **0** |
| **Peak Hour HV** | **0** | **1** | **8** | **4** | **0** | **3** | **26** | **4** | **0** | **2** | **2** | **0** | **0** | **3** | **0** | **4** | **57** | **0** |
| **Peak Hour HV%** | **-** | **0%** | **1%** | **3%** | **0%** | **5%** | **3%** | **2%** | **0%** | **1%** | **1%** | **0%** | **0%** | **1%** | **0%** | **4%** | **2%** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 4 | 11 | 0 | 1 | *16* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 3 | 0 | *3* |
| **4:15 PM** | **5** | **8** | **0** | **1** | ***14*** | **0** | **0** | **0** | **0** | ***0*** | **2** | **0** | **0** | **0** | *2* |
| **4:30 PM** | **2** | **8** | **1** | **1** | ***12*** | **1** | **0** | **0** | **0** | ***1*** | **0** | **0** | **3** | **0** | *3* |
| **4:45 PM** | **1** | **10** | **1** | **3** | ***15*** | **0** | **1** | **0** | **0** | ***1*** | **3** | **3** | **4** | **0** | *10* |
| **5:00 PM** | **5** | **7** | **2** | **2** | ***16*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **2** | **2** | **0** | ***4*** |
| 5:15 PM | 5 | 9 | 5 | 3 | *22* | 0 | 0 | 0 | 0 | *0* | 2 | 0 | 3 | 0 | *5* |
| 5:30 PM | 3 | 8 | 1 | 1 | *13* | 1 | 0 | 0 | 0 | *1* | 1 | 2 | 1 | 1 | *5* |
| 5:45 PM | 3 | 12 | 1 | 1 | *17* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 28 | 73 | 11 | 13 | *125* | 2 | 1 | 0 | 0 | *3* | 8 | 7 | 16 | 1 | *32* |
| **Peak Hour** | **13** | **33** | **4** | **7** | ***57*** | **1** | **1** | **0** | **0** | ***2*** | **5** | **5** | **9** | **0** | ***19*** |

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## Two-Hour Count Summaries - Heavy Vehicles

| Interval Start | 104th Ave Eastbound | | | | 104th Ave Westbound | | | | Chambers Rd Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 1 | 1 | 2 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 16 | 0 |
| **4:15 PM** | **0** | **0** | **5** | **0** | **0** | **2** | **4** | **2** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **14** | 0 |
| **4:30 PM** | **0** | **0** | **0** | **2** | **0** | **1** | **7** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **1** | **12** | 0 |
| **4:45 PM** | **0** | **1** | **0** | **0** | **0** | **0** | **9** | **1** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **3** | **15** | 57 |
| **5:00 PM** | **0** | **0** | **3** | **2** | **0** | **0** | **6** | **1** | **0** | **1** | **1** | **0** | **0** | **2** | **0** | **0** | **16** | **57** |
| 5:15 PM | 0 | 0 | 3 | 2 | 0 | 0 | 8 | 1 | 0 | 1 | 4 | 0 | 0 | 1 | 2 | 0 | 22 | 65 |
| 5:30 PM | 0 | 1 | 2 | 0 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 66 |
| 5:45 PM | 0 | 0 | 3 | 0 | 0 | 1 | 9 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 17 | 68 |
| Count Total | 0 | 3 | 17 | 8 | 0 | 4 | 62 | 7 | 0 | 4 | 6 | 1 | 0 | 5 | 2 | 6 | 125 | 0 |
| **Peak Hour** | **0** | **1** | **8** | **4** | **0** | **3** | **26** | **4** | **0** | **2** | **2** | **0** | **0** | **3** | **0** | **4** | **57** | **0** |

## Two-Hour Count Summaries - Bikes

| Interval Start | 104th Ave Eastbound | | | 104th Ave Westbound | | | Chambers Rd Northbound | | | Chambers Rd Southbound | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **4:15 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 0 |
| **4:30 PM** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | 0 |
| **4:45 PM** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | 2 |
| **5:00 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:30 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Count Total | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| **Peak Hour** | **0** | **1** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **0** |

*Note: U-Turn volumes for bikes are included in Left-Turn, if any.*

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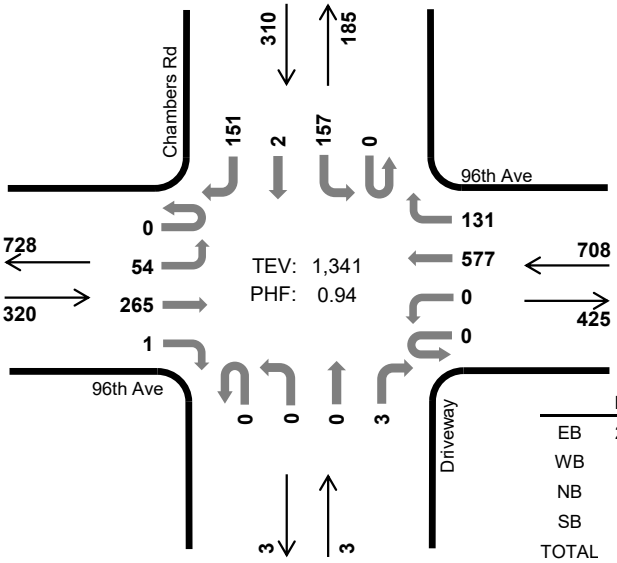
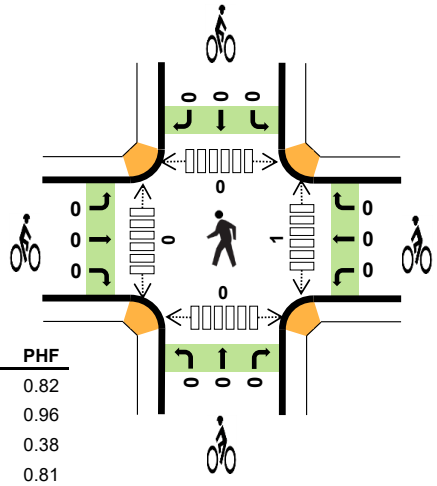
# Chambers Rd
# 96th Ave

**Date: 11/14/2023**
**Count Period: 7:00 AM to 9:00 AM**
**Peak Hour: 7:15 AM to 8:15 AM**

Peak Hour



| | HV %: | PHF |
|---|---|---|
| EB | 24.1% | 0.82 |
| WB | 6.5% | 0.96 |
| NB | 0.0% | 0.38 |
| SB | 2.9% | 0.81 |
| TOTAL | 9.8% | 0.94 |

## Two-Hour Count Summaries

| Interval Start | | 96th Ave Eastbound | | | | 96th Ave Westbound | | | | Driveway Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | | 0 | 7 | 46 | 0 | 0 | 0 | 151 | 26 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 45 | 320 | 0 |
| **7:15 AM** | | **0** | **12** | **59** | **0** | **0** | **0** | **134** | **29** | **0** | **0** | **0** | **0** | **0** | **41** | **0** | **25** | **300** | 0 |
| **7:30 AM** | | **0** | **14** | **83** | **1** | **0** | **0** | **154** | **29** | **0** | **0** | **0** | **1** | **0** | **39** | **1** | **36** | **358** | 0 |
| **7:45 AM** | | **0** | **17** | **65** | **0** | **0** | **0** | **144** | **34** | **0** | **0** | **0** | **0** | **0** | **48** | **0** | **48** | **356** | 1,334 |
| **8:00 AM** | | **0** | **11** | **58** | **0** | **0** | **0** | **145** | **39** | **0** | **0** | **0** | **2** | **0** | **29** | **1** | **42** | **327** | **1,341** |
| 8:15 AM | | 0 | 11 | 76 | 1 | 0 | 1 | 116 | 21 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 26 | 285 | 1,326 |
| 8:30 AM | | 0 | 17 | 71 | 0 | 0 | 0 | 102 | 26 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 16 | 257 | 1,225 |
| 8:45 AM | | 0 | 10 | 75 | 0 | 0 | 0 | 84 | 16 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 13 | 222 | 1,091 |
| Count Total | | 0 | 99 | 533 | 2 | 0 | 1 | 1,030 | 220 | 0 | 0 | 0 | 3 | 0 | 284 | 2 | 251 | 2,425 | 0 |
| **Peak Hour** | **All** | **0** | **54** | **265** | **1** | **0** | **0** | **577** | **131** | **0** | **0** | **0** | **3** | **0** | **157** | **2** | **151** | **1,341** | **0** |
| | **HV** | **0** | **3** | **74** | **0** | **0** | **0** | **40** | **6** | **0** | **0** | **0** | **0** | **0** | **6** | **0** | **3** | **132** | **0** |
| | **HV%** | **-** | **6%** | **28%** | **0%** | **-** | **-** | **7%** | **5%** | **-** | **-** | **-** | **0%** | **-** | **4%** | **0%** | **2%** | **10%** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 25 | 12 | 0 | 3 | *40* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **7:15 AM** | **11** | **6** | **0** | **1** | ***18*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **7:30 AM** | **25** | **14** | **0** | **0** | ***39*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **7:45 AM** | **23** | **13** | **0** | **4** | ***40*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | *1* |
| **8:00 AM** | **18** | **13** | **0** | **4** | ***35*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 8:15 AM | 13 | 19 | 0 | 1 | *33* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 8:30 AM | 18 | 16 | 0 | 0 | *34* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 8:45 AM | 20 | 11 | 0 | 1 | *32* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 153 | 104 | 0 | 14 | *271* | 0 | 0 | 0 | 0 | *0* | 1 | 0 | 0 | 0 | *1* |
| **Peak Hour** | **77** | **46** | **0** | **9** | ***132*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | ***1*** |

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## Two-Hour Count Summaries - Heavy Vehicles

| Interval Start | 96th Ave Eastbound | | | | 96th Ave Westbound | | | | Driveway Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 1 | 24 | 0 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 40 | 0 |
| **7:15 AM** | **0** | **1** | **10** | **0** | **0** | **0** | **6** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **18** | 0 |
| **7:30 AM** | **0** | **1** | **24** | **0** | **0** | **0** | **12** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **39** | 0 |
| **7:45 AM** | **0** | **1** | **22** | **0** | **0** | **0** | **12** | **1** | **0** | **0** | **0** | **0** | **0** | **2** | **0** | **2** | **40** | 137 |
| **8:00 AM** | **0** | **0** | **18** | **0** | **0** | **0** | **10** | **3** | **0** | **0** | **0** | **0** | **0** | **3** | **0** | **1** | **35** | **132** |
| 8:15 AM | 0 | 0 | 13 | 0 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 33 | 147 |
| 8:30 AM | 0 | 1 | 17 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 142 |
| 8:45 AM | 0 | 0 | 20 | 0 | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 32 | 134 |
| Count Total | 0 | 5 | 148 | 0 | 0 | 0 | 94 | 10 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 5 | 271 | 0 |
| **Peak Hour** | **0** | **3** | **74** | **0** | **0** | **0** | **40** | **6** | **0** | **0** | **0** | **0** | **0** | **6** | **0** | **3** | **132** | **0** |

## Two-Hour Count Summaries - Bikes

| Interval Start | 96th Ave Eastbound | | | 96th Ave Westbound | | | Driveway Northbound | | | Chambers Rd Southbound | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **7:15 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 0 |
| **7:30 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 0 |
| **7:45 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 0 |
| **8:00 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Peak Hour** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

*Note: U-Turn volumes for bikes are included in Left-Turn, if any.*

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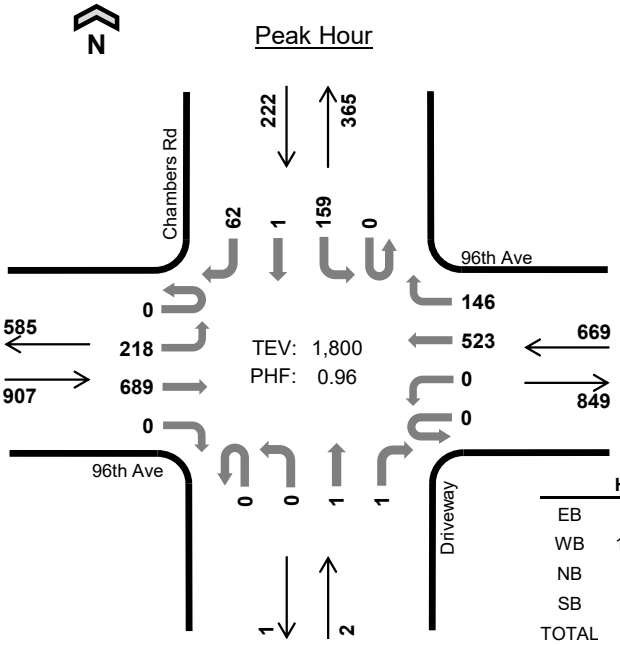
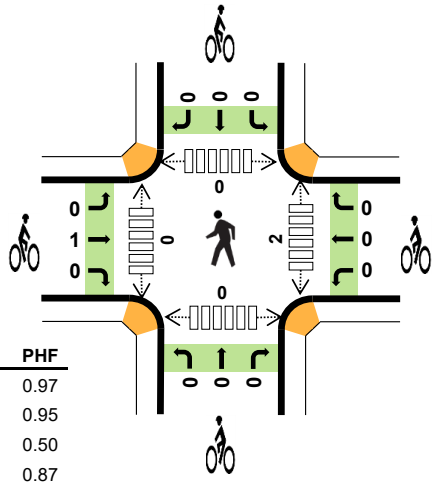
# Chambers Rd
# 96th Ave

**Date:** 11/14/2023
**Count Period:** 4:00 PM to 6:00 PM
**Peak Hour:** 4:30 PM to 5:30 PM



| | HV %: | PHF |
|---|---|---|
| EB | 3.2% | 0.97 |
| WB | 15.4% | 0.95 |
| NB | 0.0% | 0.50 |
| SB | 2.3% | 0.87 |
| TOTAL | 7.6% | 0.96 |

## Two-Hour Count Summaries

| Interval Start | 96th Ave Eastbound | | | | 96th Ave Westbound | | | | Driveway Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 52 | 128 | 0 | 0 | 0 | 101 | 33 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 10 | 355 | 0 |
| 4:15 PM | 0 | 54 | 149 | 0 | 0 | 0 | 121 | 34 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 18 | 400 | 0 |
| **4:30 PM** | **0** | **59** | **158** | **0** | **0** | **0** | **138** | **38** | **0** | **0** | **1** | **0** | **0** | **34** | **0** | **13** | **441** | 0 |
| **4:45 PM** | **0** | **59** | **173** | **0** | **0** | **0** | **130** | **44** | **0** | **0** | **0** | **0** | **0** | **47** | **0** | **17** | **470** | 1,666 |
| **5:00 PM** | **0** | **49** | **185** | **0** | **0** | **0** | **138** | **31** | **0** | **0** | **0** | **0** | **0** | **39** | **0** | **15** | **457** | 1,768 |
| **5:15 PM** | **0** | **51** | **173** | **0** | **0** | **0** | **117** | **33** | **0** | **0** | **0** | **1** | **0** | **39** | **1** | **17** | **432** | **1,800** |
| 5:30 PM | 0 | 46 | 160 | 0 | 0 | 0 | 105 | 42 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 12 | 395 | 1,754 |
| 5:45 PM | 0 | 41 | 158 | 1 | 0 | 0 | 95 | 48 | 0 | 0 | 0 | 1 | 0 | 29 | 0 | 17 | 390 | 1,674 |
| Count Total | 0 | 411 | 1,284 | 1 | 0 | 0 | 945 | 303 | 0 | 0 | 1 | 2 | 0 | 273 | 1 | 119 | 3,340 | 0 |
| **Peak Hour All** | **0** | **218** | **689** | **0** | **0** | **0** | **523** | **146** | **0** | **0** | **1** | **1** | **0** | **159** | **1** | **62** | **1,800** | **0** |
| **Peak Hour HV** | **0** | **1** | **28** | **0** | **0** | **0** | **102** | **1** | **0** | **0** | **0** | **0** | **0** | **4** | **0** | **1** | **137** | **0** |
| **Peak Hour HV%** | **-** | **0%** | **4%** | **-** | **-** | **-** | **20%** | **1%** | **-** | **-** | **0%** | **0%** | **-** | **3%** | **0%** | **2%** | **8%** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 8 | 26 | 0 | 0 | *34* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 4:15 PM | 5 | 32 | 0 | 1 | *38* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **4:30 PM** | **9** | **31** | **0** | **2** | ***42*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | *1* |
| **4:45 PM** | **9** | **24** | **0** | **1** | ***34*** | **1** | **0** | **0** | **0** | ***1*** | **0** | **0** | **0** | **0** | *0* |
| **5:00 PM** | **7** | **33** | **0** | **1** | ***41*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | *1* |
| **5:15 PM** | **4** | **15** | **0** | **1** | ***20*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 5:30 PM | 4 | 19 | 0 | 2 | *25* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 5:45 PM | 7 | 20 | 0 | 1 | *28* | 0 | 0 | 0 | 0 | *0* | 1 | 0 | 0 | 1 | *2* |
| Count Total | 53 | 200 | 0 | 9 | *262* | 1 | 0 | 0 | 0 | *1* | 3 | 0 | 0 | 1 | *4* |
| **Peak Hour** | **29** | **103** | **0** | **5** | ***137*** | **1** | **0** | **0** | **0** | ***1*** | **2** | **0** | **0** | **0** | ***2*** |

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## Two-Hour Count Summaries - Heavy Vehicles

| Interval Start | 96th Ave Eastbound | | | | 96th Ave Westbound | | | | Driveway Northbound | | | | Chambers Rd Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 8 | 0 | 0 | 0 | 24 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 |
| 4:15 PM | 0 | 0 | 5 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 38 | 0 |
| **4:30 PM** | **0** | **1** | **8** | **0** | **0** | **0** | **31** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **0** | **0** | **42** | 0 |
| **4:45 PM** | **0** | **0** | **9** | **0** | **0** | **0** | **24** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **34** | 148 |
| **5:00 PM** | **0** | **0** | **7** | **0** | **0** | **0** | **32** | **1** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **41** | 155 |
| **5:15 PM** | **0** | **0** | **4** | **0** | **0** | **0** | **15** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **20** | **137** |
| 5:30 PM | 0 | 0 | 4 | 0 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 25 | 120 |
| 5:45 PM | 0 | 0 | 7 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 28 | 114 |
| Count Total | 0 | 1 | 52 | 0 | 0 | 0 | 196 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 4 | 262 | 0 |
| **Peak Hour** | **0** | **1** | **28** | **0** | **0** | **0** | **102** | **1** | **0** | **0** | **0** | **0** | **0** | **4** | **0** | **1** | **137** | **0** |

## Two-Hour Count Summaries - Bikes

| Interval Start | 96th Ave Eastbound | | | 96th Ave Westbound | | | Driveway Northbound | | | Chambers Rd Southbound | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **4:30 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 0 |
| **4:45 PM** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | 1 |
| **5:00 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | 1 |
| **5:15 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Peak Hour** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** |

*Note: U-Turn volumes for bikes are included in Left-Turn, if any.*

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**Location:** Chambers Rd N/O 101st Ave
**Date Range:** 11/14/2023 - 11/20/2023
**Site Code:** 01

| Time | Tuesday 11/14/2023 | | | Wednesday 11/15/2023 | | | Thursday 11/16/2023 | | | Friday 11/17/2023 | | | Saturday 11/18/2023 | | | Sunday 11/19/2023 | | | Monday 11/20/2023 | | | Mid-Week Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NB | SB | Total | NB | SB | Total | NB | SB | Total | NB | SB | Total | NB | SB | Total | NB | SB | Total | NB | SB | Total | NB | SB | Total |
| 12:00 AM | 17 | 13 | 30 | 9 | 11 | 20 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 13 | 12 | 25 |
| 1:00 AM | 10 | 14 | 24 | 11 | 12 | 23 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 | 13 | 24 |
| 2:00 AM | 8 | 8 | 16 | 6 | 7 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 8 | 15 |
| 3:00 AM | 15 | 15 | 30 | 13 | 14 | 27 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | 15 | 29 |
| 4:00 AM | 35 | 27 | 62 | 24 | 24 | 48 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 30 | 26 | 55 |
| 5:00 AM | 68 | 59 | 127 | 78 | 48 | 126 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 73 | 54 | 127 |
| 6:00 AM | 170 | 192 | 362 | 194 | 220 | 414 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 182 | 206 | 388 |
| 7:00 AM | **411** | **364** | **775** | **382** | **356** | **738** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **397** | **360** | **757** |
| 8:00 AM | 276 | 293 | 569 | 273 | 285 | 558 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 275 | 289 | 564 |
| 9:00 AM | 179 | 144 | 323 | 189 | 152 | 341 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 184 | 148 | 332 |
| 10:00 AM | 166 | 148 | 314 | 170 | 164 | 334 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 168 | 156 | 324 |
| 11:00 AM | 196 | 170 | 366 | 193 | 194 | 387 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 195 | 182 | 377 |
| 12:00 PM | 204 | 231 | 435 | 240 | 229 | 469 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 222 | 230 | 452 |
| 1:00 PM | 181 | 184 | 365 | 193 | 182 | 375 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 187 | 183 | 370 |
| 2:00 PM | 262 | 203 | 465 | 230 | 244 | 474 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 246 | 224 | 470 |
| 3:00 PM | 378 | 369 | 747 | 419 | 375 | 794 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 399 | 372 | 771 |
| 4:00 PM | **499** | **433** | **932** | **479** | 405 | **884** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **489** | 419 | **908** |
| 5:00 PM | 393 | 431 | 824 | 426 | **426** | 852 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 410 | **429** | 838 |
| 6:00 PM | 276 | 280 | 556 | 281 | 299 | 580 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 279 | 290 | 568 |
| 7:00 PM | 157 | 245 | 402 | 169 | 220 | 389 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 163 | 233 | 396 |
| 8:00 PM | 105 | 132 | 237 | 114 | 169 | 283 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 110 | 151 | 260 |
| 9:00 PM | 85 | 117 | 202 | 86 | 122 | 208 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 86 | 120 | 205 |
| 10:00 PM | 37 | 55 | 92 | 52 | 75 | 127 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | 65 | 110 |
| 11:00 PM | 18 | 35 | 53 | 25 | 37 | 62 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 22 | 36 | 58 |
| **Total** | **4,146** | **4,162** | **8,308** | **4,256** | **4,270** | **8,526** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4,201** | **4,216** | **8,417** |
| **Percent** | **50%** | **50%** | | **50%** | **50%** | | - | - | | - | - | | - | - | | - | - | | - | - | | **50%** | **50%** | |
| AM Peak | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 07:00 | 07:00 | 07:00 |
| Vol. | 411 | 364 | 775 | 382 | 356 | 738 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 397 | 360 | 757 |
| PM Peak | 16:00 | 16:00 | 16:00 | 16:00 | 17:00 | 16:00 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 16:00 | 17:00 | 16:00 |
| Vol. | 499 | 433 | 932 | 479 | 426 | 884 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 489 | 429 | 908 |

1. Mid-week average includes data between Tuesday and Thursday.

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