

Smoke Tree Resort

Traffic Impact Analysis

7101 E. Lincoln Drive Town of Paradise Valley, Arizona

February 2019 Project No. 18-0550

Prepared For:

Beus Gilbert, PLC 701 N. 44th Street Phoenix, Arizona 85008

For Submittal to:

Town of Paradise Valley

Prepared By:



10605 North Hayden Road Suite 140 Scottsdale, Arizona 85260 480-659-4250

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CivTech, Inc. 10605 North Hayden Road Suite 140 Scottsdale, Arizona 85260 (480) 659-4250



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EXECUTIVE SUMMARY

This report documents a traffic impact analysis performed for the proposed Smoke Tree Resort south of Lincoln Road between Mockingbird Lane and Scottsdale Road in the Town of Paradise Valley. The proposed development will consist of maximum of 120 hotel rooms and a maximum of 30 residential units of 1,200 SF each above the hotel rooms, of which 15 will have a lock-off feature.

CivTech, Inc. has been retained by Beus Gilbert PLLC to perform the traffic impact study for the proposed redevelopment. The purpose of this assessment is to address the traffic and transportation impacts of the proposed development on the surrounding streets and intersections.

The following conclusions have been documented in this study.

General

 The proposed development is anticipated to generate approximately 1,032 weekday daily trips, with 69 trips occurring in the AM peak hour and 101 trips occurring in the PM peak hour.

Existing Conditions

- The results of the existing conditions analysis indicates that all intersections currently operate at an overall acceptable level of service (LOS D or better), with the exception of the intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive under the existing lane configurations.
 - The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and existing Apartments. It is possible that a raised median will be installed along the length of Lincoln Drive.

Opening Year 2020

- The results of the 2020 opening year Synchro analysis indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
 - The intersection of **Mockingbird Lane & Lincoln Drive** is expected to experience delay on the northbound and southbound approaches during the no build and the full build scenario. By increasing the southbound left turn phase from 9 seconds to 19 seconds and changing the northbound left turn phase from permissive to permissive-protected, the southbound approach delay is expected to decrease from 56 seconds per vehicle to 55.1 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 55.4 seconds per vehicle during the PM peak hour. The northbound approach delay is expected to decrease from 48 seconds per vehicle to 43.3 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 57.3 seconds per vehicle

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- in the PM peak hour, which is very close to what is considered an acceptable level of service.
- The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.
- The intersection of Scottsdale Road & Lincoln Drive is expected to experience delay on the eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. The intersection is expected to operate at an overall acceptable level of service (LOS D or better) during both the AM and PM peak hours of both scenarios, however, the eastbound and westbound approach delay could be improved by increasing the eastbound phase from 30 seconds to 32 seconds and increasing the westbound phase from 13 seconds to 21 seconds. This change is expected to decrease the overall intersection delay from 46.4 seconds per vehicle to 25 seconds per vehicle in the AM peak and increase the overall intersection delay from 44.9 seconds per vehicle to 52.1 seconds per vehicle in the PM peak hour. Although the PM peak hour overall intersection delay is expected to increase, the individual approach delays for the eastbound and westbound decrease significantly. The eastbound approach is expected to decrease from 82.8 seconds per vehicle to 16 seconds per vehicle and the westbound approach is expected to decrease from 63.8 seconds per vehicle to 23.7 seconds per vehicle during the PM peak hour.
- The intersection of Quail Run Road and Access A reports a delay of zero seconds using the HCM 6th edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

Horizon year 2025

- The results of the 2025 horizon year Synchro analysis summarized in Table 7 indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
 - The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.
 - The intersection of Scottsdale Road & Lincoln Drive is expected to experience delay on the southbound, eastbound and westbound approaches during both the AM and PM peak hours for both the no build

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and full build scenarios. By decreasing the cycle length from 130 seconds to 120 seconds and optimizing the green times, the overall intersection delay is expected to decrease from 76 seconds per vehicle to 58.2 seconds per vehicle during the AM peak hour and decrease from 62.7 seconds per vehicle to 57.7 seconds per vehicle during the PM peak hour. Although this mitigation measure is expected to decrease the approach delays and the overall intersection delay, if this signal is coordinated with any others along Scottsdale Road, changing the cycle length will interfere with the coordination and would not be recommended. The City of Scottsdale has stated that they have plans to change the eastbound approach configuration to dual left turn lanes and a shared through/right turn lane. It is not known when this change will occur, but it could improve the delay if the intersection is retimed.

The intersection of Quail Run Road and Access A reports a delay of zero seconds using the HCM 6th edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

Queue Storage and Sight Distance

- According to the CivTech study done for the Ritz Carlton, the newly signalized intersection of Quail Run Road and Lincoln Drive will have eastbound/westbound left turn lanes and a westbound right turn lane striped with 150 feet of storage each. While 150 feet is being proposed due to the current development agreement with Five Star Development for the Ritz Carlton, less is required to meet the recommended AASHTO length. The recommended storage lengths are provided for horizon year 2025 using the total traffic projections.
 - The Smoke Tree Resort is requesting a new full access driveway located approximately 80 feet west of the eastern most property line. The Town of Paradise Valley has stated that an eastbound right turn deceleration lane is required at this driveway. Using AASHTO methodology only 25 feet of storage is required, however, 50 feet is the minimum that should be recommended per AASHTO standards with a 90 foot taper.
- There are no existing obstructions to sight distance within the project intersections or along the included corners of the proposed intersection. Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development
 - The contractor should ensure that sight visibility is provided at all proposed intersections according to the distances and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations.



INTRODUCTION

Smoke Tree Resort is currently 26 individual suites and bungalows. The site is being redeveloped and is proposed as a hotel with a maximum of 120 hotel rooms and a maximum of 30 residential units of 1,200 SF each above the hotel rooms, of which 15 will have a lock-off feature. The site is located on the south side of Lincoln Drive between Mockingbird Lane and Scottsdale road.

Study Requirements

This study analyzes the traffic impact due to the proposed development on the surrounding street network. The study will be prepared in conformance with the Town of Paradise Valley's Traffic Impact Analysis (TIA) Criteria and Traffic Impact Statement (TIS) Criteria, May 2015. The specific objectives of the study are:

- To determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development.
- ◆ To recommend additional street improvements or traffic control devices, where necessary, and to mitigate the additional site-generated traffic

Study Area

This study is classified as a Category 1 TIA meaning the study area is defined as all signalized and major unsignalized intersections within a $\frac{1}{4}$ -mile radius of the site. The following study area intersections have been evaluated:

- Mockingbird Lane & Lincoln Drive
- Quail Run Road & Lincoln Drive
- Smoke Tree Driveway West & Lincoln Drive
- Smoke Tree Driveway East & Lincoln Drive
- Medical Office Driveway West & Lincoln Drive
- Medical Office Driveway East & Lincoln Drive
- Apartment Driveway & Lincoln Drive
- AJ's Driveway & Lincoln Drive
- Scottsdale Road & Lincoln Drive

Horizon Years

Per the study requirements, a Category 1 Traffic Impact and Mitigation Analysis is required. Analysis will be conducted on the current conditions, the opening year and opening plus five years.

It is assumed that development will open in October 2020. For purposes of this study, the development will be assumed fully built out by 2020. Therefore, the analysis years to be analyzed for this study include opening year 2020 and horizon year 2025. A location map of the study area is provided in **Figure 1**.



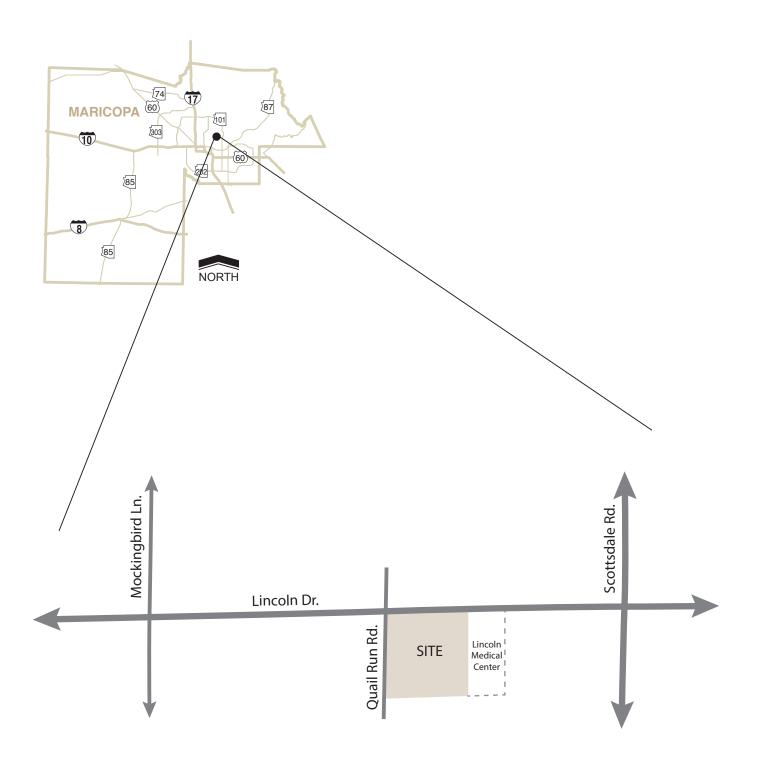


Figure 1: Vicinity Map



EXISTING CONDITIONS

SURROUNDING LAND USE

The surrounding area includes various land uses. Directly north of the site, on the north side of Lincoln Drive, is the site for the new Ritz Carlton luxury hotel. Bordering the site to the east is the site for the proposed Lincoln Medical Center expansion. West of the site are detached single-family homes. Northeast of the site is the Lincoln Scottsdale, multi-family apartment homes. Also within the vicinity of the site are many retail shops and restaurants.

EXISTING ROADWAY NETWORK

The existing roadway network analyzed in this study includes Mockingbird Lane, Lincoln Drive. Quail Run Road and Scottsdale Road.

Mockingbird Lane is a north-south three-lane road with one lane in each travelling direction and a continuous two-way-left-turn lane north of Lincoln Drive, and a two-lane road south of Lincoln Drive. Mockingbird Lane begins at the intersection with McDonald Road and continues north for approximately 2 miles before terminating at the intersection with Northern Avenue. The posted speed limit is 35 miles per hour (mph).

Lincoln Drive is an east-west four-lane road with two lanes in each travelling direction. Within the vicinity of the site, there are raised medians along portions of the road. Lincoln Drive begins just east of the State Route 51 freeway and continues east for approximately 7 miles before terminating at the intersection with Cattletrack Road, just west of the Arizona Canal. The posted speed limit is 40 mph within the vicinity of the site.

Quail Run Road is a north-south two-lane road with one lane in each travelling direction. Quail Run Road begins just north of a private property south of the site and continues north for approximately 0.15 miles before terminating at the intersection with Lincoln Drive. There is no posted speed limit.

Scottsdale Road is a north-south six-lane road with three lanes in each travelling direction within the vicinity of the site. There are broken, raised medians along the whole length of road. Scottsdale Road begins at the intersection with Rio Salado Parkway and continues north for approximately 18 miles before terminating at the intersection with Carefree Highway. The posted speed limit is 45 mph.

EXISTING INTERSECTION CONFIGURATION

The intersection of **Mockingbird Lane and Lincoln Drive** is a four-legged signalized intersection with protected left turns on the southbound and westbound approaches. The northbound and southbound approaches each have one dedicated left turn lane and a shared through and right turn lane. The eastbound and westbound approaches each have one dedicated left turn lane, one through lane, and one shared through and right turn lane. There are pedestrian crosswalks across all legs of the intersection.



The intersection of **Quail Run Road and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The northbound approach has one shared left turn/through/right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns. The southbound approach is currently a construction access point with one shared left turn/through/right turn lane.

The intersection of **Smoke Tree Driveway West and Lincoln Drive** is a three-legged, stop-controlled "T" intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Smoke Tree Driveway East and Lincoln Drive** is a three-legged, stop-controlled "T" intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Medical Office Driveway West and Lincoln Drive** is a three-legged, stop-controlled "T" intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Medical Office Driveway East and Lincoln Drive** is a three-legged, stop-controlled "T" intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Apartment Driveway and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The southbound approach consists of one dedicated left turn lane and one dedicated right turn lane. The eastbound approach consists of a two-way-left turn lane one through lane and one shared through and right turn lane. The northbound approach consists of one shared left turn and right turn lane. The westbound approach consists of a two-way left turn lane, on through lane and one shared through and right turn lane.

The intersection of **AJ's Driveway and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has a



two-way-left-turn lane, one through lane and one shared through and right turn lane. The southbound approach has one dedicated left turn lane and one dedicated right turn lane. The westbound approach has a dedicated left turn lane, one through lane and one shared through and right turn lane.

The intersection of **Scottsdale Road and Lincoln Drive** is a four-legged signalized intersection with split phasing on the eastbound and westbound approaches and protected left turns on the northbound and southbound approaches. The northbound approach has two dedicated left turn lanes, two through lanes and one shared through and right turn lane. The westbound approach has one dedicated left turn lane, one through lane and one shared through and right turn lane. The southbound approach has one dedicated left turn lane, three through lanes and one dedicated right turn lane. The eastbound approach has one dedicated left turn lane, one shared left turn and through lane and one dedicated right turn lane. There are pedestrian cross walks across all legs of the intersection.

The existing intersection configurations and traffic control is illustrated in Figure 2.



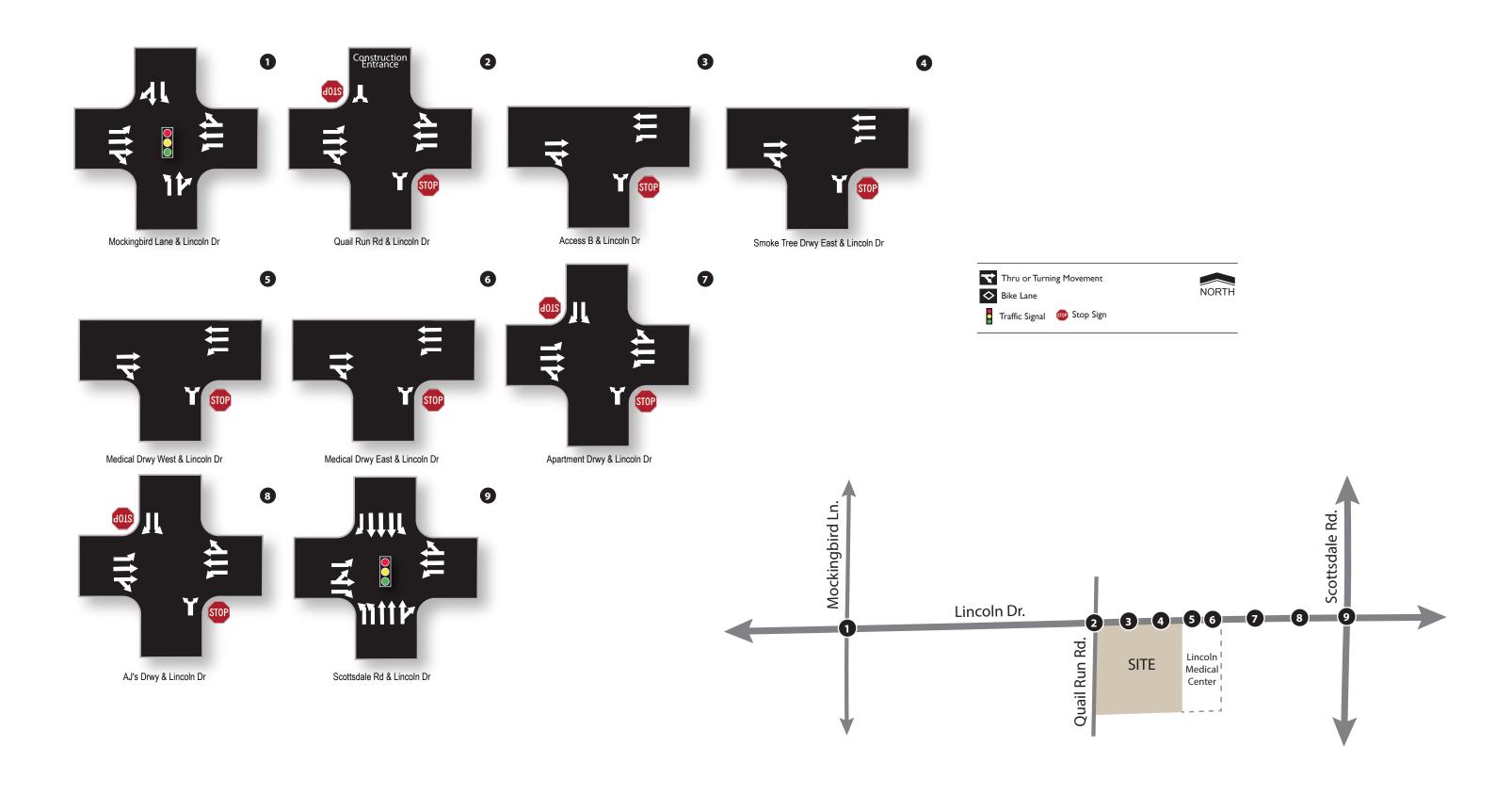


Figure 2: Existing Lane Configurations and Traffic Controls



EXISTING TRAFFIC VOLUMES

CivTech engaged Field Data Services of Arizona, Inc. to record traffic volumes at nine study intersections within the project vicinity. Peak hour volume turning movement counts were performed from 7:00-9:00 AM and 4:00-6:00 PM on Thursday, May 31, 2018. Peak hour turning movement counts were conducted at the following study intersections:

- Mockingbird Lane & Lincoln Drive
- Quail Run Road & Lincoln Drive
- Smoke Tree Driveway West & Lincoln Drive
- Smoke Tree Driveway East & Lincoln Drive
- Medical Office Driveway West & Lincoln Drive
- Medical Office Driveway East & Lincoln Drive
- Apartment Driveway & Lincoln Drive
- AJ's Driveway & Lincoln Drive
- Scottsdale Road & Lincoln Drive

The Town of Paradise Valley requires that a seasonal adjustment factor be applied to existing traffic counts taken outside of typical months. These traffic counts were conducted in May, and summer months typically have lower amounts of traffic due to school not being in session. The seasonal adjustment factor for the month of May is 1.01, however since they were conducted on the last day of the month, the adjustment factor for the month of June will be used to be more conservative. The seasonal adjustment factor for June is 1.03, this was applied to all traffic within the study area. Existing 2018 traffic volumes with the seasonal adjustment factor applied are presented in **Figure 3** for the weekday AM and PM peak hours. Raw traffic volume data obtained for this study have been included in **Appendix B**.



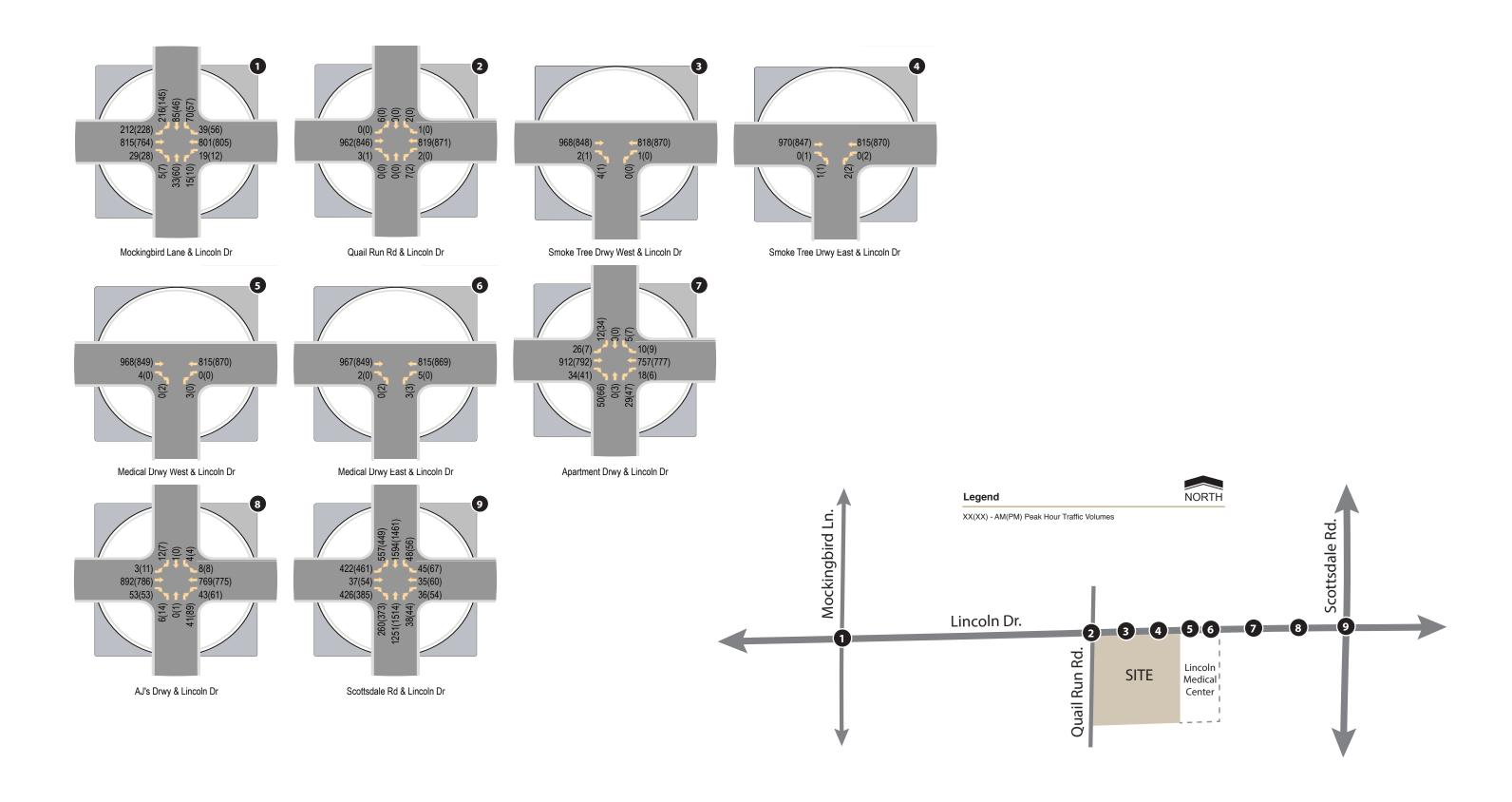


Figure 3: Seasonally Adjusted Existing Traffic Volumes



EXISTING CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections have been analyzed using the methodologies presented in the *Highway Capacity Manual (HCM), Special Report 209,* and Updated 2016 and using Synchro software, version 10.0 under the HCM 6th edition methodology.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined in terms of delay ranges. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

Table 1: Level of Service Criteria

| Lovel of Comice | Control Delay (seconds/vehicle) | | | | | |
|------------------|---------------------------------|----------------------------|--|--|--|--|
| Level of Service | Signalized Intersections | Unsignalized Intersections | | | | |
| Α | ≤ 10 | ≤ 10 | | | | |
| В | > 10-20 | > 10-15 | | | | |
| С | > 20-35 | > 15-25 | | | | |
| D | > 35-55 | > 25-35 | | | | |
| E | > 55-80 | > 35-50 | | | | |
| F | > 80 | > 50 | | | | |

Source: Exhibit 19-8, Exhibit 20-2, Exhibit 21-8 and Exhibit 22-8, Highway Capacity Manual 2017

Synchro 10.0 software calculates the LOS per the HCM 6th edition methodology. The 6th edition HCM documents the signalized LOS calculation methodology which takes into account lane geometry, traffic volumes and cycle length/phasing to compute LOS. Synchro analysis worksheets report individual movement delay/LOS and overall delay/LOS for signalized intersections; unsignalized intersection worksheets report the worst-case delay/LOS and the average overall intersection delay. Signal timing data for the intersection of Mockingbird Lane and Lincoln Drive was provided by the Town of Paradise Valley. Timing for the intersection of Scottsdale Road and Lincoln Drive was provided by the City of Scottsdale. Results of the existing level of service analyses are shown in **Table 2** for both AM and PM peak hours. The existing conditions analysis worksheets have been included in **Appendix C**.



Table 2: Existing Peak Hour Levels of Service

| ID | Intersection | Intersection Control | Approach/ Movement | Existing LOS AM (PM) |
|----|------------------------------------|-------------------------|-----------------------|-------------------------|
| | | | NB | D(E) |
| | | | SB | E(E) |
| 1 | Mockingbird Lane & Lincoln Drive | Signal | EB | B(A) |
| | 3 | J | WB | B(B) |
| | | | Overall | C(B) |
| | | | NB Shared | B(B) |
| 2 | Quail Run Road & Lincoln Drive | 2-way stop | SB Shared | C(A) |
| | Quali Ruli Road & Lincolli Dilve | (NB/SB) | EB Left | A(A) |
| | | | WB Left | B(A) |
| 3 | Smoke Tree Driveway West & | 1-way stop | NB Shared | C(C) |
| 3 | Lincoln Drive | (NB) | WB Left | B(A) |
| 4 | Smoke Tree Driveway East & | 1-way stop | NB Shared | C(B) |
| 4 | Lincoln Drive | (NB) | WB Left | A(A) |
| 5 | Medical Driveway West & Lincoln | 1-way stop | NB Shared | B(C) |
| 5 | Drive | (NB) | WB Left | A(A) |
| 6 | Medical Driveway West & Lincoln | 1-way stop | NB Shared | B(C) |
| O | Drive | Drive (NB) | | B(A) |
| | | | NB Shared | F(F) |
| | Apartment Drivousy 9 Lincoln | 2 way atan | SB Left | F(E) |
| 7 | Apartment Driveway & Lincoln Drive | 2-way stop | SB Right | B(B) |
| | Diive | (NB/SB) | EB Left | A(A) |
| | | | WB Left | B(A) |
| | | | NB Shared | C(D) |
| | | 2-way stop | SB Left | F(F) |
| 8 | AJ's Driveway & Lincoln Drive | (NB/SB) | SB Right | B(B) |
| | | (140/30) | EB Left | A(A) |
| | | | WB Left | B(B) |
| | | | NB | C(C) |
| | | | SB | D(C) |
| 9 | Scottsdale Road & Lincoln Drive | Signal | EB | E(E) |
| | | | WB | E(F) |
| | | | Overall | D(D) |

The results of the existing conditions analysis summarized in **Table 2** indicates that all intersections currently operate at an overall acceptable level of service (LOS D or better), with the exception of the intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive under the existing lane configurations depicted in **Figure 2**.

The intersections of **Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and existing Apartments. It is possible that a raised median will be installed along the length of Lincoln Drive.



PROPOSED DEVELOPMENT

SITE LOCATION

The proposed redevelopment will be located 7101 East Lincoln Drive in the Town of Paradise Valley, Arizona.

SITE ACCESS

There are three access points proposed for this development, described as follows:

- <u>Access A</u> is a proposed access from Quail Run Road to the Smoke Tree site.
 The intersection of Quail Run Road and Lincoln Drive will be signalized by build
 out year 2020, and it is expected that some vehicles will utilize Quail Run Road
 to access the Smoke Tree site. This access will be a full movement access on
 the western border of the site.
- <u>Access B</u> is a proposed full movement access point on Lincoln Drive located approximately 80 feet west of the eastern Smoke Tree property line. The two existing access points to the site will be removed and replaced with this single access.
- <u>Access C</u> is a proposed access from Quail Run Road to Smoke Tree south of the proposed Access A. This access is proposed to be full access, however, due to the location, it is unlikely that many vehicles will be using this driveway and therefore, it was not included in the analysis of this report.

The two existing Smoke Tree Driveways, intersections 3 and 4, will both be removed by opening year 2020 and replaces with a single, full movement access located approximately 80 feet west of the eastern property line.

The proposed site plan is provided in **Figure 4**.





Figure 4: Site Plan and Access



TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition and *Trip Generation Handbook*, 3rd Edition. The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

Since the Smoke Tree Resort is a proposed redevelopment of the current resort, some of the existing traffic counts are existing trips generated by the site. To be conservative, these trips were not subtracted from the existing traffic counts, meaning that there will actually be less "new trips" then mentioned in this study.

The proposed development will consist of a maximum of 120 standard hotel rooms, 30 residential units/condos, 15 lock-off units that will be owned by individuals and rented out to the public, and a 3,500 square foot quality restaurant. The lock-off residential units have been included in the analysis as part of the total hotel room count to present a worst-case scenario where all rooms have been rented at the same time. They have been included in the hotel room count since it is assumed that the owners of each unit will not use this as their primary residence and will rent it out to guests. The restaurant will be on the resort site, but is not intended to serve guests of the resort completely. An internal capture reduction reduces the number of external trips being made to the site. It is assumed that approximately 50% of all visitors to the restaurant will be off site and the other 50% will be guests and residents of the resort. The hotel is not a standard hotel, ITE land use code 310, nor would it be considered a resort hotel, ITE land use code 330. Custom trip rates were established by averaging the trip rates for a standard hotel and a resort hotel for the AM and PM peak hours as well as the daily trips. Table 3 depicts the trip generation summary for the proposed development. Trip generation calculations are provided in Appendix D.

Table 3: Trip Generation Summary

| | | | | Weekday Trips | | | | | | |
|--|-------------|-------|-------------------|---------------|-----|-----|-------|-----|-----|-------|
| | | | | Daily | | AN | 1 | | PN | I |
| Proposed Use | ITE LUC | Size | Units | Total | In | Out | Total | In | Out | Total |
| Hotel | 310/330 | 135 | Rooms | 700 | 38 | 15 | 53 | 29 | 39 | 68 |
| Condos | 220 | 30 | Dwelling Units | 186 | 3 | 12 | 15 | 13 | 7 | 20 |
| Quality Restaurant | 931 | 3,500 | SF | 294 | 0 | 3 | 3 | 18 | 9 | 27 |
| | Total Trips | | | | 41 | 30 | 71 | 60 | 55 | 115 |
| Internal Capture Reduction (Quality Restaurants 50%) | | | | (148) | (0) | (2) | (2) | (9) | (5) | (14) |
| | | • | Subtotals | 1,032 | 41 | 28 | 69 | 51 | 50 | 101 |



As shown in **Table 3**, the proposed development is anticipated to generate approximately 1,032 weekday daily trips, with 69 trips occurring in the AM peak hour and 101 trips occurring in the PM peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the resort development will generate trips based on future population within a 7-mile radius of the site. Future total population within a 7-mile radius of the site, as predicted by the 2020/2030 socio-economic data compiled by the Maricopa Association of Governments (MAG), was used as a basis to estimate trip distribution for the resort development

The resulting trip distribution percentages for the study area are shown in **Table 4**. The trip distribution calculations are included in **Appendix E**.

| Direction (To/From) | Trip Distribution |
|-------------------------|-------------------|
| North on Mockingbird Ln | 6% |
| South on Mockingbird Ln | 4% |
| West on Lincoln Dr | 25% |
| North on Scottsdale Rd | 35% |
| South on Scottsdale Rd | 30% |
| Total | 100% |

Table 4: Site Trip Distribution

Figure 5 illustrates the trip distribution percentages shown in **Table 4** on the existing roadway network with the study area. The percentages presented in **Figure 5** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the intersections within the study area. The resulting site generated traffic for the proposed development are presented in **Figure 6**.



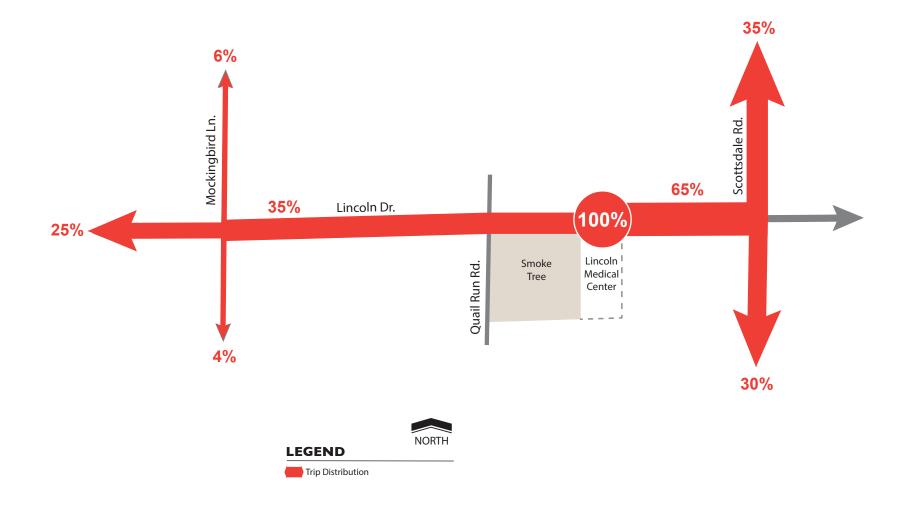


Figure 5: Trip Distribution



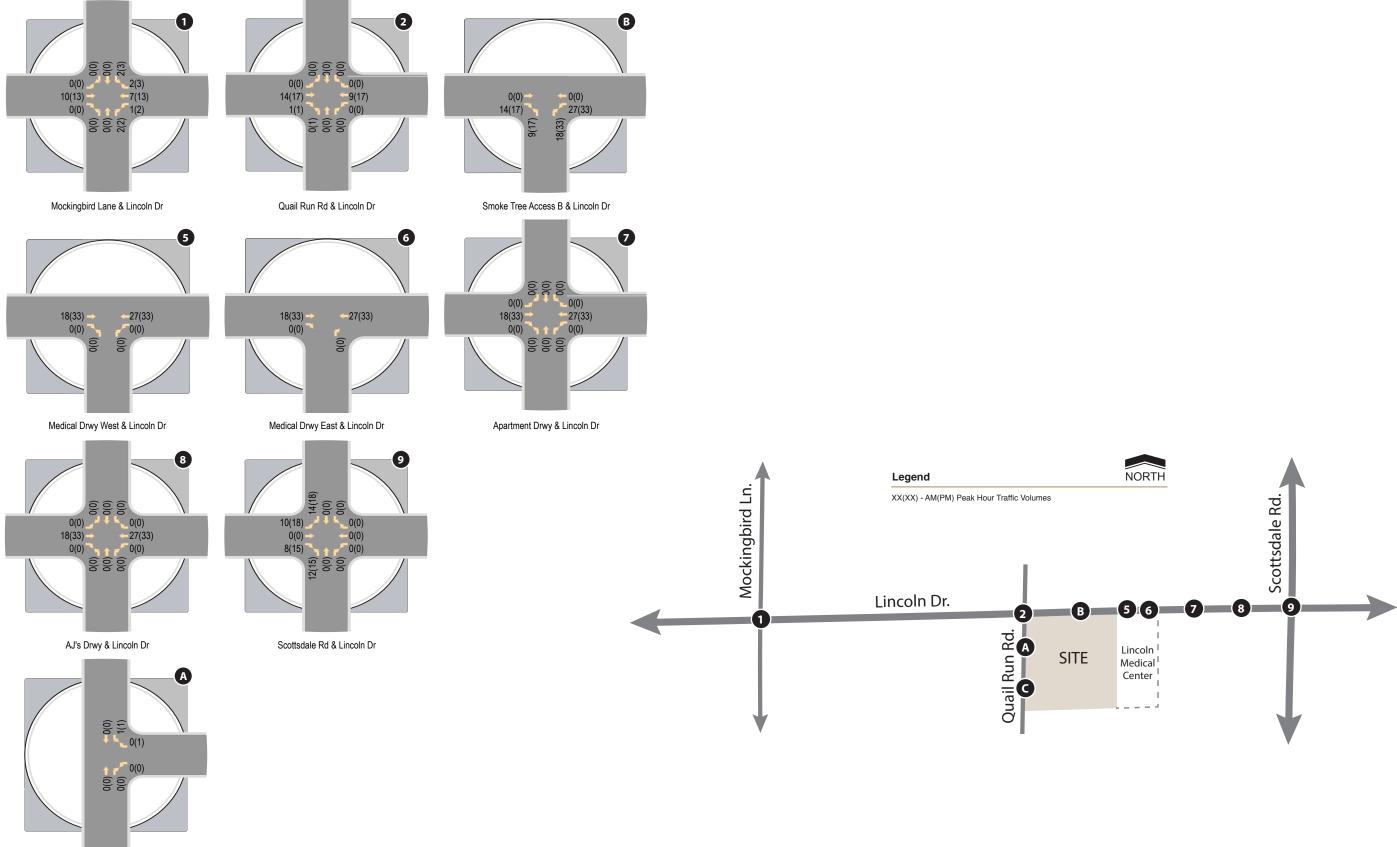


Figure 6: Site Generated Traffic Volumes



FUTURE BACKGROUND TRAFFIC

CivTech applied a growth rate to the seasonally adjusted traffic counts for this study in order to obtain the background traffic volumes along the adjacent roadway network. In reviewing the City of Scottsdale Traffic Counts Map, a 1.7% average growth rate was found within the proposed study area. **Table 5** shows the expansion factors used for the proposed opening year 2020 and horizon year 2025.

Table 5: Growth Rate Expansion Factors

| Horizon Year | Expansion Factor |
|--------------|------------------|
| 2020 | 1.034 |
| 2025 | 1.125 |

Applying the growth rate expansion factors to the seasonally adjusted existing traffic volumes predicts the volume of traffic anticipated on the surrounding area roads for opening year 2020 and horizon year 2025. Directly north of the proposed Smoke Tree Resort is the new Ritz Carlton Resort. Phase 1 of that development is expected to be open by 2020, meaning that it will be adding some site generated trips to the surrounding roadway network. Since CivTech was the company that performed the analysis for the Ritz Carlton in 2015, the site generated volumes expected for 2020 and 2025 were added to the grown existing volumes. Directly east of the proposed site is another proposed development, Lincoln Medical Center. It is expected that the Lincoln Medical expansion and the Smoke Tree Resort will begin and end construction at roughly the same time. Lincoln Medical Center is also expected to add additional traffic to the surrounding roadway network. The proposed site generated trips were assigned to the surrounding roadway network, and these trips were also added to the grown existing volumes.

The same methodology was used for both horizon years. Calculated background traffic for opening year 2020 and horizon year 2025 is presented in **Figure 7** and **Figure 8**, respectively. Seasonally adjusted existing traffic volumes, Ritz Carlton site volumes, Smoke Tree site volumes and more detailed background traffic calculations are included in **Appendix F**.

TOTAL TRAFFIC

Total traffic was determined by adding the site generated traffic to the projected background traffic. Total peak hour traffic volumes for the opening year 2020 and horizon year 2025 are shown in **Figure 9** and **Figure 10**, respectively.



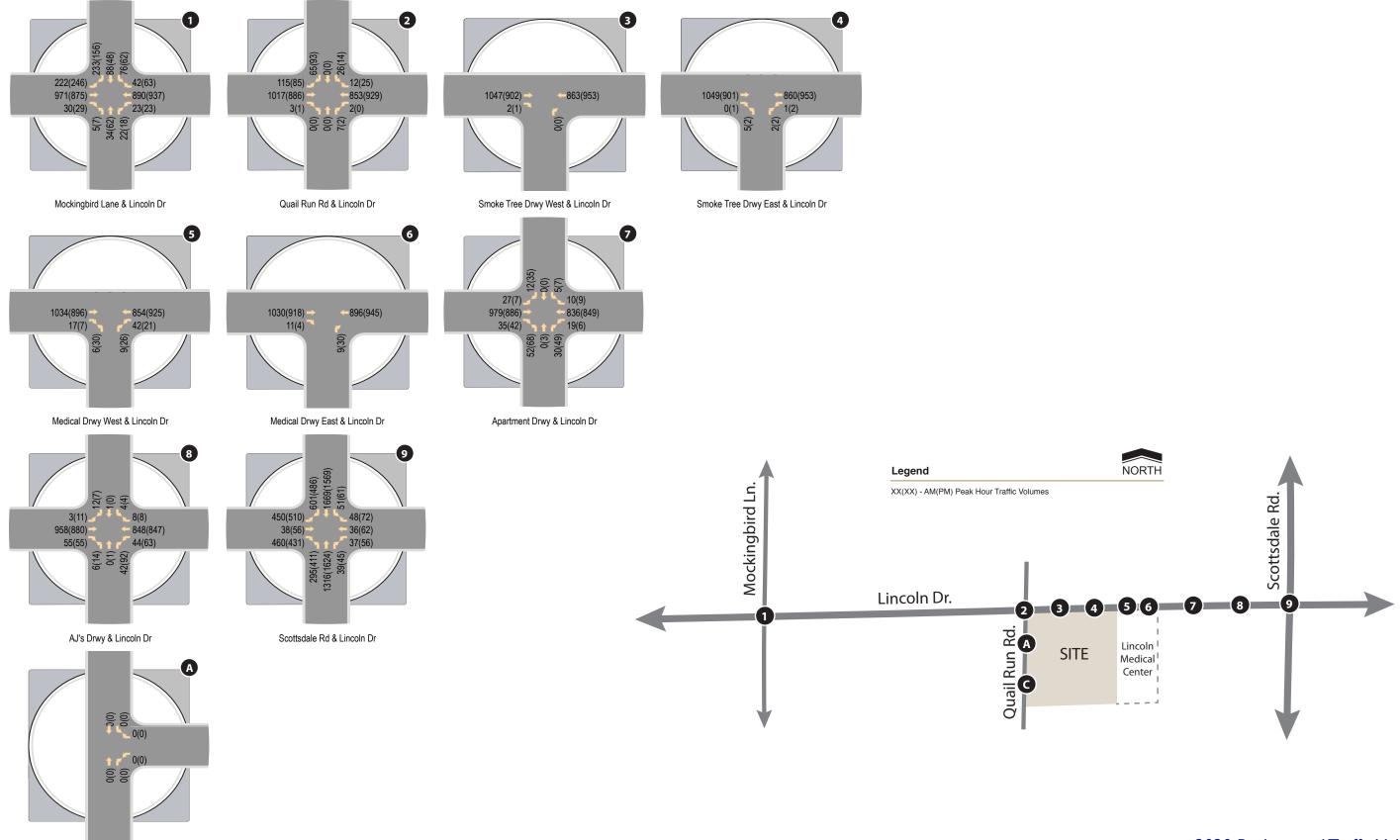


Figure 7: 2020 Background Traffic Volumes



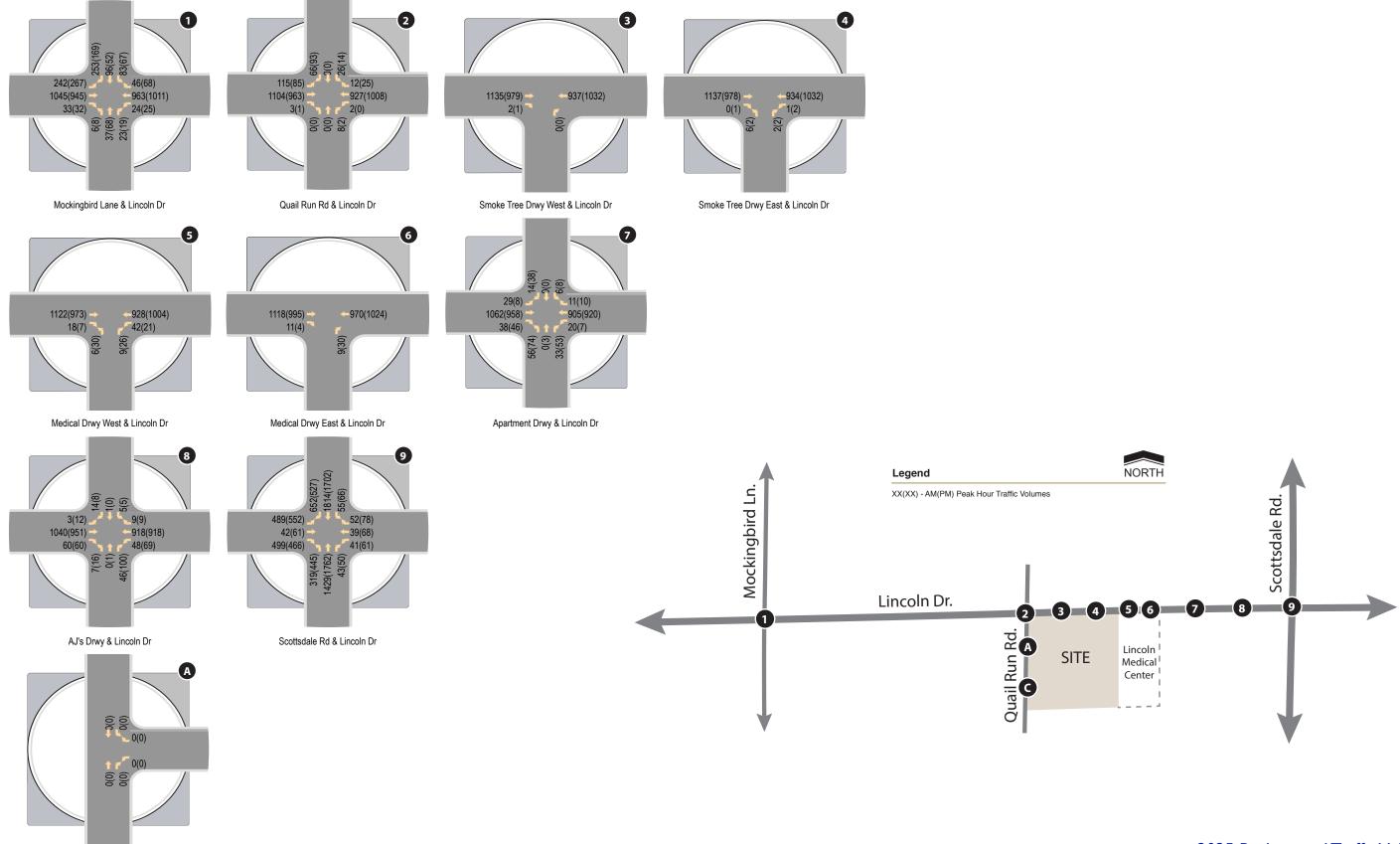


Figure 8: 2025 Background Traffic Volumes



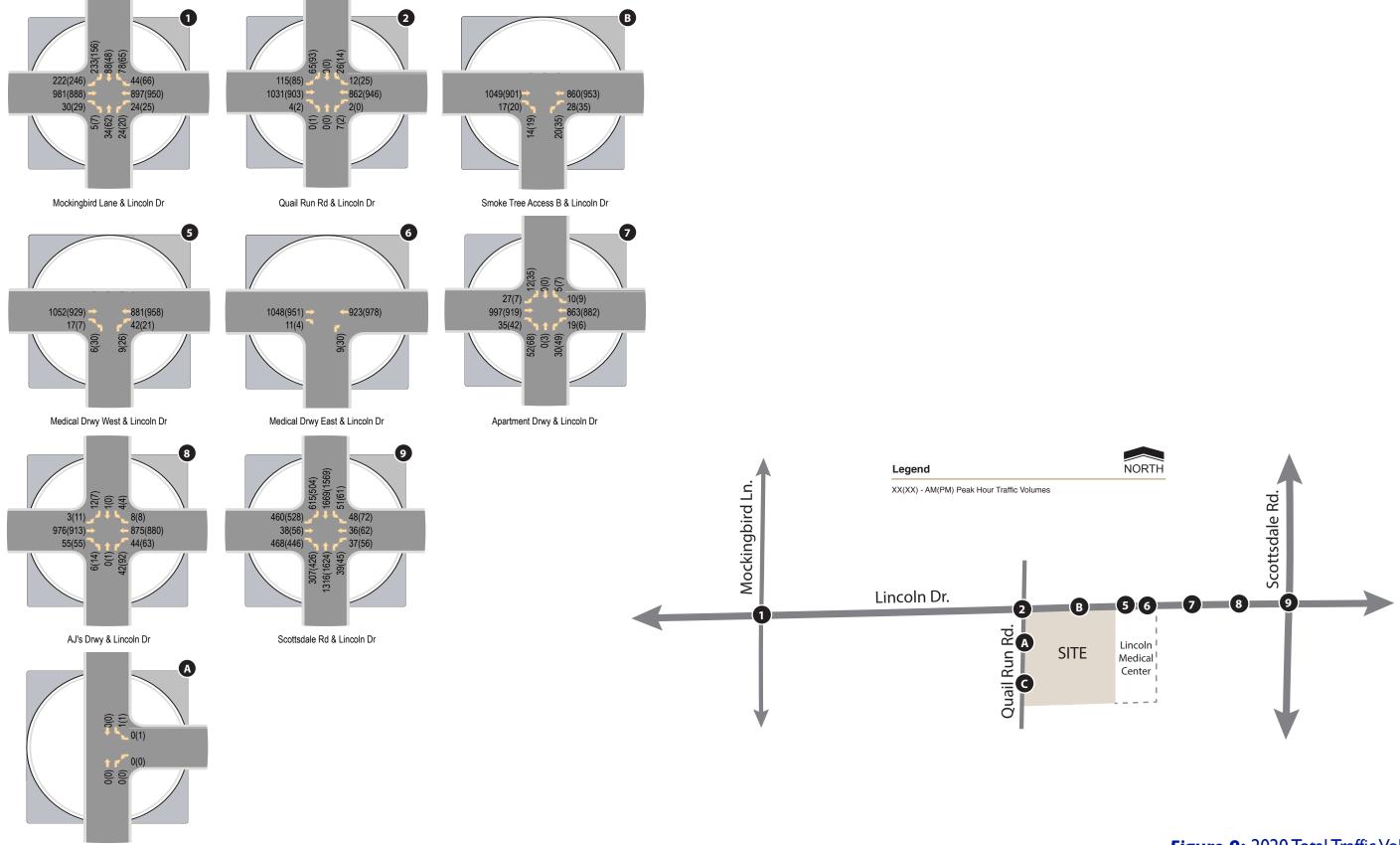


Figure 9: 2020 Total Traffic Volumes



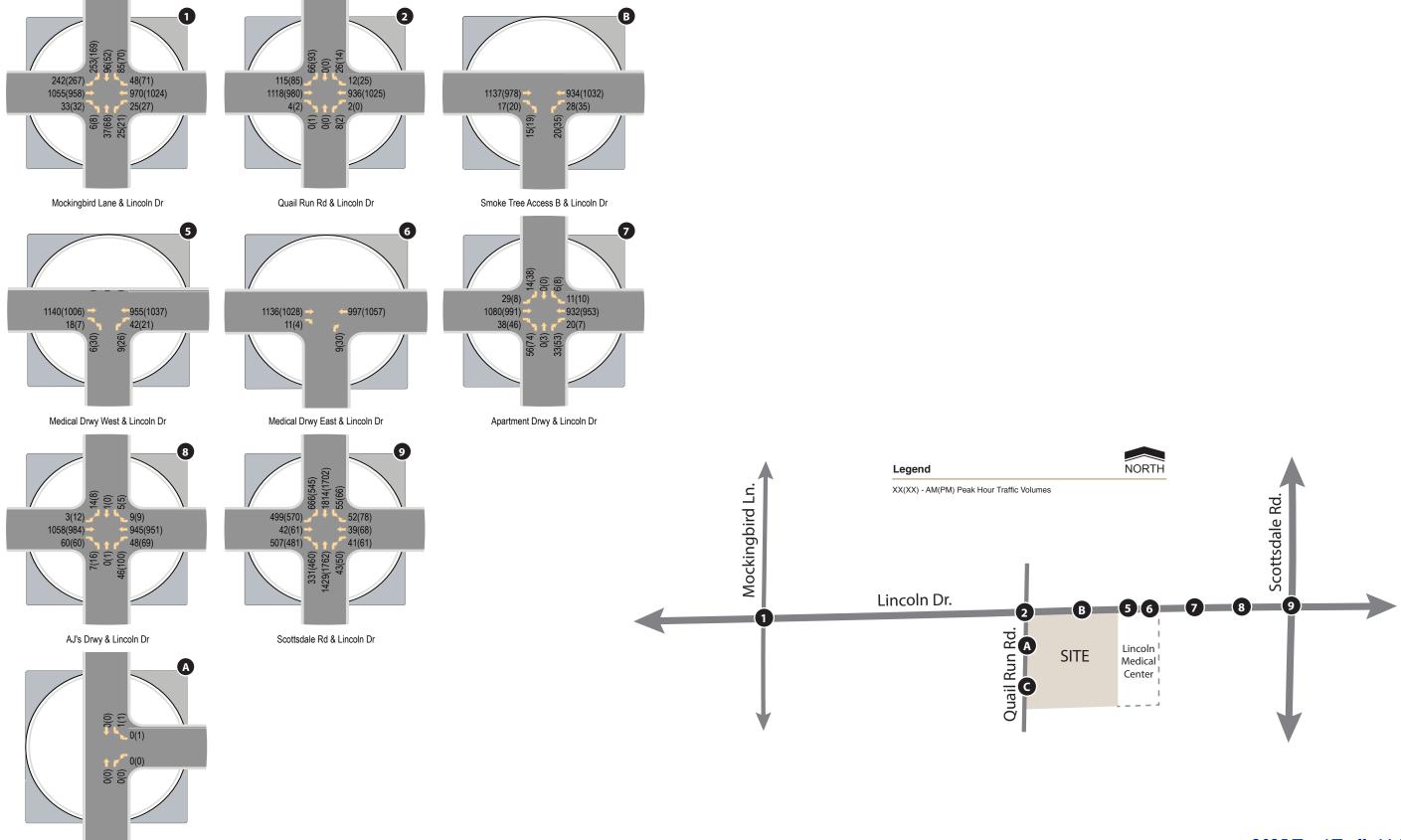


Figure 10: 2025 Total Traffic Volumes



TRAFFIC AND IMPROVEMENT ANALYSIS

INTERSECTION CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for all of the intersections within the study area. All study area intersections were analyzed using Synchro 10.0 analysis software and the methodologies previously presented. Signalized intersections were analyzed with signal timing presented by the Town of Paradise Valley and the City of Scottsdale. According to the City of Scottsdale, the intersection of Scottsdale Road & Lincoln Drive will be restriped in the future to operate with dual left turn lanes and a shared through/right turn lane. It is unknown by what year these improvements will be made, so all analysis will be conducted using the existing lane configurations. The overall intersection and approach levels of service are summarized in **Table 6** for the 2020 opening year and **Table 7** for the 2025 horizon. Detailed analysis worksheets can be found in **Appendix G** and **Appendix H**.

Table 6: 2020 Peak Hour Analysis

| | | Intersection | Approach/ | 2020 LOS AM(PM) | | |
|----|--------------------------------------|-----------------------|--|---|--|---------------------------------------|
| ID | Intersection | Control | Movement | No-Build | Build | Mitigated |
| 1 | Mockingbird Ln & Lincoln Dr | Signal | NB SB EB WB | D(E) E(E) B(A) B(A) | D(E) E(E) B(A) B(A) | D(D) E(E) B(B) C(B) |
| | | | Overall | C(B) | C(B) | C(B) |
| 2 | Quail Run Rd & Lincoln Dr | Signal | NB SB EB WB Overall | B(B) B(B) B(A) D(D) C(C) | B(B) B(B) B(A) D(D) C(C) | [Not Mitigated] |
| 3 | Smoke Tree Drwy West & Lincoln Dr | 1-way stop (NB) | NB Shared/Right WB Left | A(A) A(A) | -(-) -(-) | [Not Mitigated] |
| 4 | Smoke Tree Drwy East & Lincoln Dr | 1-way stop (NB) | NB Shared WB Left | C(C) B(B) | -(-) -(-) | [Not Mitigated] |
| 5 | Medical Drwy West & Lincoln Dr | 1-way stop (NB) | NB Shared WB Left | C(C) B(B) | C(C) B(B) | [Not Mitigated] |
| 6 | Medical Drwy East & Lincoln Dr | 1-way stop (NB) | NB Shared/Right WB Left | B(B) B(A) | B(B) B(A) | [Not Mitigated] |
| 7 | Apartment Drwy & Lincoln Dr | 2-way Stop (NB/SB) | NB Shared SB Left SB Right EB Left WB Left | F(F) F(F) B(B) B(B) B(B) | F(F) F(F) B(B) B(B) B(B) | [Not Mitigated] |
| 8 | AJ's Drwy & Lincoln Dr | 2-way Stop (NB/SB) | NB Shared SB Left SB Right EB Left WB Left | C(D) F(F) B(B) B(B) B(B) | C(E) F (F) B(B) B(B) B(B) | [Not Mitigated] |
| 9 | Scottsdale Rd & Lincoln Dr | Signal | NB SB EB WB Overall | C(C) D(D) F(E) E(F) D(D) | C(C) D(D) F(E) E(F) | D(D) E(E) E(E) E(E) |
| А | Quail Run Rd & Access A | 1-way stop (WB) | SB Left WB Right | -(-) -(-) | A(A) A(A) | [Not Mitigated] |



| | | Intersection | Approach/ | 2020 LOS AM(PM) | | |
|----|----------------------------------|--------------------|----------------------|-----------------|--------------|--------------------|
| ID | Intersection | Control | Movement | No-Build | Build | Mitigated |
| В | Smoke Tree Access B & Lincoln Dr | 1-way stop (NB) | NB Shared WB Left | -(-) -(-) | C(C) B(B) | [Not Mitigated] |

The results of the 2020 opening year Synchro analysis summarized in **Table 6** indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:

The intersection of **Mockingbird Lane & Lincoln Drive** is expected to experience delay on the northbound and southbound approaches during the no build and the full build scenario. By increasing the southbound left turn phase from 9 seconds to 19 seconds and changing the northbound left turn phase from permissive to permissive-protected, the southbound approach delay is expected to decrease from 56 seconds per vehicle to 55.1 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 55.4 seconds per vehicle during the PM peak hour. The northbound approach delay is expected to decrease from 48 seconds per vehicle to 43.3 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 57.3 seconds per vehicle in the PM peak hour, which is very close to what is considered an acceptable level of service.

The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.

The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. The intersection is expected to operate at an overall acceptable level of service (LOS D or better) during both the AM and PM peak hours of both scenarios, however, the eastbound and westbound approach delay could be improved by increasing the eastbound phase from 30 seconds to 32 seconds and increasing the westbound phase from 13 seconds to 21 seconds. This change is expected to decrease the overall intersection delay from 46.4 seconds per vehicle to 25 seconds per vehicle in the AM peak and increase the overall intersection delay from 44.9 seconds per vehicle to 52.1 seconds per vehicle in the PM peak hour. Although the PM peak hour overall intersection delay is expected to increase, the individual approach delays for the eastbound and westbound decrease significantly. The eastbound approach is expected to decrease from 82.8 seconds per vehicle to 16 seconds per vehicle and the westbound approach is expected to decrease from 63.8 seconds per vehicle to 23.7 seconds per vehicle during the PM peak hour.

The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6th edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.



The signal timing proposed for the 2020 mitigated scenario was applied to the 2025 horizon year.

Table 7: 2025 Peak Hour Analysis

| | | Intersection | Approach/ | 202 | 25 LOS AM(F | PM) |
|----|--------------------------------------|-----------------------|--|--|--|------------------------------|
| ID | Intersection | Control | Movement | No-Build | Build | Mitigated |
| 1 | Mockingbird Ln & Lincoln Dr | Signal | NB SB EB WB Overall | D(E) E (E) B(A) C(B) | D(D) E(E) C(B) D(C) | [Not Mitigated] |
| 2 | Quail Run Rd & Lincoln Dr | Signal | NB SB EB WB Overall | B(B) B(C) A(A) D(D) C(C) | B(B) B(B) B(A) D(C) C(B) | [Not Mitigated] |
| 3 | Smoke Tree Drwy West & Lincoln Dr | 1-way stop (NB) | NB Shared/Right WB Left | A(A) A(A) | -(-) -(-) | [Not Mitigated] |
| 4 | Smoke Tree Drwy East & Lincoln Dr | 1-way stop (NB) | NB Shared WB Left | C(C) B(B) | -(-) -(-) | [Not Mitigated] |
| 5 | Medical Drwy West & Lincoln Dr | 1-way stop (NB) | NB Shared WB Left | C(C) B(B) | C(C) B(B) | [Not Mitigated] |
| 6 | Medical Drwy East & Lincoln Dr | 1-way stop (NB) | NB Shared/Right WB Left | B(B) B(A) | B(B) B(A) | [Not Mitigated] |
| 7 | Apartment Drwy & Lincoln Dr | 2-way Stop (NB/SB) | NB Shared SB Left SB Right EB Left WB Left | F(F) F(F) B(B) B(B) B(B) | F(F) F(F) B(B) B(B) B(B) | [Not Mitigated] |
| 8 | AJ's Drwy & Lincoln Dr | 2-way Stop (NB/SB) | NB Shared SB Left SB Right EB Left WB Left | D(F) F(F) B(B) B(B) B(B) | D(F) F (F) B(B) B(B) B(B) | [Not Mitigated] |
| 9 | Scottsdale Rd & Lincoln Dr | Signal | NB SB EB WB Overall | C(D) D(D) F(F) E(F) D(D) | D(D) F(E) F(E) E(E) | D(E) E(D) E(E) E(E) |
| Α | Quail Run Rd & Access A | 1-way stop (WB) | SB Left WB Right | -(-) -(-) | A(A) A(A) | [Not Mitigated] |
| В | Smoke Tree Access B & Lincoln Dr | 1-way stop (NB) | NB Shared WB Left | -(-) -(-) | C(C) B(B) | [Not Mitigated] |

The results of the 2025 horizon year Synchro analysis summarized in **Table 7** indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:

The intersection of **Mockingbird Lane & Lincoln Drive** is expected to have delay on the southbound approach during the AM and PM peak hours of both the no build and full build scenario. The delay is due to the volume of southbound right turning vehicles, however the approach delay is 55.4 seconds per vehicle during the AM peak hour of the full build scenario and 56.2 seconds per vehicle during the PM peak hour, which is lower than the no build scenario and very close to the threshold for an acceptable level of service (LOS D or better).



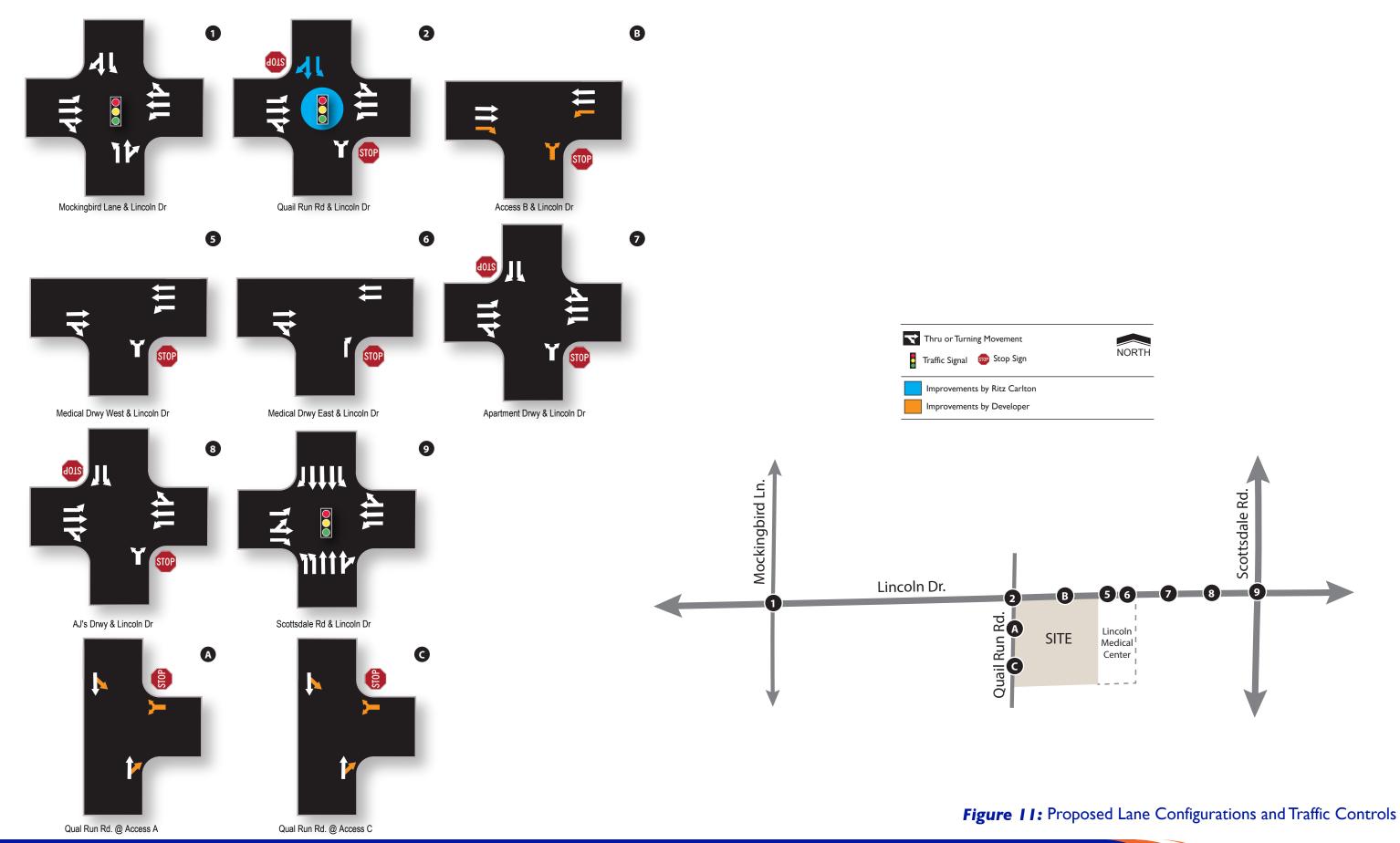
The intersections of **Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.

The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the southbound, eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. By decreasing the cycle length from 130 seconds to 120 seconds and optimizing the green times, the overall intersection delay is expected to decrease from 76 seconds per vehicle to 58.2 seconds per vehicle during the AM peak hour and decrease from 62.7 seconds per vehicle to 57.7 seconds per vehicle during the PM peak hour. Although this mitigation measure is expected to decrease the approach delays and the overall intersection delay, if this signal is coordinated with any others along Scottsdale Road, changing the cycle length will interfere with the coordination and would not be recommended. The City of Scottsdale has stated that they have plans to change the eastbound approach configuration to dual left turn lanes and a shared through/right turn lane. It is not known when this change will occur, but it could improve the delay if the intersection is retimed.

The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6th edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

The proposed lane configurations are presented in **Figure 11**.





CivTech

QUEUE LENGTH ANALYSIS

Adequate turn storage should be supplied on any approach where turn lanes are permitted and/or warranted. A queuing analysis was performed for all warranted/recommended and existing intersection turn lanes where site traffic is expected as well as left turn lanes adjacent to the site. According to the methodology documented in *A Policy on Geometric Design of Highways and Streets* (the AASHTO "Green Book"), the storage length for a turn lane is typically estimated as the length required to hold the average number of arriving vehicles per two minutes, where unsignalized, or per one-and-a half signal cycles, where signalized. The formulas used for the calculations are shown below.

For signalized intersections, the storage length is determined by the following formula:

Storage Length = [1.5 x (veh/hr)/(cycles/hr)] x 25 feet

For unsignalized intersections, the storage length is determined by the following formula:

Storage Length = $[(veh/hr)/(30 periods/hr)] \times 25 feet$

Using the traffic volumes and lane configurations projected for the 2025 horizon year, the resulting turn lane storage for turn movements affiliated with the site using AASHTO guidelines were calculated with a 130-second cycle length and are summarized in **Table 8**. Calculations for the queue storage length recommendations are provided in **Appendix I.**

Queue Storage Intersection ID Existing (1) AASHTO 95th Percentile Recommended Intersection Control Movement NB Left 85' 25' 25' 85' Mockingbird Lane SB Left 130' 175' 95' 130' 1 Signalized ⁽⁴⁾145' & Lincoln Dr EB Left 145' 500' 235' WB Left 100' 50' 30' 100' EB Left 225' 155' 150' Quail Run Rd & 2 Signalized WB Left 25' 25' 150' Lincoln Dr WB Right 50' 150' NB Left (2)550° (2)850° (2)345° (2)550° SB Left 185' 125' 120' 185' Scottsdale Rd & EB Left 1,050' 500' ⁽⁴⁾175' 175' 9 Signalized Lincoln Dr WB Left 90' 125' 100' (5)90SB Right 315' 1,225' 275' (3)350" **EB** Right 175' 925' 350' ⁽⁴⁾175' Smoke Tree 1-way stop WB Left 50' 25' 50' В Access B & (NB) EB Right 25' 50' Lincoln Dr

Table 8: Queue Storage Lengths

¹ The American Association of Highway and Transportation Officials on pages 714-715 of its publication, *Geometric Design of Highways and Streets* ("AASHTO Green Book"), indicates that storage length for a turn lane, exclusive of taper, "should usually be based on one and one-half to two times the average number of vehicles that would store per cycle" at a signalized intersection.



⁽¹⁾ Measured from stop bar to end of storage length

⁽²⁾ Dual left turn lanes. Queue storage includes total storage length of both lanes

⁽³⁾ Max storage length recommended for signalized intersection

- (4) Extending this turn will interfere with left turns into AJ's Fine Foods driveway
- (5) Not the responsibility of the developer

According to the CivTech study done for the Ritz Carlton, the newly signalized intersection of Quail Run Road and Lincoln Drive will have eastbound/westbound left turn lanes and a westbound right turn lane striped with 150 feet of storage each. The recommended storage lengths in **Table 8** are provided for horizon year 2025 using the total traffic projections.

The Smoke Tree Resort is requesting a new full access driveway located approximately 80 feet west of the eastern most property line. The Town of Paradise Valley has stated that an eastbound right turn deceleration lane is required at this driveway. Using AASHTO methodology only 25 feet of storage is required, however, 50 feet is the minimum that should be recommended per AASHTO standards with a 90 foot taper. A minimum of 75 feet of storage is recommended for the right turn deceleration lane, however, if interference with other turn lanes is expected with the 75 foot storage length, 50 feet would be an acceptable storage length.

SIGHT DISTANCE ANALYSIS

Adequate sight distance must be provided at intersections and site access driveways to allow safe turning movements. There must be sufficient unobstructed sight distance along both approaches of a street/driveway intersection and across their included corners to allow operators of vehicles to see each other in time to prevent a collision.

The Town of Paradise Valley maintains sight distance requirements within their City Code, standard details and development services guidelines. The Town of Paradise Valley measures sight distance using AASHTO methodology except that the sight triangle from the driveway is measured from the center of the egress lane, 14.5 feet back from the curb return line. Sight distance calculations according to AASHTO guidelines are summarized in **Table 9**.

| | Posted | Sight Distance Along Roadway | | | |
|-------------------------------------|-------------------------|------------------------------|-------------------------------------|-----------------------------------|------------------------------|
| Roadway | Speed Limit (mph) | Design Speed (mph) | Left of Driveway (Case B2/B3) | Right of Driveway (Case B1) | On Major Road (Case F) |
| Quail Run Rd & Access A | - | 30 | 290' | 335' | 245' |
| Smoke Tree Access B & Lincoln Dr | 40 | 45 | 860' | 930' | 795' |
| Quail Run Rd & Access C | 1 | 30 | 290' | 335' | 245' |

Table 9: AASHTO Sight Distance Requirements

There are no existing obstructions to sight distance within the project intersection or along the included corners of the proposed intersection. Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development. Recommended distances for these movements can be found in the table above.

The contractor should ensure that sight visibility is provided at all proposed intersections according to the distances shown in **Table 9** and that sight triangles at public



intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations. Sight distance worksheets have been included within **Appendix J**.



CONCLUSIONS

The following conclusions have been documented in this study.

General

 The proposed development is anticipated to generate approximately 1,032 weekday daily trips, with 69 trips occurring in the AM peak hour and 101 trips occurring in the PM peak hour.

Existing Conditions

- The results of the existing conditions analysis indicates that all intersections currently operate at an overall acceptable level of service (LOS D or better), with the exception of the intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive under the existing lane configurations.
 - The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and existing Apartments. It is possible that a raised median will be installed along the length of Lincoln Drive.

Opening Year 2020

- The results of the 2020 opening year Synchro analysis indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
 - The intersection of **Mockingbird Lane & Lincoln Drive** is expected to experience delay on the northbound and southbound approaches during the no build and the full build scenario. By increasing the southbound left turn phase from 9 seconds to 19 seconds and changing the northbound left turn phase from permissive to permissive-protected, the southbound approach delay is expected to decrease from 56 seconds per vehicle to 55.1 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 55.4 seconds per vehicle during the PM peak hour. The northbound approach delay is expected to decrease from 48 seconds per vehicle to 43.3 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 57.3 seconds per vehicle in the PM peak hour, which is very close to what is considered an acceptable level of service.
 - The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.



- o The intersection of Scottsdale Road & Lincoln Drive is expected to experience delay on the eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. The intersection is expected to operate at an overall acceptable level of service (LOS D or better) during both the AM and PM peak hours of both scenarios, however, the eastbound and westbound approach delay could be improved by increasing the eastbound phase from 30 seconds to 32 seconds and increasing the westbound phase from 13 seconds to 21 seconds. This change is expected to decrease the overall intersection delay from 46.4 seconds per vehicle to 25 seconds per vehicle in the AM peak and increase the overall intersection delay from 44.9 seconds per vehicle to 52.1 seconds per vehicle in the PM peak hour. Although the PM peak hour overall intersection delay is expected to increase, the individual approach delays for the eastbound and westbound decrease significantly. The eastbound approach is expected to decrease from 82.8 seconds per vehicle to 16 seconds per vehicle and the westbound approach is expected to decrease from 63.8 seconds per vehicle to 23.7 seconds per vehicle during the PM peak hour.
- The intersection of Quail Run Road and Access A reports a delay of zero seconds using the HCM 6th edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

Horizon year 2025

- The results of the 2025 horizon year Synchro analysis summarized in Table 7 indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
 - The intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.
 - The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the southbound, eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. By decreasing the cycle length from 130 seconds to 120 seconds and optimizing the green times, the overall intersection delay is expected to decrease from 76 seconds per vehicle to 58.2 seconds per vehicle during the AM peak hour and decrease from 62.7 seconds per vehicle to 57.7 seconds per vehicle during the PM peak hour. Although this mitigation measure is expected to decrease the approach delays and the overall intersection delay, if this signal is coordinated with any others along Scottsdale Road, changing the cycle length will interfere with the coordination and would not be recommended. The City of



- Scottsdale has stated that they have plans to change the eastbound approach configuration to dual left turn lanes and a shared through/right turn lane. It is not known when this change will occur, but it could improve the delay if the intersection is retimed.
- The intersection of Quail Run Road and Access A reports a delay of zero seconds using the HCM 6th edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

Queue Storage and Sight Distance

- According to the CivTech study done for the Ritz Carlton, the newly signalized intersection of Quail Run Road and Lincoln Drive will have eastbound/westbound left turn lanes and a westbound right turn lane striped with 150 feet of storage each. While 150 feet is being proposed due to the current development agreement with Five Star Development for the Ritz Carlton, less is required to meet the recommended AASHTO length. The recommended storage lengths are provided for horizon year 2025 using the total traffic projections.
 - The Smoke Tree Resort is requesting a new full access driveway located approximately 80 feet west of the eastern most property line. The Town of Paradise Valley has stated that an eastbound right turn deceleration lane is required at this driveway. Using AASHTO methodology only 25 feet of storage is required, however, 50 feet is the minimum that should be recommended per AASHTO standards with a 90 foot taper.
- There are no existing obstructions to sight distance within the project intersections or along the included corners of the proposed intersection. Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development
 - The contractor should ensure that sight visibility is provided at all proposed intersections according to the distances and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations.



LIST OF REFERENCES

Highway Capacity Manual. Transportation Research Board, Washington, D.C., 2000.

Manual on Uniform Traffic Control Devices. U.S. Department of Transportation, Federal Highways Administration, Washington, D.C., 2009.

Roadway Design Manual, Maricopa County Department of Transportation, Phoenix, Arizona, Revised April 2004.

Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, Washington, D.C., 2016.

Trip Generation Handbook, 3nd *Edition*, Institute of Transportation Engineers, Washington, D.C., 2016.

Ritz Carlton Master Plan, Paradise Valley Traffic Impact Analysis (TIA), CivTech, Scottsdale, AZ, March 2016.

Lincoln Medical Center, Paradise Valley Traffic Impact Analysis (TIA), CivTech, Scottsdale, AZ, November 2018.



TECHNICAL APPENDIX

APPENDIX A: REVIEW COMMENTS AND RESPONSES

APPENDIX B: EXISTING TRAFFIC COUNTS

APPENDIX C: EXISTING PEAK HOUR ANALYSIS

APPENDIX D: TRIP GENERATION

APPENDIX E: TRIP DISTRIBUTION

APPENDIX F: BACKGROUND TRAFFIC

APPENDIX G: 2020 PEAK HOUR ANALYSIS

APPENDIX H: 2025 PEAK HOUR ANALYSIS

APPENDIX I: QUEUE STORAGE ANALYSIS

APPENDIX J: SIGHT DISTANCE ANALYSIS



APPENDIX A

REVIEW COMMENTS AND RESPONSES



Smoke Tree Resort 2ns Submittal

CivTech, Inc.

Review Comments & Responses

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: Paul Mood, Town of Paradise Valley

| Item | Review Comment | (Code) & Response |
|---------|--|--|
| 1. | Applicant shall assume staff's recommendation for access onto Lincoln | (1) The analysis and report text have been updated to reflect the change |
| | Drive which includes 65 feet of right-of-way, eliminated both existing | in access from the two existing driveways on Lincoln Drive to a single, |
| | driveways and adds a right turn deceleration lane and shared use | full movement, shared driveway with Lincoln Medical Center. However, |
| | driveway with the Lincoln Medical Plaza approximately 80 feet west of | Lincoln Medical site traffic was not added to this shared driveway, but |
| | the eastern property line. The TIA should be updated accordingly | instead kept at their two existing driveways, per the instruction of the |
| | | Town of Paradise Valley. |
| 2. | A cross access easement with the Lincoln Medical Plaza shall be | (2) Cross access may be included in the site design, but for the purpose |
| | required | of this study, Lincoln Medical site generated traffic was not assumed to |
| | | be using the shared access, but instead kept their two original driveways. |
| | | |
| | Update existing speed limit on Lincoln Drive from 35 mph to 40 mph in | (1) Speed limit for Lincoln Drive has been updated from 35 mph to 40 |
| | existing conditions and sight distance analysis sections | mph |



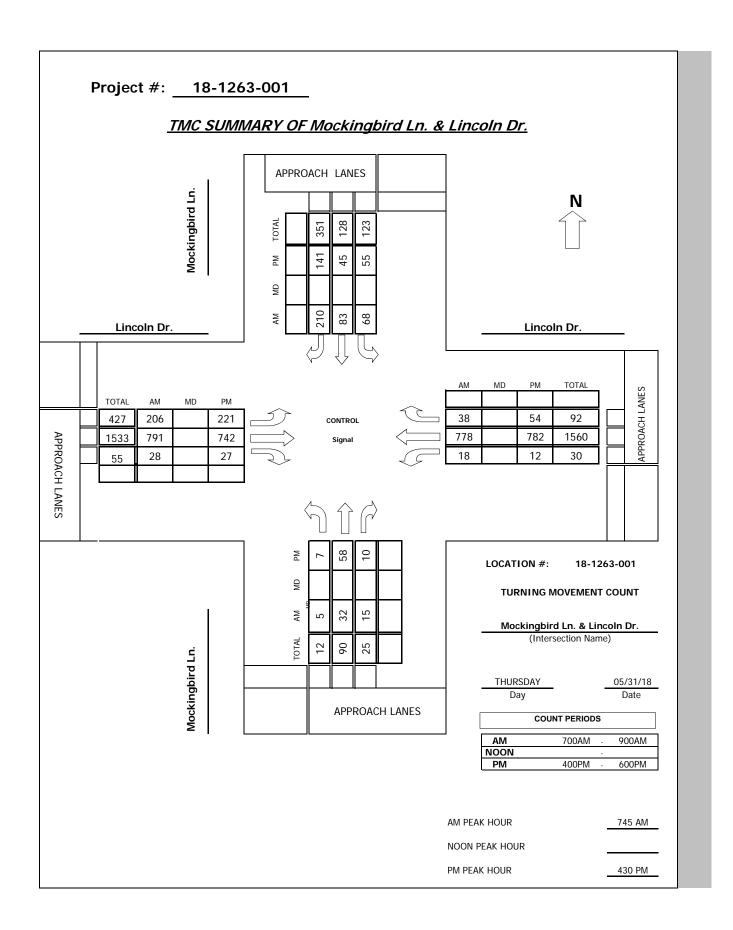
Reviewed Date: 01/03/201! CivTech Received Date: 02/08/201! CivTech Entered Date: 02/11/201! CivTech Response Date: 02/11/201!

APPENDIX B

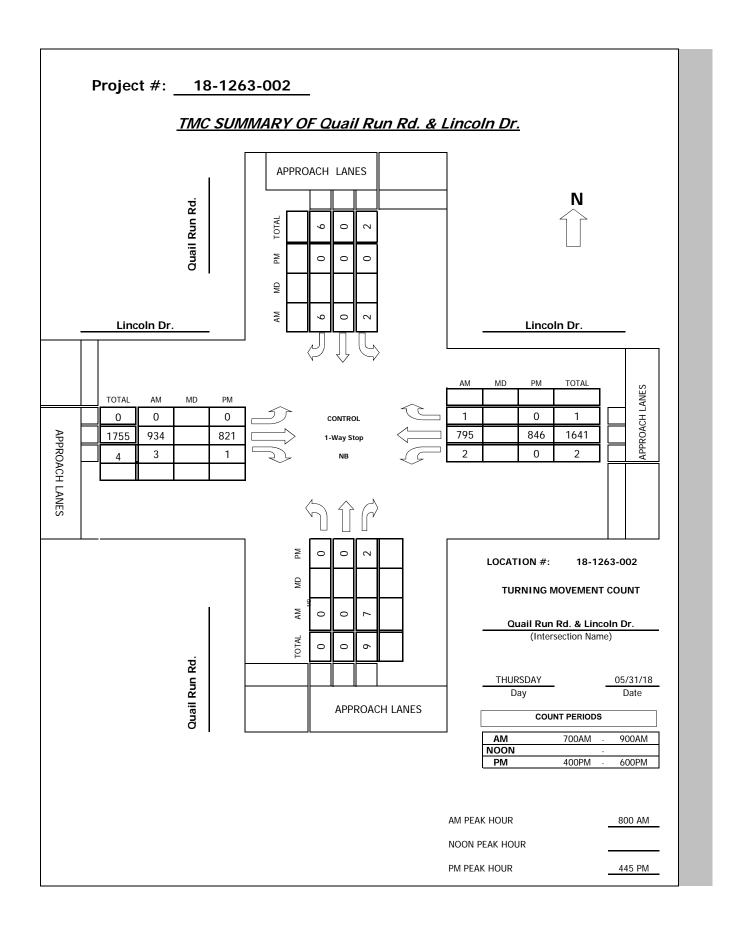
EXISTING TRAFFIC COUNTS



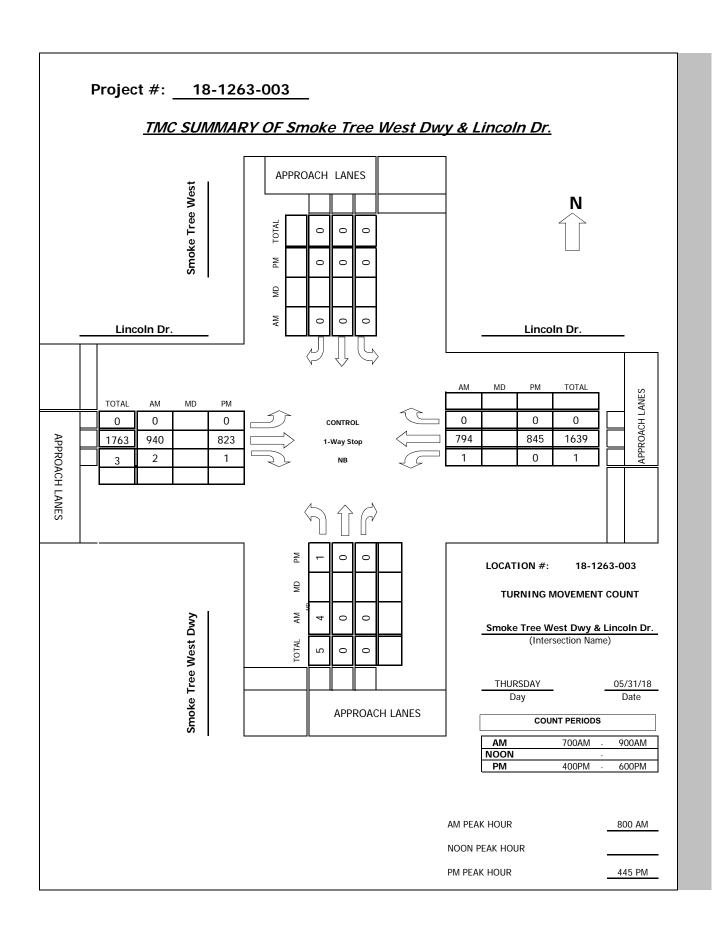




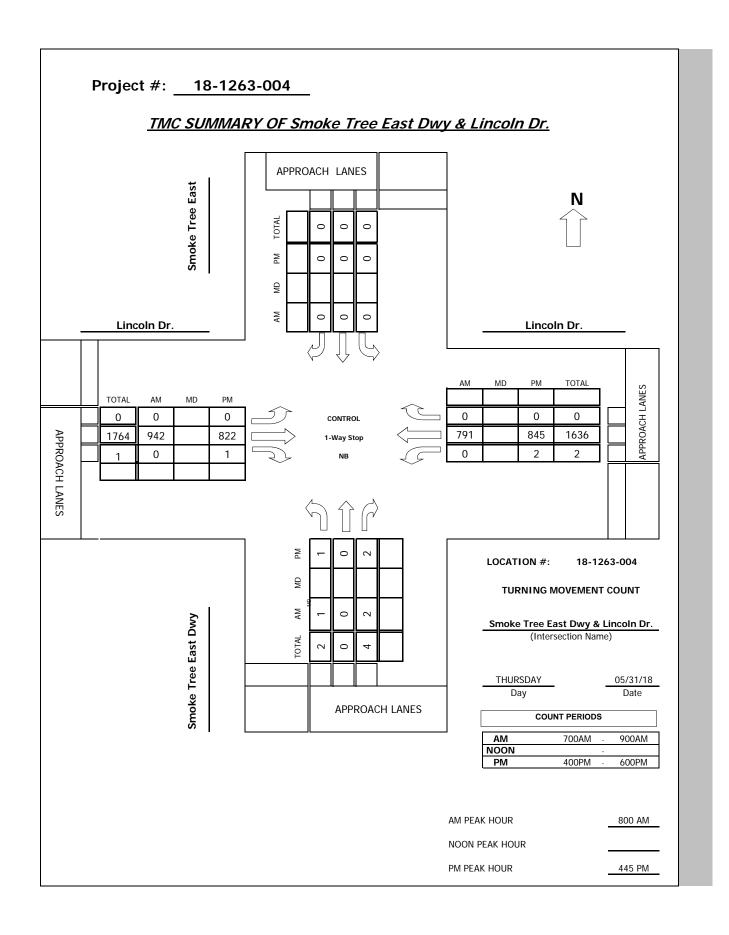




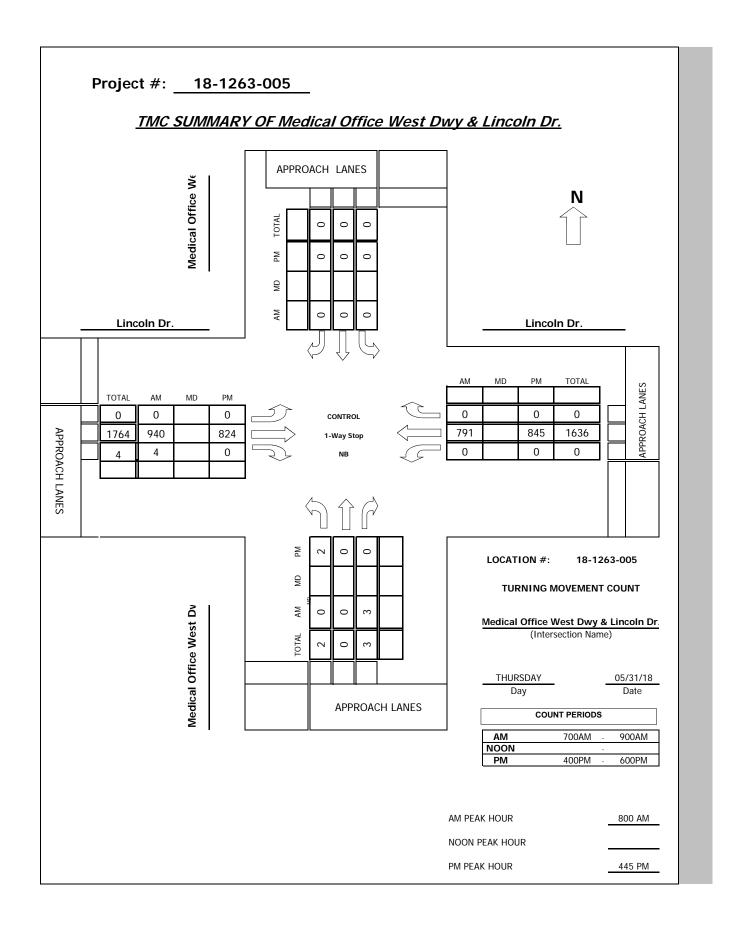




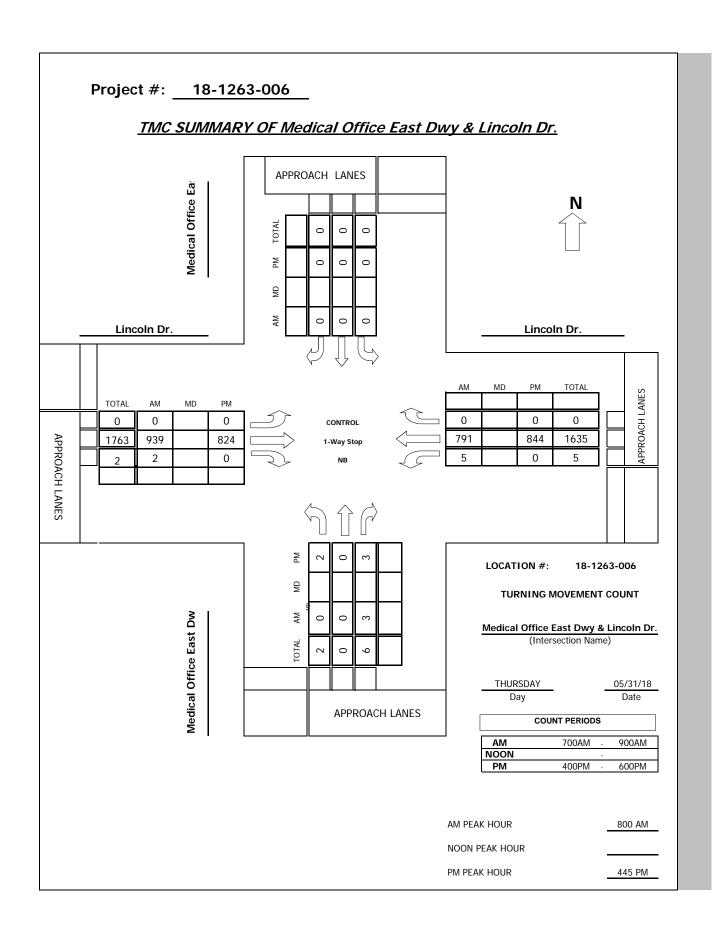




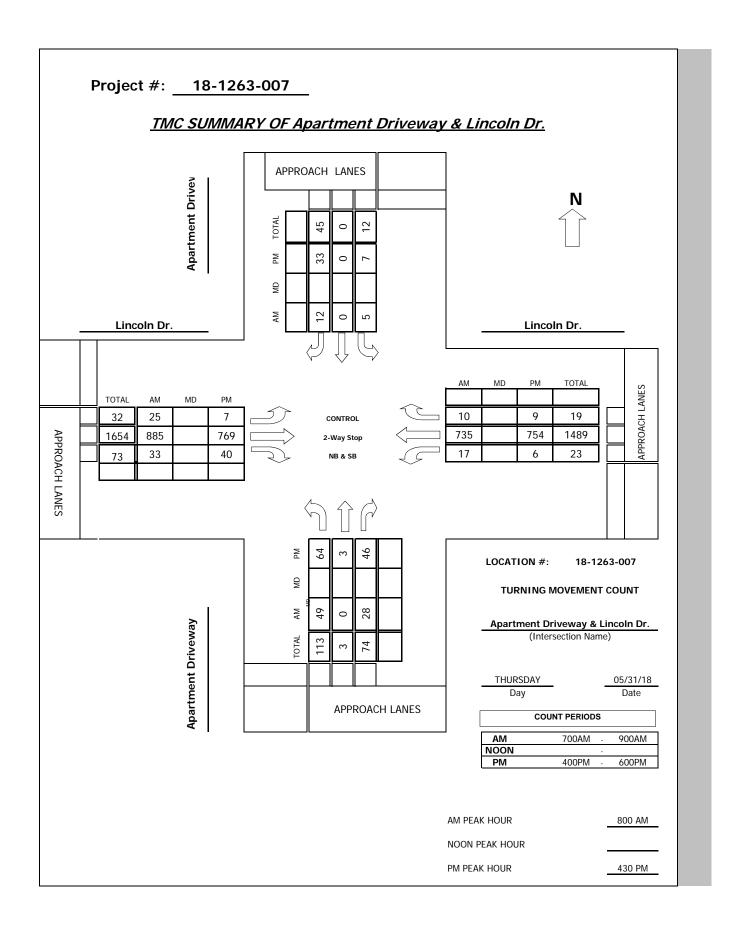




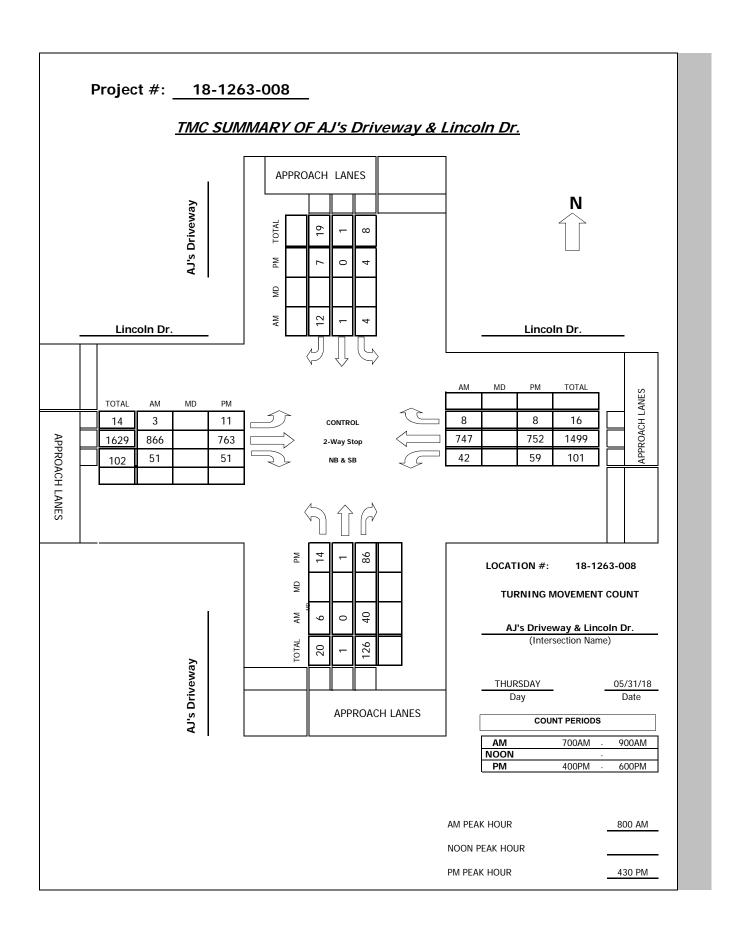




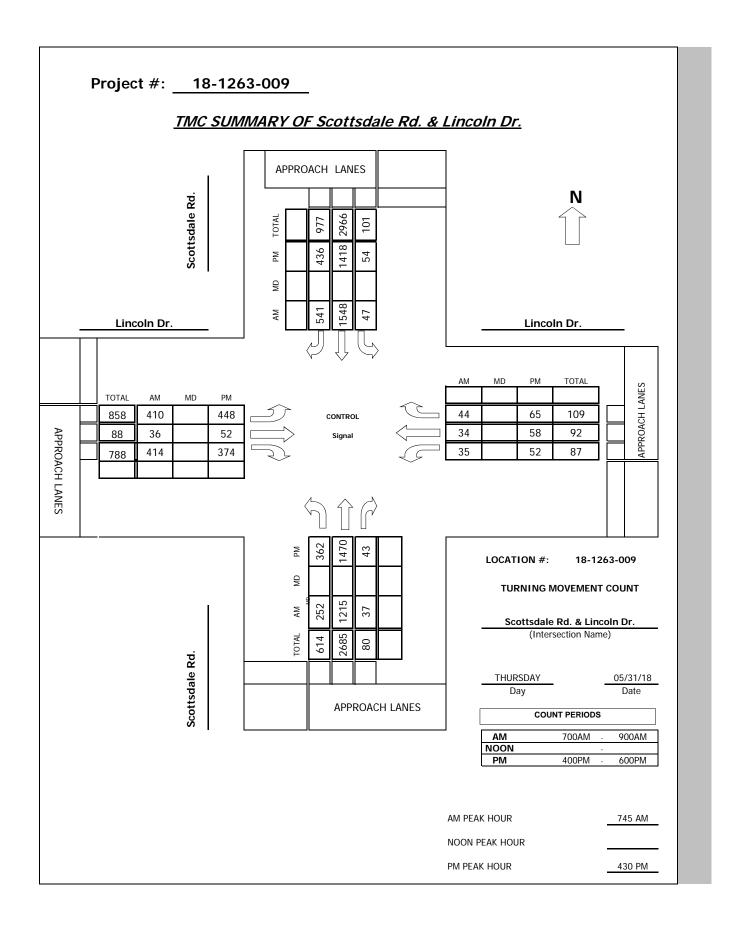












APPENDIX C

EXISTING PEAK HOUR ANALYSIS



1: Mockingbird Ln & Lincoln Drive

7.0 33.5 53.0 40.8% 4.0 2.5 0.0 None 24.4 0.19 0.83 50.8 0.0 49.4 D ¥ 85 85 3.5 8.0 9.0 9.0 3.0 3.0 1.0 0.0 1.0 4.0 4.0 1.0 9.0 0.0 0.21 0.031 43.6 7.0 33.5 44.0 33.8% 4.0 2.5 0.0 6.5 Lag Yes ₹ 33 33 4 None 17.2 0.13 0.22 36.8 36.8 33.8% 4.0 2.5 0.0 6.5 Lag Yes None Cycle Length: 130
Actuard Cycle Length: 130
Offiset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 80 15.0 27.0 50.0 38.5% 4.5 1.5 0.0 0.0 Lag Yes C-Max 74.8 0.58 0.46 19.1 801 ₹ 801 801 15.0 27.0 38.5% 4.5 1.5 0.0 6.0 6.0 6.0 74.8 0.58 0.06 18.2 815 NA 15.0 27.0 77.0 59.2% C-Max 93.1 0.72 0.37 8.4 8.4 8.4 4.5 1.5 0.0 6.0 3.5 8.0 27.0 20.8% 3.0 1.0 0.0 4.0 1.0 4.0 1.0 95.1 10.5 10.5 Control Type: Actuated-Coordinated Lane Configurations Traffic Volume (vph) Future Volume (vph) Switch Phase
Minimum Initial (s)
Minimum Initial (s)
Minimum Spit (s)
Total Spitt (%)
Yellow Time (s)
All-Red Time (s)
Total Lost Time Adjust (s)
Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effet Green (s) Actuated g/C Ratio v/c Ratio Intersection Summary Turn Type Protected Phases Permitted Phases Approach Delay Approach LOS Detector Phase Control Delay Queue Delay Total Delay LOS

₩ 1: Mockingbird Ln & Lincoln Drive **₹** Ø2 (R) Splits and Phases: ğ

Intersection LOS: B ICU Level of Service C

Intersection Signal Delay: 19.7 Intersection Capacity Utilization 69.1% Analysis Period (min) 15

Maximum v/c Ratio: 0.83

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Smoke Tree Resort Existing AM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | 4 | † | <i>></i> | > | ţ | 4 | • | • | • | ٠ | → | • |
|------------------------------|------|------|-------------|--|------|------|--|------|------|------|----------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | ₩. | | <u>, </u> | ₩. | | <u>, </u> | 2 | | r | \$ | |
| Traffic Volume (veh/h) | 212 | 815 | 59 | 19 | 801 | 39 | 2 | 33 | 15 | 70 | 82 | 216 |
| Future Volume (veh/h) | 212 | 815 | 59 | 19 | 801 | 39 | 2 | 33 | 15 | 70 | 82 | 216 |
| 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 | | S | | | 8 | | | S | | | 8 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 236 | 906 | 32 | 21 | 890 | 43 | 9 | 37 | 17 | 78 | 94 | 240 |
| Peak Hour Factor | 06.0 | 0.00 | 0.90 | 0.00 | 06:0 | 0.00 | 06:0 | 0.00 | 06:0 | 0.00 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 7 | 2 | 2 | 7 | 2 | 7 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 439 | 2371 | 84 | 393 | 1984 | 96 | 88 | 191 | 88 | 301 | 106 | 270 |
| Arrive On Green | 0.07 | 89.0 | 89.0 | 0.58 | 0.58 | 0.58 | 0.16 | 0.16 | 0.16 | 0.04 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1781 | 3501 | 124 | 265 | 3450 | 167 | 1046 | 1213 | 222 | 1781 | 466 | 1190 |
| Grp Volume(v), veh/h | 236 | 460 | 478 | 21 | 458 | 475 | 9 | 0 | 54 | 78 | 0 | 334 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1848 | 263 | 1777 | 1840 | 1046 | 0 | 1770 | 1781 | 0 | 1656 |
| Q Serve(g_s), s | 6.7 | 14.6 | 14.6 | 2.1 | 19.2 | 19.2 | 0.7 | 0.0 | 3.4 | 4.7 | 0.0 | 25.4 |
| Cycle Q Clear(g_c), s | 6.7 | 14.6 | 14.6 | 3.4 | 19.2 | 19.2 | 17.1 | 0.0 | 3.4 | 4.7 | 0.0 | 25.4 |
| Prop In Lane | 1.00 | | 0.07 | 1.00 | | 0.09 | 1.00 | | 0.31 | 1.00 | | 0.72 |
| Lane Grp Cap(c), veh/h | 439 | 1203 | 1252 | 393 | 1022 | 1058 | 88 | 0 | 279 | 301 | 0 | 375 |
| V/C Ratio(X) | 0.54 | 0.38 | 0.38 | 0.05 | 0.45 | 0.45 | 0.07 | 0.00 | 0.19 | 0.26 | 0.00 | 0.89 |
| Avail Cap(c_a), veh/h | 627 | 1203 | 1252 | 393 | 1022 | 1058 | 225 | 0 | 511 | 301 | 0 | 592 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 11.4 | 9.1 | 9.1 | 12.8 | 15.8 | 15.8 | 61.4 | 0.0 | 47.6 | 42.4 | 0.0 | 48.7 |
| Incr Delay (d2), s/veh | 1.0 | 6.0 | 6.0 | 0.3 | 1.4 | 1.4 | 0.3 | 0.0 | 0.3 | 0.5 | 0.0 | 10.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.7 | 2.7 | 0.9 | 0.3 | 8.1 | 8.4 | 0.2 | 0.0 | 1.6 | 2.1 | 0.0 | 11.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 12.4 | 10.1 | 10.0 | 13.0 | 17.2 | 17.2 | 61.7 | 0.0 | 47.9 | 42.9 | 0.0 | 58.9 |
| LnGrp LOS | В | В | В | В | В | В | ш | A | О | ٥ | A | Ш |
| Approach Vol, veh/h | | 1174 | | | 954 | | | 09 | | | 412 | |
| Approach Delay, s/veh | | 10.5 | | | 17.1 | | | 49.3 | | | 22.8 | |
| Approach LOS | | В | | | В | | | Ω | | | ш | |
| Timer - Assigned Phs | - | 2 | က | 4 | | 9 | | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 13.3 | 80.8 | 0.6 | 27.0 | | 94.0 | | 36.0 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 8.7 | 21.2 | 6.7 | 19.1 | | 16.6 | | 27.4 | | | | |
| Green Ext Time (p_c), s | 9.0 | 6.7 | 0.0 | 0.2 | | 7.6 | | 2.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 21.0 | | | | | | | | | |
| HCM 6th LOS | | | O | | | | | | | | | |
| | | | | | | | | | | | | |

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2: Quail Run Rd & Lincoln Driv

| III Kun Ka & Lincoln Drive | HCM 6th TWSC |
|----------------------------|--------------|
| = | |

| Intersection | | | | | | | | | | | | | |
|------------------------|----------|------|------|--------|------|------|--------|------|------|--------|------|------|--|
| Int Delay, síveh | 0.1 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | <u>"</u> | 4₽ | | F | 4₽ | | | 4 | | | 4 | | |
| Traffic Vol, veh/h | 0 | 396 | က | 2 | 819 | _ | 0 | 0 | 7 | 7 | 0 | 9 | |
| Future Vol, veh/h | 0 | 962 | 3 | 2 | 819 | - | 0 | 0 | 7 | 7 | 0 | 9 | |
| 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 | 1 | 1 | None | 1 | • | None | 1 | ì | None | 1 | • | None | |
| Storage Length | 25 | ٠ | ٠ | 22 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | | |
| Veh in Median Storage, | - # | 0 | ٠ | • | 0 | • | ٠ | 0 | ٠ | ٠ | 0 | | |
| Grade, % | ٠ | 0 | | | 0 | | | 0 | | | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 7 | 2 | 2 | 7 | 2 | 2 | 2 | 7 | 2 | 7 | 2 | |
| Mvmt Flow | 0 | 1069 | 3 | 7 | 910 | _ | 0 | 0 | 00 | 7 | 0 | 7 | |
| | | | | | | | | | | | | | |
| Major/Minor N | Major1 | | 2 | Major2 | | 2 | Minor1 | | 2 | Minor2 | | | |
| Conflicting Flow All | 911 | 0 | 0 | 1072 | 0 | 0 | 1530 | 1986 | 536 | 1450 | 1987 | 456 | |
| Stage 1 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | 1071 | 1071 | ٠ | 915 | 915 | | |
| Stage 2 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | 459 | 915 | ٠ | 535 | 1072 | | |
| Critical Hdwy | 4.14 | ٠ | ٠ | 4.14 | • | ٠ | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | 6.54 | 5.54 | ٠ | 6.54 | 5.54 | | |
| Critical Hdwy Stg 2 | 1 | 1 | 1 | 1 | 1 | 1 | 6.54 | 5.54 | 1 | 6.54 | 5.54 | i | |
| Follow-up Hdwy | 2.22 | • | • | 2.22 | • | • | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | |
| Pot Cap-1 Maneuver | 743 | 1 | 1 | 949 | 1 | 1 | 80 | 99 | 489 | 92 | 99 | 551 | |
| Stage 1 | • | • | • | • | • | • | 236 | 295 | • | 294 | 350 | | |
| Stage 2 | 1 | 1 | 1 | • | 1 | 1 | 221 | 320 | 1 | 497 | 295 | · | |
| Platoon blocked, % | | ٠ | ٠ | | ٠ | ٠ | | | | | | | |
| Mov Cap-1 Maneuver | 743 | 1 | 1 | 949 | 1 | 1 | 79 | 9 | 489 | 06 | 9 | 551 | |
| Mov Cap-2 Maneuver | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | 79 | 99 | ٠ | 6 | 99 | | |
| Stage 1 | ٠ | ٠ | | ٠ | | ٠ | 236 | 295 | ٠ | 294 | 349 | | |
| Stage 2 | | | | | | | 543 | 349 | ٠ | 489 | 295 | | |
| | | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 0 | | | 0 | | | 12.5 | | | 20.4 | | | |
| HCM LOS | | | | | | | В | | | ပ | | | |
| | | | | | | | | | | | | | |

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WBR SBLn1
- 242
- 0.037
- 20.4
- C

NBLn1 EBL EBT EBR WBL WBT W 489 743 - 646 - 60016 - 0.0018 - 12.5 0 - 10.6 - 10

Minor LaneMajor Mornt Capacity (veh.h.) HCM Lane V/C Ratio HCM Control Delay (s) HCM Lane LOS HCM Sith %ille Q(veh)

Smoke Tree Resort Existing AM

3: Smole Tree West & Lincoln Dr

| Int Delay, s/veh | 0 | | | | | | |
|--------------------------|--------|-------|-------------|---------|---------|------|--|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | - | \$ | > | | |
| Traffic Vol, veh/h | 896 | 2 | · — | 818 | 4 | 0 | |
| Future Vol, veh/h | 896 | 7 | | 818 | 4 | 0 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | 1 | None | 1 | None | 1 | None | |
| Storage Length | | • | 22 | ٠ | 0 | | |
| Veh in Median Storage, # | 0 # | 1 | 1 | 0 | 0 | 1 | |
| Grade, % | 0 | | • | 0 | 0 | 1 | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 8 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1076 | 2 | | 606 | 4 | 0 | |
| | | | | | | | |
| Major/Minor N | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1078 | 0 | 1534 | 539 | |
| Stage 1 | 1 | | • | | 1077 | • | |
| Stage 2 | | • | • | ٠ | 457 | ٠ | |
| Critical Hdwy | | • | 4.14 | • | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | | • | | • | 5.84 | ٠ | |
| Critical Hdwy Stg 2 | 1 | 1 | 1 | 1 | 5.84 | 1 | |
| Follow-up Hdwy | • | • | 2.22 | • | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 643 | ٠ | 107 | 487 | |
| Stage 1 | • | ' | • | , | 288 | • | |
| Stage 2 | 1 | 1 | 1 | 1 | 604 | 1 | |
| Platoon blocked, % | 1 | • | | ٠ | | | |
| Mov Cap-1 Maneuver | 1 | • | 643 | • | 107 | 487 | |
| Mov Cap-2 Maneuver | | • | | ١ | 218 | ٠ | |
| Stage 1 | | • | • | • | 287 | • | |
| Stage 2 | | • | • | • | 904 | • | |
| Approach | H | ı | WR | ı | N N | | |
| UCM Control Dolay o | ٥ | l | | l | 210 | | |
| HCM LOS | > | | > | | C C | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR WBL | WBL | WBT | |
| Capacity (veh/h) | | 218 | • | ٠ | 643 | • | |
| HCM Lane V/C Ratio | | 0.02 | 1 | - | - 0.002 | 1 | |
| HCM Control Delay (s) | | 21.9 | 1 | 1 | 10.6 | 1 | |
| HCM Lane LOS | | ပ | • | • | В | • | |
| HCM 95th %tile Q(veh) | | 0.1 | 1 | • | 0 | | |
| | | | | | | | |

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4: Smoke Tree East & Lincoln Dr HCM 6th TWSC

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| Intersection | | | | | | | |
|--------------------------|--------|--------------|--------|------|--------------|------|--|
| Int Delay, sheh | 0 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | \$ | | r | ‡ | > | | |
| Traffic Vol, veh/h | 026 | 0 | 0 | 815 | | 2 | |
| | 026 | 0 | 0 | 815 | - | 7 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | - | None | | None | | None | |
| Storage Length | | ٠ | 25 | ٠ | 0 | ٠ | |
| Veh in Median Storage, # | | • | • | 0 | 0 | ٠ | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 06 | 06 | 8 | |
| Heavy Vehicles, % | 7 | 7 | 7 | 2 | 7 | 7 | |
| Mvmt Flow 1 | 1078 | 0 | 0 | 906 | - | 2 | |
| | | | | | | | |
| Major/Minor Ma | Major1 | \mathbf{Z} | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1078 | 0 | 1531 | 239 | |
| Stage 1 | | | | | 1078 | 1 | |
| Stage 2 | | ٠ | ٠ | ٠ | 453 | ٠ | |
| Critical Hdwy | | 1 | 4.14 | | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | ٠ | • | ٠ | 5.84 | ٠ | |
| Critical Hdwy Stg 2 | , | 1 | 1 | | 5.84 | 1 | |
| Follow-up Hdwy | ٠ | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | | | 643 | • | 108 | 487 | |
| Stage 1 | ٠ | ٠ | 1 | 1 | 788 | 1 | |
| Stage 2 | | | • | • | 209 | • | |
| Platoon blocked, % | ٠ | ٠ | | ٠ | | | |
| Mov Cap-1 Maneuver | ٠ | ٠ | 643 | • | 108 | 487 | |
| Mov Cap-2 Maneuver | ٠ | ٠ | ٠ | ٠ | 219 | ٠ | |
| Stage 1 | ٠ | ٠ | 1 | • | 288 | 1 | |
| Stage 2 | ٠ | ٠ | • | ٠ | 209 | ٠ | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 15.5 | | |
| HCM LOS | | | | | ပ | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 346 | | | 643 | | |
| HCM Lane V/C Ratio | | 0.01 | ٠ | ٠ | | ٠ | |
| HCM Control Delay (s) | | 15.5 | | | 0 | 1 | |
| HCM Lane LOS | | ပ | • | 1 | ⋖ | 1 | |
| HCM 95th %tile Q(veh) | | 0 | • | | 0 | 1 | |
| | | | | | | | |

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Smoke Tree Resort Existing AM

5: Lincoln Medical West & Lincoln Dr

| Int Delay, s/veh | 0 | | | | | | |
|--------------------------|--------|-------|--------|------|--------|------|--|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | F | \$ | > | | |
| Traffic Vol, veh/h | 896 | 4 | 0 | 815 | 0 | က | |
| Future Vol, veh/h | 896 | 4 | 0 | 815 | 0 | m | |
| Conflicting Peds, #/hr | 0 | | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | | None | • | None | ٠ | None | |
| Storage Length | • | • | 22 | ٠ | 0 | ٠ | |
| Veh in Median Storage, # | 0 # | • | 1 | 0 | 0 | | |
| Grade, % | 0 | • | • | 0 | 0 | ٠ | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 8 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1076 | 4 | 0 | 906 | 0 | က | |
| | | | | | | | |
| Major/Minor M | Major1 | 2 | Major2 | Ξ | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1080 | 0 | 1531 | 540 | |
| Stage 1 | 1 | • | | | 1078 | | |
| Stage 2 | | ٠ | ٠ | ٠ | 453 | ٠ | |
| Critical Hdwy | | • | 4.14 | • | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | ٠ | ٠ | ٠ | 5.84 | ٠ | |
| Critical Hdwy Stg 2 | | • | • | • | 5.84 | | |
| Follow-up Hdwy | • | • | 2.22 | • | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | 1 | 641 | | 108 | 486 | |
| Stage 1 | • | • | , | • | 288 | • | |
| Stage 2 | | 1 | • | 1 | 209 | | |
| Platoon blocked, % | • | • | | ٠ | | | |
| Mov Cap-1 Maneuver | 1 | • | 641 | ٠ | 108 | 486 | |
| Mov Cap-2 Maneuver | • | 1 | ٠ | ٠ | 219 | • | |
| Stage 1 | 1 | 1 | 1 | 1 | 288 | 1 | |
| Stage 2 | • | • | • | • | 209 | • | |
| Annroach | FB | | WB | | NB | | |
| UCM Control Dolay c | | | | | 10 E | | |
| HCM LOS | > | | > | | B B | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 486 | | | 641 | | |
| HCM Lane V/C Ratio | | 0.007 | | ٠ | | ٠ | |
| HCM Control Delay (s) | | 12.5 | | | 0 | | |
| HCM Lane LOS | | В | ٠ | ٠ | V | ٠ | |
| HCM 95th %tile Q(veh) | | 0 | | | 0 | | |
| | | | | | | | |

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6: Lincoln Medical East & Lincoln Dr

| | | | NBL NBR | | က | co | 0 | Stop | None | | |
|--|--|-----|---------|------|-----|-----|---|------|------|----|---|
| | | | NBL | > | 0 | 0 | 0 | Stop | | 0 | • |
| | | | WBT | ‡ | 815 | 815 | 0 | Free | None | | • |
| | | | WBL | - | 2 | 2 | 0 | Free | | 25 | |
| | | | EBR | ** * | 2 | 2 | 0 | Free | None | | |
| | | 0.1 | EBT | ₽ | 196 | 196 | 0 | Free | • | | |
| | | | | ĺ | | | ⊨ | | | | |

Intersection Int Delay, s/veh

| 1 | 0 538 | - 2 | 2 | 4 6.94 | 4 - | 4 . | 2 3.32 | 6 488 | - 6 | - 6 | | 5 488 | - 9 | - 9 | - 6 | В | 4 | В | EBR WBL WBT | 4 - | - 6 | - 9 | В | |
|---------------|----------------------|---------|---------|---------------|---------------------|----------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|---------------------------|
| Minor1 | 0 1540 | - 1075 | - 465 | - 6.84 | - 5.84 | - 5.84 | - 3.52 | - 106 | - 289 | - 266 | | - 105 | - 216 | - 286 | - 599 | NB | 12.4 | | SR WB | - 644 | - 0.009 | - 10.6 | | |
| or2 | 9/0 | ì | | 4.14 | | | 2.22 | 644 | , | ì | | 644 | | · | | WB | 0.1 | | BT EE | ı | | ì | | |
| Major2 | 0 1076 | | | 7 | | | . 7 | | | | | | | | | | | | NBLn1 EBT | 488 | 0.007 | 12.4 | В | |
| Major1 | 0 | • | ' | , | , | | | | ' | • | , | | ٠ | | • | EB | 0 | | | | | | | |
| Major/Minor N | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Holwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | The state of the state of |

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Smoke Tree Resort Existing AM

| & Lincoln Dr | HCM 6th TWSC |
|--------------------------------|--------------|
| 7: Apartment Drwy & Lincoln Dr | |
| 7: | |
| | |

| Int Delay, s/veh | 5.8 | | | | | | | | | | | | |
|------------------------|--------|-------|-------|--------|------|------|--------|-------|-----------------|--------|------|------|--|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | * | ₹ | | * | ₹ | | | 4 | | je- | | ¥:_ | |
| raffic Vol, veh/h | 79 | 912 | 34 | 18 | 757 | 10 | 20 | 0 | 29 | 2 | 0 | 12 | |
| Future Vol, veh/h | 56 | 912 | 34 | 9 | 757 | 9 | 20 | 0 | 59 | വ | 0 | 12 | |
| 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 | ٠ | 1 | None | 1 | • | None | 1 | | None | | 1 | None | |
| Storage Length | 22 | 1 | | 22 | | | | | | 0 | | 0 | |
| Veh in Median Storage, | ** | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | | |
| Grade, % | • | 0 | | • | 0 | ľ | ' | 0 | • | • | 0 | | |
| Peak Hour Factor | 06 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | 8 | 06 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Wvmt Flow | 29 | 1013 | 38 | 20 | 841 | = | 26 | 0 | 32 | 9 | 0 | 13 | |
| | | | | - | | | | | | | | | |
| | Majori | | | Major2 | | _ | Minori | | 2 | Minorz | | | |
| Conflicting Flow All | 852 | 0 | 0 | 1051 | 0 | 0 | 1551 | 1982 | 526 | 1452 | • | 426 | |
| Stage 1 | • | • | • | • | • | • | 1090 | 1090 | • | 887 | • | | |
| Stage 2 | , | | | | | | 461 | 892 | | 292 | | | |
| Critical Hdwy | 4.14 | 1 | | 4.14 | • | 1 | 7.54 | 6.54 | 6.94 | 7.54 | • | 6.94 | |
| Critical Hdwy Stg 1 | , | 1 | | | | | 6.54 | 5.54 | | 6.54 | | | |
| Critical Hdwy Stg 2 | • | • | | | | • | 6.54 | 5.54 | • | 6.54 | | | |
| Follow-up Hdwy | 2.22 | | | 2.22 | • | • | 3.52 | 4.02 | 3.32 | 3.52 | • | 3.32 | |
| Pot Cap-1 Maneuver | 783 | 1 | 1 | 929 | 1 | 1 | 77 | 19 | 496 | 92 | 0 | 277 | |
| Stage 1 | • | • | • | 1 | ' | 1 | 230 | 289 | • | 305 | 0 | | |
| Stage 2 | • | | | | | • | 220 | 328 | | 477 | 0 | | |
| Platoon blocked, % | | | | | | • | | | | | | | |
| Mov Cap-1 Maneuver | 783 | 1 | 1 | 929 | 1 | 1 | 71 | 22 | 496 | 82 | 1 | 277 | |
| Mov Cap-2 Maneuver | ١ | • | 1 | • | • | • | 71 | 22 | • | 83 | • | | |
| Stage 1 | • | 1 | 1 | • | 1 | • | 221 | 278 | • | 294 | 1 | | |
| Stage 2 | 1 | • | 1 | 1 | • | 1 | 521 | 347 | 1 | 429 | • | | |
| | | | | | | | | | | | | | |
| Approach | EB | | | WB | | | 8 | | | SB | | | |
| HCM Control Delay, s | 0.3 | | | 0.2 | | | 124.4 | | | 23.4 | | | |
| HCM LOS | | | | | | | ш | | | U | | | |
| | | | | | | | | | | | | | |
| Viinor Lane/Major Mvmt | | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR S | WBR SBLn1 SBLn2 | BLn2 | | | |
| Capacity (veh/h) | | 104 | 783 | | | 929 | | • | 82 | 277 | | | |
| HCM Lane V/C Ratio | | | 0.037 | • | • | 0.03 | • | • | 0.068 | 0.023 | | | |
| HCM Control Delay (s) | | 124.4 | 9.8 | | | 10.6 | | | 52.1 | 11.4 | | | |
| HCM Lane LOS | | ш | ۷ | | | α | | | ш | α | | | |
| | | | _ | | | ב | | | | 2 | | | |

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8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

Smoke Tree Resort Existing AM

9: Scottsdale Rd & Lincoln Dr

| • | SBR | ¥C | 222 | 222 | vo+mq | 4 | 9 | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 89.3 | 69:0 | 0.53 | 8.4 | 0.0 | 8.4 | A | | | | | | | | | | | | |
|----------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| → | SBT | 444 | 1594 | 1594 | NA | 9 | | 9 | | 10.0 | 16.0 | 57.0 | 43.8% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | C-Max | 9.09 | 0.47 | 0.75 | 32.1 | 0.0 | 32.1 | ပ | 27.1 | ပ | | | | | | | | | | |
| ۶ | SBL | * | 48 | 48 | Prot | - | | - | | 2.0 | 11.0 | 14.0 | 10.8% | 3.3 | 2.0 | 0.0 | 5.3 | Lead | | None | 7.5 | 90:0 | 0.52 | 77.2 | 0.0 | 77.2 | ш | | | | | | | | | | | | |
| ← | NBT | 441 | 1251 | 1251 | ¥ | 2 | | 7 | | 10.0 | 16.7 | 73.0 | 56.2% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | None | 72.2 | 0.56 | 0.51 | 19.6 | 0.0 | 19.6 | В | 26.4 | ပ | | | | | | | | | ۵ | |
| • | NBL | 14 | 260 | 260 | Prot | 2 | | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 16.9 | 0.13 | 0.65 | 0.09 | 0.0 | 0.09 | ш | | | | | | | | | | LOS: C | ICU Level of Service D | |
| ţ | WBT | 4₽ | 35 | 32 | ¥ | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.2 | 90:0 | 0.39 | 34.3 | 0.0 | 34.3 | O | 46.0 | D | | | | | | | | Intersection LOS: C | U Level o | |
| \ | WBL | F | 36 | 36 | Split | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.2 | 90:0 | 0.41 | 72.1 | 0.0 | 72.1 | ш | | | | | | _ | | | | I | ೨ | |
| / | EBR | ¥. | 426 | 426 | vo+mq | 2 | 4 | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 39.9 | 0.31 | 0.89 | 44.6 | 0.0 | 44.6 | ٥ | | | | | | t of Greer | | | | | | |
| † | EBT | ₩ | 37 | 37 | NA | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 23.0 | 0.18 | 98.0 | 77.4 | 0.0 | 77.4 | ш | 9.19 | ш | | | | SBT, Star | | | | | | |
| 4 | EBL | je. | 422 | 422 | Split | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 23.0 | 0.18 | 0.85 | 77.2 | 0.0 | 77.2 | ш | | | | | | phase 6:5 | | inated | | ~ | n 77.0% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | TOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.89 | Intersection Signal Delay: 33.8 | Intersection Capacity Utilization 77.0% | Analysis Period (min) 15 |

11551 1986 528 1457 2 1027 1027 - 955 1 524 959 - 502 10 754 654 694 754 6 654 5.54 - 6.54 6 654 5.54 - 6.54 5 77 60 497 91 3 251 310 - 278 3 504 334 - 520 30

0

90

8 7 4 432

0

Major2 1050

Major1 863

Major/Minor Conflicting Flow All Stage 1

2 8

2 2

991

06

Peak Hour Factor Heavy Vehicles, %

- 4.14

2.22

Follow-up Hdwy 2.22 Pot Cap-1 Maneuver 775

Critical Hdwy Stg 1 Critical Hdwy Stg 2

Stage 2 Critical Hdwy

12 0

Stop

Stop

Stop

Free

Free

Free

Free

Traffic Vol, verhh 3
Future Vol, verhh 3
Conflicting Peds, #hr 10
Sign Control Free
RT Channelized Stonge Length 25
Stonge Length 25
Grade, %

25

25

0 O Stop Stop

692

53

Lane Configurations

Int Delay, s/veh

78 78 277 471

55 309 310

70 70 250 455

497

629

Stage 1 - Stage 2 - Platoon blocked, % Mov Cap-1 Maneuver 775

Mov Cap-2 Maneuver Stage 1

SB C

20.9 C

WB 0.6

EB

Approach HCM Control Delay, s HCM LOS

9: Scottsdale Rd & Lincoln Dr Splits and Phases:

- 78 572 - 0.057 0.023 - 53.9 11.4

659 0.073 10.9 B

279 775 0.187 0.004 20.9 9.7

Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s)
HCM Lane LOS
HCM 95th %tile Q(veh)

EBT

Minor Lane/Major Mvml

- 0.2 0.1



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9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | 4 | † | ~ | \ | ţ | 1 | • | — | • | ٠ | → | • |
|------------------------------|--------------|----------|------|--------------|------|------|------|----------|------|------|----------|------|
| Movement | EBI | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | - | 4 | * | r | ₩. | | F | 4413 | | r | 444 | ¥C |
| Traffic Volume (veh/h) | 422 | 37 | 426 | 36 | 32 | 45 | 260 | 1251 | 38 | 48 | 1594 | 25.7 |
| Future Volume (veh/h) | 422 | 37 | 426 | 36 | 32 | 45 | 260 | 1251 | 38 | 48 | 1594 | 557 |
| 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 | | 9 | | | 9 | | | No No | | | 9 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 498 | 0 | 473 | 40 | 36 | 20 | 289 | 1390 | 42 | 53 | 1771 | 619 |
| Peak Hour Factor | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 | 0.90 | 0.00 | 0.00 | 0.00 | 06:0 | 06.0 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 671 | 0 | 458 | 95 | 95 | 82 | 348 | 2336 | 71 | 89 | 2015 | 924 |
| Arrive On Green | 0.19 | 0.00 | 0.19 | 0.05 | 0.05 | 0.02 | 0.10 | 0.46 | 0.46 | 0.04 | 0.39 | 0.39 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5093 | 154 | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h | 498 | 0 | 473 | 40 | 36 | 20 | 289 | 676 | 503 | 53 | 1771 | 619 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| Q Serve(g_s), s | 17.1 | 0.0 | 24.5 | 2.8 | 2.8 | 4.0 | 10.7 | 26.4 | 26.4 | 3.8 | 41.8 | 34.7 |
| Cycle Q Clear(g_c), s | 17.1 | 0.0 | 24.5 | 2.8 | 2.8 | 4.0 | 10.7 | 26.4 | 26.4 | 3.8 | 41.8 | 34.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 671 | 0 | 458 | 95 | 95 | 82 | 348 | 1561 | 845 | 89 | 2015 | 924 |
| V/C Ratio(X) | 0.74 | 0.00 | 1.03 | 0.42 | 0.41 | 0.59 | 0.83 | 09:0 | 09:0 | 0.78 | 0.88 | 0.67 |
| Avail Cap(c_a), veh/h | 671 | 0 | 458 | 101 | 101 | 8 | 651 | 1762 | 954 | 119 | 2015 | 924 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 49.8 | 0:0 | 46.2 | 9.69 | 9.69 | 60.1 | 57.4 | 26.2 | 26.2 | 62.0 | 36.5 | 18.5 |
| Incr Delay (d2), s/veh | 3.9 | 0.0 | 50.4 | - | = | 5.4 | 2.0 | 0.2 | 0.4 | 6.9 | 5.9 | 3.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0:0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.0 | 0.0 | 21.1 | 1.3 | 1.3 | 1.7 | 4.8 | 10.7 | 11.6 | 1.9 | 18.2 | 20.2 |
| Unsig. Movement Delay, siven | 0 | 0 | | | | i. | C | | | 0 | 9 | |
| LnGrp Delay(d),s/veh | 53.7 | 0.0 | 9.06 | /:09 | 9.09 | 65.5 | 59.3 | 70.4 | 70.0 | 8.89 | 42.3 | 22.4 |
| Lifeip LUS | | ∢ ; | - | ш | ال | ш | ۰ | اد | اد | ш | | اد |
| Approach Vol, veh/h | | 116 | | | 129 | | | 1721 | | | 2443 | |
| Approach Delay, s/ven | | 74.0 | | | 07.7 | | | 32.0 | | | 3/.9 | |
| Approach LOS | | ш | | | ш | | | ပ | | | ٥ | |
| Timer - Assigned Phs | - | 2 | | 4 | 2 | 9 | | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 65.3 | | 30.0 | 18.6 | 57.0 | | 12.5 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.6 | | | | |
| Max Green Setting (Gmax), s | * 8.7 | 67.3 | | 24.5 | 24.5 | 51.3 | | 7.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.8 | 28.4 | | 26.5 | 12.7 | 43.8 | | 0.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.1 | | 0.0 | 0.4 | 2.5 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 43.3 | | | | | | | | | |
| HCM 6th LOS | | | ۵ | | | | | | | | | |
| Notes | | | | | | | | | | | | |

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement

*HCM oth computational engine requires equal clearance times for the phases crossing the barrier.

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1: Mockingbird Ln & Lincoln Drive

| → • | SBL SBT | ₹ | 57 46 | | pm+pt NA | 3 8 | 8 | 3 8 | | 4.0 7.0 | 8.0 33.5 | 8.0 42.0 | 6.2% 32.3% | | 1.0 2.5 | | 4.0 6.5 | Lead | Yes | None None | 19.6 17.1 | | | | | 33 | D C | 37.3 | D | | | | | | | | | |
|------------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|-----|
| ← | 3L NBT | £ | 09 | 09 / | NA | 4 | 4 | 4 4 | | 7.0 7.0 | .5 33.5 | | 26.2% | | | | .5 6.5 | | | None | 10.7 | 0.08 | 0.51 | 63.3 | | 55.7 63.3 | Е | 62.6 | ш | | | | п | | | | Intersection LOS: B | |
| ţ | WBT NBI | ₩₽ | 802 | 805 | NA Perm | 2 | | 2 | | 15.0 7 | 27.0 33.5 | 57.0 34.0 | 43.8% 26.2% | | 1.5 | 0.0 | 9 0.9 | | Yes | _ | | | 0.42 0.10 | | | | В | 13.0 | В | | | | L, Start of Gree | | | | Interse | |
| † | EBT WBL | ₩ ₽ | 764 12 | 764 12 | NA Perm | 9 | 2 | 6 2 | | 15.0 15.0 | 27.0 27.0 | 88.0 57.0 | 67.7% 43.8% | | 1.5 1.5 | | 0.9 0.9 | Lag | Yes | C-Max C-Max | 100.4 84.3 | | 0.32 0.03 | | | 5.3 11.8 | A B | 5.9 | Α | | | | /BTL and 6:EBT | | | | | |
| 4 | EBL | <u>1</u> - | 228 | 228 | pm+pt | - | 9 | - | | 4.0 | 8.0 | 31.0 | | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | | 102.4 | 0.79 | 0.53 | 8.1 | 0.0 | 8.1 | ۷ | | | | | 30 | ed to phase 2:W | | Soordinated | | : 14.2 | 100 |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | TOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Lenath: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.66 | Intersection Signal Delay: 14.2 | |

Splits and Phases: 1: Mockingbird Ln & Lincoln Drive - NO (R)

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Smoke Tree Resort Existing PM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | 1 | † | / | \ | ļ | ✓ | • | - | • | • | - | • |
|------------------------------|------|----------|------|----------|------|-------|--------|-------------|--------|--|-----------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | ₩. | | r | ₩ | | r | £, | | <u>, </u> | \$ | |
| Traffic Volume (veh/h) | 228 | 764 | 28 | 12 | 802 | 99 | 7 | 09 | 10 | 57 | 46 | 145 |
| Future Volume (veh/h) | 228 | 764 | 28 | 12 | 802 | 26 | 7 | 09 | 10 | 22 | 46 | 145 |
| Initial Q (Qb), veh | 0 9 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 |
| Ped-Bike Adj(A_pb1) | 8.0 | | 00.1 | 00.1 | | 00.1 | 00.1 | | 8. | 8:1 | | 8.1 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1:00 | 1.00 |
| Work Zone On Approach | 010 | 00 5 | 1 | 1 | ON S | 1 | 0 10 1 | ON S | 0 10 1 | 0 | 00 | 0 |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 253 | 846 | 31 | 13 | 894 | 62 | ∞ , | /9 | Ξ | 63 | 21 | 161 |
| Peak Hour Factor | 0.90 | 0.90 | 0.00 | 0.00 | 0.90 | 06.0 | 06:0 | 0.00 | 06:0 | 0.00 | 0.00 | 0.00 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 484 | 2635 | 96 | 471 | 2222 | 154 | 84 | 139 | 23 | 173 | 26 | 188 |
| Arrive On Green | 90:0 | 0.75 | 0.75 | 99.0 | 99.0 | 99.0 | 0.09 | 0.09 | 0.09 | 0.03 | 0.15 | 0.15 |
| Sat Flow, veh/h | 1781 | 3497 | 128 | 631 | 3371 | 234 | 1170 | 1567 | 257 | 1781 | 396 | 1250 |
| Grp Volume(v), veh/h | 253 | 431 | 449 | 13 | 471 | 485 | 80 | 0 | 78 | 63 | 0 | 212 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1847 | 631 | 1777 | 1828 | 1170 | 0 | 1824 | 1781 | 0 | 1645 |
| Q Serve(g_s), s | 9.6 | 10.3 | 10.3 | 6.0 | 16.0 | 16.0 | 6.0 | 0.0 | 5.3 | 4.0 | 0.0 | 16.3 |
| Cycle Q Clear(g_c), s | 9.9 | 10.3 | 10.3 | 6.0 | 16.0 | 16.0 | 9.5 | 0.0 | 5.3 | 4.0 | 0.0 | 16.3 |
| Prop In Lane | 1.00 | | 0.07 | 1.00 | | 0.13 | 1.00 | | 0.14 | 1.00 | | 97.0 |
| Lane Grp Cap(c), veh/h | 484 | 1339 | 1392 | 471 | 1171 | 1205 | 84 | 0 | 162 | 173 | 0 | 247 |
| V/C Ratio(X) | 0.52 | 0.32 | 0.32 | 0.03 | 0.40 | 0.40 | 0.10 | 0.00 | 0.48 | 0.36 | 0.00 | 98.0 |
| Avail Cap(c_a), veh/h | 740 | 1339 | 1392 | 471 | 1171 | 1205 | 228 | 0 | 386 | 173 | 0 | 449 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 7.4 | 5.2 | 5.2 | 7.7 | 10.3 | 10.3 | 62.3 | 0.0 | 56.4 | 50.9 | 0:0 | 53.9 |
| Incr Delay (d2), s/veh | 6.0 | 9.0 | 9.0 | 0.1 | 1.0 | 1.0 | 0.5 | 0.0 | 2.2 | 1.3 | 0.0 | 8.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.0 | 3.7 | 3.8 | 0.1 | 6.4 | 9.9 | 0.3 | 0.0 | 2.5 | 1.9 | 0.0 | 7.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 8.3 | 2.8 | 2.8 | 7.8 | 11.3 | 11.3 | 62.8 | 0.0 | 58.6 | 52.1 | 0.0 | 62.3 |
| LnGrp LOS | A | A | A | A | В | В | ш | Α | ш | О | Α | Ш |
| Approach Vol, veh/h | | 1133 | | | 696 | | | 98 | | | 275 | |
| Approach Delay, s/veh | | 6.4 | | | 11.3 | | | 29.0 | | | 0.09 | |
| Approach LOS | | A | | | В | | | ш | | | ш | |
| Timer - Assigned Phs | _ | 2 | 3 | 4 | | 9 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.3 | 7.16 | 8.0 | 18.0 | | 104.0 | | 26.0 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 27.0 | 21.0 | 4.0 | 27.5 | | 82.0 | | 35.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.6 | 18.0 | 0.9 | 11.2 | | 12.3 | | 18.3 | | | | |
| Green Ext Time (p_c), s | 0.7 | 7.5 | 0.0 | 0.3 | | 6.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 16.1 | | | | | | | | | |
| HCM 6th LOS | | | В | | | | | | | | | |
| | | | | | | | | | | | | |

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2: Quail Run Rd & Lincoln Drive

| ב ב ב | HCM 6th TWSC |
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| 2. Guall ruil ru & Lilicolli I | |
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| Intersection | | | | | | | | | | | | | |
|--------------------------|----------|------|--------------|-------------|-----------|------|------|------|------|------|------|------|--|
| Int Delay, sheh | 0 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | EBR WBL WBT | | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | <u>r</u> | ₩ | | r | ₹ | | | 4 | | | 4 | | |
| Traffic Vol, veh/h | 0 | 846 | _ | 0 | 871 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |
| Future Vol, veh/h | 0 | 846 | - | 0 | 871 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Free Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | |
| RT Channelized | 1 | 1 | None | 1 | 1 | None | | 1 | None | 1 | | None | |
| Storage Length | 25 | | ٠ | 22 | | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | | |
| Veh in Median Storage, # | # | 0 | • | 1 | 0 | 1 | | 0 | 1 | 1 | 0 | | |
| Grade, % | | 0 | | • | 0 | • | ٠ | 0 | ٠ | ٠ | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | 06 | 06 | 06 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 0 | 940 | - | 0 | 896 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |
| | | | | | | | | | | | | | |

| Conflicting Flow All 968 0 941 0 1425 1909 484 Stage1 - - - - 941 - - 941 - - 941 - - 941 - - 941 - - - 941 - - - 941 - < | Major/Minor | Major1 | | 2 | Major2 | | 2 | Minor1 | | Σ | Minor2 | | | |
|---|---------------------|--------|-------|-----|--------|---|-----|--------|--------|------|--------|------|------|--|
| 4.14 | flicting Flow All | 896 | 0 | 0 | 941 | 0 | 0 | 1425 | | 471 | 1438 | 1909 | 484 | |
| 1.1 NBLN1 EBL EBT RBR WBT WBT NBLN1 S39 707 1.0 | Stage 1 | • | ٠ | ٠ | ٠ | ٠ | ٠ | 941 | 941 | ٠ | 896 | 896 | | |
| 4.14 4.14 7.54 6.54 6.94 7.54 6. | Stage 2 | • | ٠ | ٠ | ٠ | ٠ | ٠ | 484 | 896 | | 470 | 941 | | |
| 2.2 | cal Hdwy | 4.14 | • | ٠ | 4.14 | ٠ | ٠ | 7.54 | | 6.94 | 7.54 | 6.54 | 6.94 | |
| 1.5 1.5 | ical Hdwy Stg 1 | • | ٠ | ٠ | ٠ | ٠ | ٠ | 6.54 | 5.54 | ٠ | 6.54 | 5.54 | | |
| 2.22 2.22 3.52 4.02 3.32 3.52 4.02 7.07 724 96 68 539 94 68 68 7.00 7.00 | ical Hdwy Stg 2 | 1 | 1 | 1 | 1 | 1 | 1 | 6.54 | 5.54 | ٠ | 6.54 | 5.54 | , | |
| 707 - 724 - 96 68 539 94 68 68 707 | ow-up Hdwy | 2.22 | ٠ | ٠ | 2.22 | ٠ | ٠ | 3.52 | | 3.32 | 3.52 | 4.02 | 3.32 | |
| 1.00 | Cap-1 Maneuver | 707 | | | 724 | | 1 | 96 | 89 | 233 | 94 | 89 | 529 | |
| 707 - 724 - 96 68 539 94 68 68 69 68 69 68 69 68 69 68 68 | Stage 1 | • | ٠ | ٠ | ٠ | ٠ | ٠ | 283 | 340 | | 273 | 330 | | |
| 707 724 96 68 539 94 68 68 68 68 68 68 68 6 | Stage 2 | • | • | ٠ | ٠ | ٠ | ٠ | 533 | 330 | ٠ | 543 | 340 | | |
| 707 724 | toon blocked, % | | , | | | | 1 | | | | | | | |
| New Year New Year | / Cap-1 Maneuver | 707 | • | ٠ | 724 | ٠ | • | 96 | 89 | 539 | 94 | 89 | 529 | |
| EB | / Cap-2 Maneuver | ٠ | ٠ | ٠ | ٠ | ٠ | | 96 | 89 | ٠ | 94 | 89 | | |
| EB | Stage 1 | • | | | | | 1 | 283 | 340 | ÷ | 273 | 330 | | |
| FB WB NB NB NB NB NB NB N | Stage 2 | , | • | • | • | • | • | 533 | 330 | , | 541 | 340 | | |
| EB WB NB NB NB NB NB NB N | | | | | | | | | | | | | | |
| 11.7 B | roach | EB | | | WB | | | NB | | | SB | | | |
| B B C C C C C C C C | M Control Delay, s | 0 | | | 0 | | | 11.7 | | | 0 | | | |
| 1 NBLn1 EBL EBT EBR WBL WBT WBRSBLn 539 707 - 724 0.004 | MLOS | | | | | | | В | | | ⋖ | | | |
| t NBLn1 EBL EBT EBR WBL WBT WBRSBLn 539 707 - 724 - 0004 11.7 0 - 0 - 0 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | | | | | | | | | | | | |
| 539 707 724 | or Lane/Major Mvm | | JBLn1 | EBL | EBT | | WBL | | WBR SE | 3Ln1 | | | | |
| 11,7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | acity (veh/h) | | 233 | 707 | • | • | 724 | • | | • | | | | |
| 11.7 0 · · · 0 · · · · B B A · · · · A · · · · · · · · | M Lane V/C Ratio | | 0.004 | | | ٠ | | | | ٠ | | | | |
| B A A 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | M Control Delay (s) | | 11.7 | 0 | ٠ | ٠ | 0 | • | | 0 | | | | |
| | M Lane LOS | | В | A | ٠ | ٠ | ⋖ | • | | V | | | | |
| | M 95th %tile Q(veh | _ | 0 | 0 | 1 | 1 | 0 | • | ì | ÷ | | | | |

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Smoke Tree Resort Existing PM

3: Smole Tree West & Lincoln Dr HCM 6th TWSC

| IIII Delay, sveli | | | | | | | |
|--------------------------|--------|---------------|-----------|------|--------------|------|--|
| | > | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | 4₽ | | <u>,-</u> | ₩ | À | | |
| Traffic Vol, veh/h | 848 | - | 0 | 870 | _ | 0 | |
| Future Vol, veh/h | 848 | - | 0 | 870 | - | 0 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | | Free | Free | Stop | Stop | |
| RT Channelized | 1 | None | | None | 1 | None | |
| Storage Length | • | • | 22 | • | 0 | | |
| Veh in Median Storage, # | 0 # | ٠ | ٠ | 0 | 0 | | |
| Grade, % | 0 | • | ٠ | 0 | 0 | | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 7 | 7 | 2 | 7 | 7 | 2 | |
| Mvmt Flow | 942 | | 0 | 196 | - | 0 | |
| | | | | | | | |
| Major/Minor Ma | Major1 | ≥ | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 943 | 0 | 1427 | 472 | |
| Stage 1 | • | ٠ | | 1 | 943 | | |
| Stage 2 | | | | | 484 | | |
| Critical Hdwy | ٠ | ٠ | 4.14 | ٠ | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | ٠ | ٠ | | 5.84 | | |
| Critical Hdwy Stg 2 | ٠ | ٠ | ٠ | ٠ | 5.84 | | |
| Follow-up Hdwy | ٠ | • | 2.22 | • | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | ٠ | ٠ | 723 | ٠ | 126 | 538 | |
| Stage 1 | ٠ | ٠ | ٠ | ٠ | 339 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 282 | | |
| Platoon blocked, % | • | • | | • | | | |
| Mov Cap-1 Maneuver | 1 | 1 | 723 | 1 | 126 | 538 | |
| Mov Cap-2 Maneuver | ٠ | ٠ | ٠ | • | 248 | | |
| Stage 1 | 1 | 1 | 1 | 1 | 339 | | |
| Stage 2 | 1 | 1 | 1 | • | 282 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 19.6 | | |
| HCM LOS | | | | | ပ | | |
| | 2 | 7 | Ė | | Į. | FOR | |
| Capacity (yoh/h) | 2 | NBLIII 248 | EDI | EDK | VVBL 733 | /bl | |
| Capacily (veryn) | | 248 | | | 173 | | |
| HCM Lane V/C Ratio | | 0.004 | ٠ | ٠ | ' (| | |
| HCM Control Delay (s) | | 9.61 | | • | 0 | | |
| HCM Lane LOS | | ပ | ٠ | • | V | | |
| HCM 95th %tile Q(veh) | | 0 | | ٠ | 0 | | |

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4: Smoke Tree East & Lincoln Dr HCM 6th TWSC

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| Movement EBI EBR WBL WBT NBR NBR MBR WBL WBT NBR MBR | | | | | | | |
|---|------------------------|----------|-------------|--------|----------|-------------|------|
| Corrections | lersection | | | | | | |
| iorns | Delay, síveh | 0 | | | | | |
| Major Majo | | EBT | | WBL | WBT | NBL | NBR |
| h 847 1 2 870 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | ne Configurations | ₽ | | F | ‡ | > | |
| Horage, # 0 1 2 870 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | ffic Vol, veh/h | 847 | _ | 2 | 870 | - | 2 |
| Free Free Free Stop Stop Stop Stop Stop Stop Stop Stop | ure Vol, veh/h | 847 | - | 7 | 870 | - | 2 |
| Free Free Free Slop Site | nflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| All None - None - Nore | | Free | Free | Free | Free | Stop | Stop |
| Najora 1. 25 0 0 0 0 0 0 0 0 0 | Channelized | 1 | None | 1 | None | | None |
| Norage, # 0 0 0 0 20 90 90 90 90 90 90 30 2 2 2 2 2 30 2 2 2 2 2 4 1 1 2 967 1 All 0 0 942 0 1430 4 All 0 0 942 0 1430 4 All 0 0 942 0 1430 4 91 0 0 942 0 1430 4 92 1 0 0 942 1 93 1 0 0 0 942 0 1430 4 94 2 1 0 0 942 1 94 6 6 6 6 6 6 6 6 94 6 6 6 6 6 6 6 95 8 9 1 0 0 0 0 0 0 0 95 8 9 1 0 0 0 0 0 0 95 8 9 1 0 0 0 0 0 0 0 95 8 9 1 0 0 0 0 0 0 0 0 14 4 10 0 0 0 0 0 0 0 0 0 0 14 4 10 0 0 0 0 0 0 0 0 0 0 0 14 4 1 0 0 0 0 0 0 0 0 0 0 0 14 4 1 0 0 0 0 0 0 0 0 0 0 0 0 14 4 1 0 0 0 0 0 0 0 0 0 0 0 0 0 14 4 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 14 4 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | rage Length | ٠ | | 25 | | 0 | |
| 90 9 9 9 9 0 0 0 0 2 2 2 2 2 2 2 2 2 2 2 | n in Median Storage, # | 0 # | • | 1 | 0 | 0 | |
| 90 90 90 90 90 90 90 90 90 90 90 90 90 9 | ıde, % | 0 | | | 0 | 0 | |
| 2 2 2 2 2 2 2 2 2 2 | ak Hour Factor | 06 | 8 | 06 | 8 | 06 | 06 |
| 1 | avy Vehicles, % | 2 | 7 | 2 | 7 | 7 | 2 |
| Major Major Minor 0 0 942 0 1430 0 0 0 942 0 1430 0 0 1430 0 942 0 0 1430 0 942 0 0 1430 0 943 0 0 1440 0 1009 0 0 1444 0 1009 0 0 1444 0 1009 0 0 1444 0 1009 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | mt Flow | 941 | | 2 | 196 | | 2 |
| Major Minor Mi | | | | | | | |
| 0 0 942 0 1430 942 4.14 - 6848 4.14 - 6848 2.22 - 584 2.22 - 584 724 - 125 724 | | ajor1 | 2 | lajor2 | ≥ | inor1 | |
| ## 178 1942 1942 1942 1943 1944 | nflicting Flow All | 0 | 0 | 942 | | 1430 | 471 |
| EB WB NB | Stage 1 | ٠ | ٠ | • | ٠ | 942 | |
| - 4.14 - 6.84 - 2.22 - 5.84 - 2.22 - 3.52 - 7.24 - 1.25 - 3.40 - 7.24 - 1.25 - 3.40 - 7.24 - 1.25 - 3.40 - 7.24 - 1.25 - 3.40 - 7.24 - 1.25 - 3.40 - 7.24 - 1.25 - 6.83 - 7.24 - 1.25 - 7.24 - 1.25 - 7.24 - | Stage 2 | ٠ | ٠ | • | ٠ | 488 | |
| EB WB NB | ical Hdwy | ٠ | ٠ | 4.14 | ٠ | 6.84 | 6.94 |
| EB WB NB | ical Hdwy Stg 1 | ٠ | • | • | ٠ | 5.84 | |
| EB WB NB NB NB 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 0.0009 - 0.0003 14.4 | ical Hdwy Stg 2 | 1 | 1 | 1 | • | 5.84 | |
| 125 | low-up Hdwy | ٠ | ٠ | 2.22 | ٠ | 3.52 | 3.32 |
| EB NB | Cap-1 Maneuver | • | • | 724 | • | 125 | 539 |
| EB WB NB WB NB | Stage 1 | ٠ | ٠ | • | ٠ | 340 | |
| EB | Stage 2 | ٠ | • | • | | 283 | |
| EB WB NB | toon blocked, % | • | 1 | | ٠ | | |
| EB WB NB O 0 144 NBINI EBI EBR WBI WB 387 - 724 0009 - 0003 144 - 10 | / Cap-1 Maneuver | • | • | 724 | • | 125 | 539 |
| EB WB NB | / Cap-2 Maneuver | ٠ | ٠ | ٠ | ٠ | 247 | |
| EB WB NB | Stage 1 | ٠ | • | 1 | · | 339 | |
| NB NB NB NB NB NB NB NB | Stage 2 | • | • | • | ٠ | 283 | |
| EB WB NB | | | | | | | |
| 0 0 14.4 B B NBLn1 EBR WBL WB 387 - 724 0.009 - 0.003 14.4 - 10 B - A | proach | EB | | WB | | NB | |
| NBLn1 EBT EBR WBL WB 387 . 724 0.009 . 0.003 14.4 . 10 B . A | M Control Delay, s | 0 | | 0 | | 14.4 | |
| NBLn1 EBT EBR WBL WB 387 - 724 0.009 - 0.003 144 - 10 B - A | MLOS | | | | | В | |
| NBLn1 EBT EBR WBL WB 387 . 724 0.009 . 0.003 144 . 10 B . A | | | | | | | |
| 387 724 0.009 0.003 0 144 10 18 A 0 0 0 | or Lane/Major Mvmt | Z | BLn1 | EBT | | WBL | WBT |
| 0.009 0.003 14.4 10 B A 0 0 0 | oacity (veh/h) | | 387 | 1 | • | 724 | |
| lay (s) 14.4 10 B A O(veh) 0 0 | M Lane V/C Ratio | | 600.0 | | | 0.003 | |
| B A Q(veh) 0 0 | M Control Delay (s) | | 14.4 | • | • | 10 | |
| 0 | M Lane LOS | | Ω | 1 | • | ⋖ | |
| | M 95th %tile Q(veh) | | 0 | • | ٠ | 0 | |

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Smoke Tree Resort Existing PM

5: Lincoln Medical West & Lincoln Dr

| ### EBI EB EB EB EB EB EB EB | Int Delay, s/veh | 0 | l | | | | | |
|--|------------------------|---------|--------|--------|------|-------|------|--|
| 1 | Movement | EBT | EBR | | | NBL | NBR | |
| 849 0 0 870 2 849 0 0 870 2 849 0 0 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 | Lane Configurations | ₹ | | F | \$ | > | | |
| 10 0 0 0 0 0 0 0 0 0 | Traffic Vol, veh/h | 849 | 0 | 0 | 870 | 5 | 0 | |
| Color Colo | Future Vol, veh/h | 849 | 0 | 0 | 870 | 2 | 0 | |
| Tree Free Free Stop Signed S | Conflicting Peds, #/hr | | 0 | 0 | 0 | 0 | 0 | |
| None | Sign Control | | Free | Free | Free | | Stop | |
| 1 | RT Channelized | 1 | None | 1 | None | 1 | None | |
| 0 | Storage Length | ٠ | ٠ | 22 | ٠ | 0 | | |
| Majori Majore Minori Majori Majori Minori Majore Minori Majore Minori Majore Minori Mi | Veh in Median Storage, | | • | | 0 | 0 | | |
| Majort Majorz Minort Majorz Majorz Minort Majorz Minort Majorz Minort Majorz Minort Majorz Minort Majorz Minort Majorz Majorz Minort Majorz Majorz Minort Majorz Ma | Grade, % | 0 | ٠ | ٠ | 0 | 0 | | |
| 2 | Peak Hour Factor | 06 | 06 | 8 | 06 | 8 | 06 | |
| Majori Majore Minori 7 0 0 943 0 1427 47 0 0 943 0 1427 47 0 0 943 0 1427 47 | Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Major1 Major2 Mitror1 417 47 47 47 47 47 47 47 47 47 47 47 47 47 | Mvmt Flow | 943 | 0 | 0 | 196 | 2 | 0 | |
| Majort Major2 Minort 47 47 47 47 47 47 47 47 47 47 47 47 47 | | | | | | | | |
| 0 0 943 0 1427 47 943 943 943 | | /lajor1 | 2 | 1ajor2 | 2 | lnor1 | | |
| HI NBINT EBT EBR WBL WB To compare the compare to | Conflicting Flow All | 0 | 0 | 943 | 0 | 1427 | 472 | |
| HINBLAIL EBT EBR WBL WF | Stage 1 | | | | | 943 | | |
| ## 1.00 | Stage 2 | , | , | | , | 484 | | |
| EB WB NBL WB WBL WBL WBL WBL WBL WBL WBL WBL WB | Critical Hdwy | • | • | 4.14 | • | 6.84 | 6.94 | |
| EB WB NB | Critical Hdwy Stg 1 | , | | | , | 5.84 | | |
| EB WB NB | Critical Hdwy Stg 2 | | • | | ٠ | 5.84 | | |
| EB WB NBA WB NB NB | Follow-up Hdwy | • | • | 2.22 | • | 3.52 | 3.32 | |
| EB WB NB WB | Pot Cap-1 Maneuver | | • | 723 | | 126 | 538 | |
| EB WB NB | Stage 1 | • | , | ٠ | ٠ | 339 | | |
| EB WB NB | Stage 2 | • | , | | ٠ | 282 | | |
| EB WB NB NB C C C C C C C C C C C C C C C C | Platoon blocked, % | ٠ | ٠ | | ٠ | | | |
| EB WB NB | Mov Cap-1 Maneuver | 1 | 1 | 723 | • | 126 | 538 | |
| EB WB NB NB C C C C C C C C C C C C C C C C | Mov Cap-2 Maneuver | • | • | • | ٠ | 248 | | |
| EB WB NB NB C C C C C C C C C C C C C C C C | Stage 1 | | | | | 339 | | |
| EB WB NB NB C C C C C C C C C C C C C C C C | Stage 2 | ٠ | ٠ | • | ٠ | 282 | | |
| EB WB NB NB NB NB NB NB N | | | | | | | | |
| 0 0 19.6 C C C C C C 24.8 C 24 | Approach | EB | | WB | | NB | | |
| C C 248 WBL WB WBL WB (1973 | HCM Control Delay, s | 0 | | 0 | | 19.6 | | |
| 11 NBLn1 EBT EBR WBL WB 248 - 723 0.009 1) 19.6 - 0 | HCM LOS | | | | | ပ | | |
| (1) (1) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4 | Minor Lano/Major Mumi | | La Idi | FDT | | IQ/W | TOW | |
| 0.009 0 19.6 0 | Capacity (veh/h) | | 248 | | | 723 | , | |
| (i) 19.6 0 | HCM I ane V/C Ratio | | 0.00 | ľ | | | | |
| C | HCM Control Delay (s) | | 19.6 | | | 0 | | |
| O quant | HCM Lane LOS | | | ľ | | ٥ | | |
| | HCM 95th %tile O(veh) | |) < | | | : 0 | | |

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| - | | | | | | | |
|-------------------------------------|--------|-------|--------|------|--------|------|--|
| Intersection | | | | | | | |
| Int Delay, s/veh | 0 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | 4 | | F | ‡ | > | | |
| Traffic Vol, veh/h | 849 | 0 | 0 | 698 | 7 | 3 | |
| Future Vol, veh/h | 849 | 0 | 0 | 698 | 2 | 3 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | ٠ | None | • | None | | None | |
| Storage Length | ٠ | ٠ | 25 | ٠ | 0 | | |
| Veh in Median Storage, ³ | 0 # | • | • | 0 | 0 | | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 06 | 06 | 06 | 06 | 06 | |
| Heavy Vehicles, % | 7 | 7 | 7 | 7 | 7 | 2 | |
| Mvmt Flow | 943 | 0 | 0 | 996 | 2 | 3 | |
| | | | | | | | |
| Major/Minor Ma | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 943 | 0 | 1426 | 472 | |
| Stage 1 | ٠ | • | • | ٠ | 943 | | |
| Stage 2 | ٠ | ٠ | ٠ | ٠ | 483 | | |
| Critical Hdwy | • | 1 | 4.14 | 1 | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | • | • | • | • | 5.84 | | |
| Critical Hdwy Stg 2 | 1 | • | • | • | 5.84 | | |
| Follow-up Hdwy | ٠ | | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | 1 | • | 723 | • | 126 | 538 | |
| Stage 1 | ٠ | ٠ | ٠ | ٠ | 339 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 286 | | |
| Platoon blocked, % | ٠ | • | | ٠ | | | |
| Mov Cap-1 Maneuver | • | • | 723 | • | 126 | 538 | |
| Mov Cap-2 Maneuver | ٠ | ٠ | ٠ | ٠ | 248 | | |
| Stage 1 | ٠ | • | • | • | 339 | | |
| Stage 2 | ٠ | • | • | • | 286 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 15 | | |
| HCM LOS | | | | | ပ | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 367 | 1 | • | 723 | | |
| HCM Lane V/C Ratio | | 0.015 | • | ٠ | ٠ | | |
| HCM Control Delay (s) | | 15 | | 1 | 0 | | |
| HCM Lane LOS | | ပ | ٠ | ٠ | ⋖ | | |
| HCM 95th %tile Q(veh) | | 0 | • | • | 0 | | |

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Smoke Tree Resort Existing PM

7: Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Intercontion | | | | | | | | | | | | | |
|------------------------|--------|-------|------|---------|------|-------|--------|-------|-----------------|--------|------|------|--|
| Intersection | 7.6 | | | | | | | | | | | | |
| IIII Delay, sveli | 0.7 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | K | 4₽ | | × | ₩. | | | 4 | | * | | ×. | |
| Traffic Vol, veh/h | 7 | 792 | 41 | 9 | 111 | 6 | 99 | က | 47 | 7 | 0 | 34 | |
| Future Vol, veh/h | 7 | 792 | 41 | 9 | 111 | 6 | 99 | m | 47 | 7 | 0 | 34 | |
| 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 | 1 | 1 | None | 1 | 1 | None | 1 | 1 | None | 1 | 1 | None | |
| Storage Length | 22 | • | • | 25 | • | • | • | • | , | 0 | • | 0 | |
| Veh in Median Storage, | - # | 0 | • | 1 | 0 | 1 | 1 | 0 | 1 | , | 0 | , | |
| Grade, % | ٠ | 0 | | • | 0 | | | 0 | ٠ | ' | 0 | | |
| Peak Hour Factor | 8 | 06 | 06 | 06 | 8 | 8 | 06 | 8 | 06 | 8 | 06 | 06 | |
| Heavy Vehicles, % | 7 | 7 | 2 | 7 | 7 | 7 | 2 | 7 | 2 | 7 | 2 | 2 | |
| Mvmt Flow | 00 | 880 | 46 | 7 | 863 | 10 | 73 | က | 52 | 00 | 0 | 38 | |
| | | | | - | | • | | | | | | | |
| | Majori | | 2 | Major 2 | | _ | MINOLI | | 2 | MINOrz | | | |
| Conflicting Flow All | 873 | 0 | 0 | 926 | 0 | 0 | 1365 | 1806 | 463 | 1340 | • | 437 | |
| Stage 1 | 1 | • | • | 1 | 1 | 1 | 919 | 919 | | 882 | | | |
| Stage 2 | • | 1 | , | ' | 1 | 1 | 446 | 887 | ' | 458 | ' | | |
| Critical Hdwy | 4.14 | • | 1 | 4.14 | • | • | 7.54 | 6.54 | 6.94 | 7.54 | 1 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | | | | | | 6.54 | 5.54 | | 6.54 | | ٠ | |
| Critical Hdwy Stg 2 | ì | 1 | 1 | 1 | 1 | 1 | 6.54 | 5.54 | , | 6.54 | | | |
| Follow-up Hdwy | 2.22 | | ' | 2.22 | | | 3.52 | 4.02 | 3.32 | 3.52 | | 3.32 | |
| Pot Cap-1 Maneuver | 392 | | ٠ | 734 | | | 106 | 78 | 546 | 111 | 0 | 292 | |
| Stage 1 | ٠ | | • | • | | | 292 | 348 | ٠ | 307 | 0 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 1 | 1 | 291 | 360 | 1 | 222 | 0 | | |
| Platoon blocked, % | | • | ٠ | | • | • | | | | | | | |
| Mov Cap-1 Maneuver | 768 | • | 1 | 734 | 1 | 1 | 46 | 76 | 546 | 96 | 1 | 292 | |
| Mov Cap-2 Maneuver | • | • | • | • | • | • | 4 | 9/ | • | % | • | ٠ | |
| Stage 1 | 1 | 1 | 1 | 1 | 1 | 1 | 289 | 345 | 1 | 304 | 1 | | |
| Stage 2 | • | • | • | 1 | 1 | 1 | 519 | 326 | • | 489 | • | ٠ | |
| | | | | | | | | | | | | | |
| Approach | EB | | | WB | | | BB | | | SB | | | |
| HCM Control Delay, s | 0.1 | | | 0.1 | | | 109.5 | | | 17.6 | | | |
| HCM LOS | | | | | | | ш | | | O | | | |
| | | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR S | WBR SBLn1 SBLn2 | BLn2 | | | |
| Capacity (veh/h) | | 144 | 299 | • | | 734 | | • | 96 | 292 | | | |
| HCM Lane V/C Ratio | _ | 0.895 | 0.01 | • | • | 0.009 | | • | 0.081 0.067 | 0.067 | | | |
| HCM Control Delay (s) | | 109.5 | 6.7 | 1 | 1 | 9 | 1 | 1 | 45.8 | 11.8 | | | |
| HCM Lane LOS | | ш | A | , | , | A | • | • | ш | В | | | |
| HCM 95th %tile Q(veh) | | 6.1 | 0 | • | 1 | 0 | • | 1 | 0.3 | 0.2 | | | |

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Int Delay, s/veh

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

Smoke Tree Resort Existing PM

9: Scottsdale Rd & Lincoln Dr

| • | SBR | * | 449 | 449 | vo+mq | 4 | 9 | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 86.2 | 99.0 | 0.46 | 6.6 | 0.0 | 6.6 | V | | | | | | | | | | | | |
|----------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| → | SBT | 444 | 1461 | 1461 | NA | 9 | | 9 | | 10.0 | 16.0 | 57.0 | 43.8% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | C-Max | 9.99 | 0.44 | 0.73 | 33.6 | 0.0 | 33.6 | O | 29.5 | ပ | | | | | | | | | | |
| ۶ | SBL | F | 26 | 99 | Prot | - | | - | | 2.0 | 11.0 | 14.0 | 10.8% | 3.3 | 2.0 | 0.0 | 5.3 | Lead | | None | 7.7 | 90:0 | 09:0 | 82.1 | 0.0 | 82.1 | ш | | | | | | | | | | | | |
| ← | NBT | 443 | 1514 | 1514 | ¥ | 2 | | 2 | | 10.0 | 16.7 | 73.0 | 56.2% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | None | 71.1 | 0.55 | 0.62 | 22.3 | 0.0 | 22.3 | S | 30.4 | ပ | | | | | | | | | ۵ | |
| • | NBL | F | 373 | 373 | Prot | 2 | | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 19.9 | 0.15 | 0.79 | 64.2 | 0.0 | 64.2 | ш | | | | | | | | | | LOS: D | ICU Level of Service D | |
| ţ | WBT | ₽ | 09 | 09 | ¥ | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.3 | 90.0 | 0.56 | 38.1 | 0.0 | 38.1 | ٥ | 52.1 | O | | | | | | | | Intersection LOS: D | :U Level (| |
| / | WBL | * | 54 | 24 | Split | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.3 | 90:0 | 0.61 | 84.9 | 0.0 | 84.9 | ш | | | | | | u | | | | 드 | 2 | |
| <u> </u> | EBR | * | 382 | 382 | vo+mq | 2 | 4 | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 43.7 | 0.34 | 0.74 | 29.5 | 0.0 | 29.5 | S | | | | | | t of Gree | | | | | | |
| † | EBT | ₩ | 54 | 24 | NA | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 23.9 | 0.18 | 0.91 | 85.1 | 0.0 | 85.1 | ш | 62.4 | ш | | | | SBT, Sta | | | | | | |
| 4 | EBL | F | 461 | 461 | Split | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 23.9 | 0.18 | 0.93 | 88.8 | 0.0 | 88.8 | ш | | | | | | phase 6: | | linated | | 9 | nn 77.5% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effet Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Oueue Delay | Total Delay | ros | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.93 | Intersection Signal Delay: 36.6 | Intersection Capacity Utilization 77.5% | Analysis Period (min) 15 |

- 6.94

Minor1 Minor2
0 1494 1933 466 1463
- 927 927 - 1002
- 567 1006 - 461
- 7.54 6.54 6.94 7.54
- 6.54 5.54 - 6.54
- 6.54 5.54 - 6.54
- 6.54 5.64 - 6.54
- 8.54 6.65 3.35
- 8.56 6.54 9.00
- 289 345 - 260
- 476 317 - 550

- 4.14

435

0

Major2 932

870

Major/Minor Conflicting Flow All Stage 1 - 3.32 0 569

2.22

Follow-up Hdwy 2.22 Pot Cap-1 Maneuver 770

Critical Hdwy Stg 1 Critical Hdwy Stg 2

Stage 2 Critical Hdwy 269

543

730

Stage 1 - Stage 2 - Platoon blocked, % Mov Cap-1 Maneuver 770

Mov Cap-2 Maneuver Stage 1 Stage 2

67 67 256 441

58 58 339 288

> 77 284 426

SB 30

NB 25.7

WB 0.8

0.1

Approach HCM Control Delay, s HCM LOS

0

Stop

Stop

Stop Stop

Free

Free Free

Free

25

Traffic Voly Jehn 11

Future Vol, vehn 11

Conflicting Peds, #hr 0

Sign Control Free F

RT Chamelked Storage Length 25

Storage Length 25

Grade, %
Peak Hour Factor 90

Heavy Vehicles, % 2

89 89 0 Stop

775

53

90

8 2 8

16

2

2 2

Splits and Phases: 9: Scottsdale Rd & Lincoln Dr

- 67 569 - 0.066 0.014 - 62.5 11.4

> 730 0.093 10.4 B

287 770 0.403 0.016 25.7 9.8

Capacity (veh.h.)
HCM Lane V/C Ratio
HCM Control Delay (s)
HCM Lane LOS
HCM 95th %tile Q(veh)

- F

1

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9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

2 924 924 11585 44.9 924 24.9 924 924 924 924 11.00 0.54 924 11.00 0.54 924 11.00 11 1870 499 0.90 1.00 0.81 1.00 1.00 34.9 3.6 0.0 1.00 No 1870 2 2015 0.39 5106 2184 1623 1702 36.7 36.7 1461 56 0 0 00.1 62 0.90 2 79 0.04 1781 70.2 E 62 4.5 4.5 4.5 1.00 79 0.78 1.00 1.00 61.5 8.7 0.0 49 0.90 2 2 73 73 0.049 149 608 1844 193.7 0.08 954 1.00 0.06 1.4 0.00 00. 1.00 No 1870 1682 0.90 2491 0.49 5099 C 2145 33.4 0.68 1762 1.00 1.00 25.4 25.4 0.7 0.0 13.0 5.6 7.4 8.0 0.0 26.1 1123 1702 32.7 32.7 2 473 3456 414 11728 414 115.3 110.0 651 11.00 7.7 0.0 7.7 373 373 0 1.00 1.00 62.7 101.2 57.0 5.7 51.3 38.7 2.6 67 67 0 1.00 1.00 **4**9990 1.00 No 1870 67 0.90 2 101 0.06 7771 67 1777 4.8 4.8 101 100 1.00 1.00 60.1 12.2 0.0 2.5 72.3 201 23.3 5.5 24.5 17.3 0.5 0.99 60 00.90 2 2 2 2 101 101 1781 4.3 4.3 4.3 1.00 0.59 1101 101 101 100 100 2.1 30.0 5.5 24.5 26.5 0.0 50.8 D 39.6 D 385 385 1.00 1.00 1870 428 0.90 2 516 0.19 1585 428 124.5 24.5 1.00 516 0.83 516 1.00 1.00 1.00 1.00 1.00 0.00 0.0 983 55.2 1.00 No 0.90 0.00 0.00 0.00 0.0 0.0 0.0 0.0 69.2 5.7 67.3 34.7 2.7 t 461 461 0 1.00 1.00 1870 555 0.90 2 671 0.19 3563 555 1781 19.5 19.5 19.5 1.00 671 1.00 1.00 7.9 0.0 9.4 58.6 Max Green Setting (Gmax), s *8.7 Max O Clear Time (g_c+l1), s 6.5 Green Ext Time (p_c), s 0.0 Upstream Filler(I)
Uniform Delay (d), siveh
find Delay (d2), sweh
Initial O Delay(d3), siveh
Sile BackOfd(50%), vehin
Unsig, Movement Delay, siveh
LinGrp Delay(d), siveh Initial O (QD), we have a construction of the Phs Duration (G+Y+Rc), s Change Period (Y+Rc), s Grp Volume(v), vervin Grp Sat Flow(s), vervin Gro Serve(g. s), s Cycle O Clear(g. c), s Prop In Lane Lane Grp Cap(c), vervin V/C Ratio(X) Avait Cap(c. a), vervin HCM Platoon Ratio Approach Vol, veh/h Approach Delay, s/veh Approach LOS Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) imer - Assigned Phs ntersection Summar HCM 6th Ctrl Delay HCM 6th LOS

User approved pedestrian interval to be less than phase max green. User approved volume balancing among the lanes for furning movement.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier

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APPENDIX D

TRIP GENERATION



Trip Generation

February 2019 Appendix D

Proposed

Methodology Overview

This form facilitates trip generation estimation using data within the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 10th Edition and methodology described within ITE's *Trip Generation Handbook*, 3rd Edition. These references will be referred to as *Manual and Handbook*, respectively. The *Manual* contains data collected by various transportation professionals for a wide range of different land uses, with each land use category represented by a land use code (LUC). Average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized LUC in various settings and time periods. The *Handbook* indicates an established methodology for how to use data contained within the Manual when to use the fitted curve instead of the average rate and when to adjustments to the volume of trips are appropriate and how to do so. The methodology steps are represented visually in boxes in Figure 3.1. This worksheet applies calculations for each box if applicable.

Box 1 - Define Study Site Land Use Type & Site Characteristics

The analyst is to pick an appropriate LUC(s) based on the subject's zoning/land use(s)/future land use(s). The size of the land use(s) is described in reference to an independent variable(s) specific to (each) the land use (example: 1,000 square feet of building area is relatively common).

Land Use Types and Size

| Proposed Use | Amount Units | ITE LUC | ITE Land Use Name |
|--------------------------|-------------------------|---------|--------------------------------|
| Hotel and Lock-off Units | 135 Rooms | 310/330 | Standard Hotel/Resort Hotel |
| Residential Units | 30 Dwelling Units | 220 | Multifamily Housing (Low-Rise) |
| Quality Restaurant | 3.500 1,000 square feet | 931 | Quality Restaurant |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Box 2 - Define Site Context

Context assessment is to "simply determine whether the study sites is in a multimodal setting" and "could have persons accessing the site by walking, bicycling, or riding transit." This assessment is used in Box 4. The *Manual* separates data into 4 setting categories - **Rural, General Urban/Suburban**, **Dense Multi-Urban Use** and **Center City Core**. This worksheet uses the following abbreviations, respectively: **R**, **G**, **D**, and **C**. The *Manual* does not have data for all settings of all land use codes. See the table on the next page titled "Site Context and Time Periods" - if this table is not provided, the "General Urban/Suburban" setting is used by default.

Box 3 - Define Analysis Objectives Types of Trips & Time Period

This tool will focus on vehicular trips for a 24-hour period on a typical weekday as well as its AM peak hour and PM peak hour. Other time period(s) may be of interest.



Trip Generation

Proposed February 2019
Appendix D

Box 4 - Is Study Site Multimodal?

Per the Handbook, "if the objective is to establish a local trip generation rate for a particular land use or study site, the simplified approach (Box 9) may be acceptable but the Box 5 through 8 approach is required if the study site is located in an infill setting, contains a mix of uses on-site, or is near significant transit service."

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Determine Equation)

Vehicle trips are estimated using rates/equations applicable to each LUC. When the appropriate graph has a fitted curve, the *Handbook* has a process (Figure 4.2) to determine when to use it versus using the weighted average rate or collecting local data. The methodology requires for engineering judgement in some circumstances and permits engineering judgement to override or make adjustments when appropriate to best project (example 1: study site is expected to operate differently than data in the applicable land use code - such as restaurant that is closed in the morning or in the evening; example 2: LUC data in a localized area fails to be represented by the typically selected fitted curve/weighted average rate - a small shop/LUC 820, AM peak hour is skewed by the high y-intercept).

Equation Type: Equation Used [Equated Rate] (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

| Proposed Use | ADT | AM Peak Hour | PM Peak Hour | (not used) |
|--------------------------|---------------------------|----------------------------------|----------------------------------|------------|
| Hotel and Lock-off Units | WA: [] | FC: T=0.38*X-28.58 [0.17] | FC: T=0.52*X-55.42 [0.11] | |
| Residential Units | FC: T=7.56*X-40.86 [6.20] | FC: LN(T)=0.95*LN(X)-0.51 [0.51] | FC: LN(T)=0.89*LN(X)-0.02 [0.67] | |
| Quality Restaurant | WA: T=X*83.84 [83.84] | WA: T=X*0.73 [0.73] | WA: T=X*7.8 [7.80] | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Apply Equations and in/out Distributions)

Baseline Vehicular Trips

| · | | AD | T | | | AM Pe | ak Hour | | | PM Pe | ak Hour | | (not used) |
|--------------------------|------|-----|-----|-------|------|-------|---------|-------|------|-------|---------|-------|------------|
| Proposed Use | % In | In | Out | Total | % In | In | Out | Total | % In | In | Out | Total | |
| Hotel and Lock-off Units | 50% | 350 | 350 | 700 | 72% | 38 | 15 | 53 | 43% | 29 | 39 | 68 | |
| Residential Units | 50% | 93 | 93 | 186 | 23% | 3 | 12 | 15 | 63% | 13 | 7 | 20 | |
| Quality Restaurant | 50% | 147 | 147 | 294 | 0% | 0 | 3 | 3 | 67% | 18 | 9 | 27 | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Totals | | 590 | 590 | 1,180 | | 41 | 30 | 71 | | 60 | 55 | 115 | |



Proposed

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Box 6 - Convert Baseline Vehicle Trips to Person Trips

If no vehicle trip reductions are to be applied, this portion may be ignored. The *Handbook* states "There are not enough samples to derive precise percentages by mode...however, for all but one, ...the motor vehicle percentage of total person trips is at least 96 percent." and "[vehicle occupancy for] many of the most commonly analyzed land use codes are not [available]." This form assumes that the total baseline vehicle trips for all land use codes accounts for 90% of total person trips. Unless otherwise specified, this form later reverses the conversion in Box 8.

Box 7 - Estimate Internal Person Trips, External Walk/Bike Trips, Transit Person Trips, External Person Trips (Internal Capture)

Internal capture occurs for mixed-use developments when a portion of the trips generated by the site are expected to have the both the origin and destination within the site. Internal capture is not dependent on mode choice. The table below presents the internal capture percentages and trips in units of vehicle trips. CivTech can provide trips in units of persons if requested.

Adjustments for Internal Trips

| | | AD | T | | | AM Pe | ak Hour | | | PM Pe | ak Hour | | (not used) |
|--------------------------|---------|----|-----|-------|---------|-------|---------|-------|---------|-------|---------|-------|------------|
| Proposed Use | Percent | In | Out | Total | Percent | In | Out | Total | Percent | ln | Out | Total | |
| Hotel and Lock-off Units | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | |
| Residential Units | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | |
| Quality Restaurant | 50% | 74 | 74 | 148 | 50% | 0 | 2 | 2 | 50% | 9 | 5 | 14 | |
| Totals | | 74 | 74 | 148 | | 0 | 2 | 2 | | 9 | 5 | 14 | |

Box 8 - Convert Person Trips to Final Vehicle Trips

The vehicle occupancy and baseline alternate mode are now factored out from the external trips in vehicles, after any adjustments for internal capture and additional alternate mode from Box 7. In Box 6, vehicle trips were considered to account for 90% of total person trips. Alternate mode trips in addition to the baseline, if any, are accounted for in Box 7. It is estimated that vehicle trips should be reduced by an additional 0% due to carpooling. The final external trips in vehicles is multiplied by 90% - 0% = 90% to produce the external vehicle trips.

External Vehicular Trips

| | AD | T | | AM Pe | eak Hour | | PM Pea | ak Hour | | (not used) |
|--------------|-----|-----|-------|-------|----------|-------|--------|---------|-------|------------|
| Proposed Use | In | Out | Total | In | Out | Total | In | Out | Total | |
| Totals | 516 | 516 | 1,032 | 41 | 28 | 69 | 51 | 50 | 101 | |

Box 10 - Estimate Vehicle Trip Subsets Pass-by/Diverted Trips, Truck Trips (Pass-By Trips)

Some trips may be classified as "pass-by" trips, where some vehicle trips generated by the study site are already traveling on an adjacent road and make a stop while passing by. These trips do not add traffic volume to the roadway. The *Handbook* does not specify that a 'pair' of pass-by trips must enter and exit the same driveway. The current edition of the *Handbook* indicates that pass-by trips should have directional distribution applied (%in/%out), though reviewers often comment when pass-by trip "pairs" do not occur within a the specified time period. This is likely due to ease of calculation and traditional methodology found in the first edition of the *Handbook*. As such, the analyst may ignore the direction distribution divide the total pass-by trip volume by 2 to apply pass-by "pairs". In addition, the analyst may consider pass-by rates at a reduced rate. Data is not available for all land use codes and all periods, assumtions are highlighted. The percentage is applied to total external vehicle trips.



APPENDIX E

TRIP DISTRIBUTION

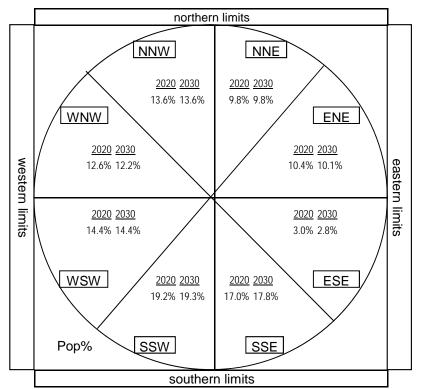


| | | 2020 | | 2 | 030 | |
|-----------------|------------|---------|------------|---------|-----|--|
| Quadrant | Population | Percent | Population | Percent | | |
| North Northwest | 65,355 | 13.6% | 70,346 | 13.6% | | |
| North Northeast | 46,994 | 9.8% | 50,587 | 9.8% | | |
| North | 112,348 | 23.4% | 120,934 | 23.4% | | |
| East Northeast | 49,891 | 10.4% | 52,124 | 10.1% | | |
| East Southeast | 14,233 | 3.0% | 14,712 | 2.8% | | |
| East | 64,123 | 13.4% | 66,836 | 12.9% | | |
| South Southeast | 81,730 | 17.0% | 92,480 | 17.8% | | |
| South Southwest | 92,361 | 19.2% | 99,928 | 19.3% | | |
| South | 174,091 | 36.2% | 192,407 | 37.1% | | |
| West Southwest | 69,372 | 14.4% | 74,834 | 14.4% | | |
| West Northwest | 60,317 | 12.6% | 63,387 | 12.2% | | |
| West | 129,689 | 27.0% | 138,221 | 26.6% | | |
| Totals | 480,252 | 100.0% | 518,398 | 100.0% | | |

Radius

Population radius: 10 miles

Select Analysis Year (2020, 2030, 2040,2050) 2020



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|--|--------------------------------------|---------|
| 1,956 6,209 5,583 3,647 1,706 1,487 | | _ |
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| 0,587 | trik | ŕ |
| 0,587 | is | |

| 0-mile | rauiu | 2020 | 2030 | % of | 2020 | 2030 | | | 2020 | 2030 | % of | 2020 | 2030 |
|--------------|---------|------------|------------|------|----------|----------|------|---------|------------|------------|------|-------------------|-------------------|
| | MPA | Population | Population | TAZ | Adjusted | Adjusted | RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted |
| MNN | | | | | | | NNE | | | | | | |
| 245 | PH | 57,570 | 59,845 | 30% | 17,271 | 17,954 | 228 | PH | 17,962 | 39,116 | 5% | | 1,956 |
| 227 | PH | 56,483 | 67,265 | 5% | 2,824 | 3,363 | 230 | SC | 33,607 | 41,394 | 15% | · · | 6,209 |
| 228 | PH | 17,962 | 39,116 | 10% | 1,796 | 3,912 | 246 | PH | 60,062 | 62,330 | 25% | | 15,583 |
| 246 | PH | 60,062 | 62,330 | 70% | 42,043 | 43,631 | 247 | SC | 13,321 | 13,647 | 100% | | 13,647 |
| 262 | PV | 14,198 | 14,871 | 10% | 1,420 | 1,487 | 248 | SC | 37,661 | 39,019 | 30% | | 11,706 |
| | | - | - | | - | - | 262 | PV | 14,198 | 14,871 | 10% | 1,420 | 1,487 |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
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| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
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| | | - | - | | - | - | | | - | - | | - | - |
| Eron | NINI\A/ | - | - | | CE SEE | 70 246 | Fue- | n NINIT | - | - | | 46 004 | - E0 E07 |
| From From | | | | | 65,355 | 70,346 | Fron | n NNE | | | ; | 46,994 112,348 | 50,587 120,934 |

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| | radiu | 2020 | 2030 | % of | 2020 | 2030 | | | 2020 | 2030 | % of | 2020 | 2030 |
|------|-----------------|------------|------------|------|----------|----------|------|--------|------------|------------|------|----------|----------|
| RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted | RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted |
| NE | | | | | | | ESE | | | | | | |
| 230 | SC | 33,607 | 41,394 | 5% | 1,680 | 2,070 | 262 | PV | 14,198 | 14,871 | 5% | 710 | 744 |
| 249 | SC | 21,657 | 22,818 | 40% | 8,663 | 9,127 | 263 | SC | 36,704 | 37,882 | 35% | 12,846 | 13,259 |
| 248 | SC | 37,661 | 39,019 | 70% | 26,363 | 27,313 | 264 | SR | 6,766 | 7,102 | 10% | 677 | 710 |
| 264 | SR | 6,766 | 7,102 | 5% | 338 | 355 | | | - | - | | - | - |
| 263 | SC | 36,704 | 37,882 | 35% | 12,846 | 13,259 | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
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| | | - | - | | - | - | | | - | - | | - | - |
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| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| Eron | n ENE | | | | 49,891 | 52,124 | Ero | n ESE | <u>-</u> | | | 14,233 | 14,712 |
| | n ENE n East | | | | 49,091 | 32,124 | LIOI | 11 E3E | | | ; | 64,123 | 66,836 |

| | | 2020 | 2030 | % of | 2020 | 2030 | | | 2020 | 2030 | % of | 2020 | 2030 |
|------|-------|------------|------------|------|----------|----------|------|-------|------------|------------|------|----------|----------|
| RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted | RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted |
| SSE | | | | | | | SSW | | | | | | |
| 262 | PV | 14,198 | 14,871 | 10% | 1,420 | 1,487 | 262 | PV | 14,198 | 14,871 | 20% | 2,840 | 2,974 |
| 263 | SC | 36,704 | 37,882 | 20% | 7,341 | 7,576 | 271 | PH | 67,978 | 72,784 | 55% | 37,388 | 40,031 |
| 272 | SC | 72,339 | 81,764 | 95% | 68,722 | 77,676 | 272 | SC | 72,339 | 81,764 | 5% | 3,617 | 4,088 |
| 264 | SR | 6,766 | 7,102 | 5% | 338 | 355 | 276 | PH | 48,517 | 52,834 | 100% | 48,517 | 52,834 |
| 288 | TE | 78,175 | 107,704 | 5% | 3,909 | 5,385 | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
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| | | _ | _ | | _ | _ | | | _ | _ | | _ | _ |
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| | | _ | _ | | _ | _ | | | _ | _ | | _ | _ |
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| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
| | | | | | | | | | | | | - | |
| Fror | n SSE | | | | 81,730 | 92,480 | Fron | n SSW | | | | 92,361 | 99,928 |
| From | South | | | | | | | | | | į | 174,091 | 192,407 |

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| | | 2020 | 2030 | % of | 2020 | 2030 | | | 2020 | 2030 | % of | 2020 | 2030 |
|------|-------------|------------|------------|------|----------|----------|------|-----|------------|------------|------|----------|----------|
| RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted | RAZ | MPA | Population | Population | TAZ | Adjusted | Adjusted |
| vsw | | | | | | | WNW | | | | | | |
| 262 | PV | 14,198 | 14,871 | 25% | 3,550 | 3,718 | 349 | MC | 391 | 416 | 100% | 391 | 416 |
| 261 | PH | 35,232 | 38,363 | 100% | 35,232 | 38,363 | 244 | PH | 55,833 | 59,925 | 35% | 19,542 | 20,974 |
| 271 | PH | 67,978 | 72,784 | 45% | 30,590 | 32,753 | 262 | PV | 14,198 | 14,871 | 20% | 2,840 | 2,974 |
| | | - | - | | - | - | 246 | PH | 60,062 | 62,330 | 5% | 3,003 | 3,117 |
| | | - | - | | - | - | 245 | PH | 57,570 | 59,845 | 60% | 34,542 | 35,907 |
| | | - | - | | - | - | | | - | - | | - | - |
| | | - | - | | - | - | | | - | - | | - | - |
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| | | - | - | | - | - | | | - | - | | - | - |
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| | | _ | _ | | _ | _ | | | _ | _ | | _ | _ |
| | | _ | _ | | _ | _ | | | _ | _ | | _ | _ |
| | | _ | _ | | _ | _ | | | _ | _ | | _ | _ |
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| | | - | - | | - | - | | | - | - | | - | - |
| | WSW | | | | 69,372 | 74,834 | From | WNW | | | : | 60,317 | 63,387 |
| From | West | | | | | | | | | | | 129,689 | 138,221 |

APPENDIX F

BACKGROUND TRAFFIC



Background Traffic Calculations

Location of counts: Scottsdale Road between Indian Bend and Lincoln

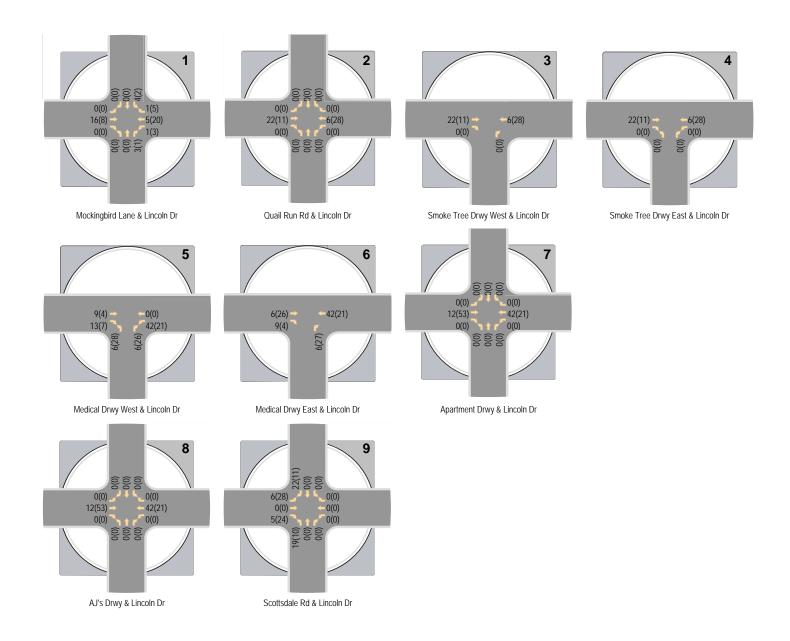
Source(s): https://www.scottsdaleaz.gov/transportation/studies-reports/traffic-volume

| | | | | Expansion |
|-----------|------|--------|--------------|-----------|
| | | | Avg Growth | Factor to |
| | Year | Volume | Rate to 2012 | 2012 |
| Beginning | 2012 | 43,500 | | |
| End | 2014 | 45,000 | 1.7% | 0.967 |

Growth Rate Used 1.7% Per-Year Multiplier 1.017

| | Expansion | |
|------|-----------|--|
| Year | Factor(s) | |
| 2018 | 1.000 | |
| 2019 | 1.017 | |
| 2020 | 1.034 | <- Expansion factor to opening |
| 2021 | 1.052 | |
| 2022 | 1.070 | |
| 2023 | 1.088 | |
| 2024 | 1.106 | |
| 2025 | 1.125 | <- Expansion factor to 5 years after opening |
| 2026 | 1.144 | |
| 2027 | 1.164 | |
| 2028 | 1.184 | |
| 2029 | 1.204 | |
| 2030 | 1.224 | |
| 2031 | 1.245 | |
| 2032 | 1.266 | |
| 2033 | 1.288 | |
| 2034 | 1.310 | |
| 2035 | 1.332 | |
| 2036 | 1.354 | |
| 2037 | 1.378 | |
| 2038 | 1.401 | |





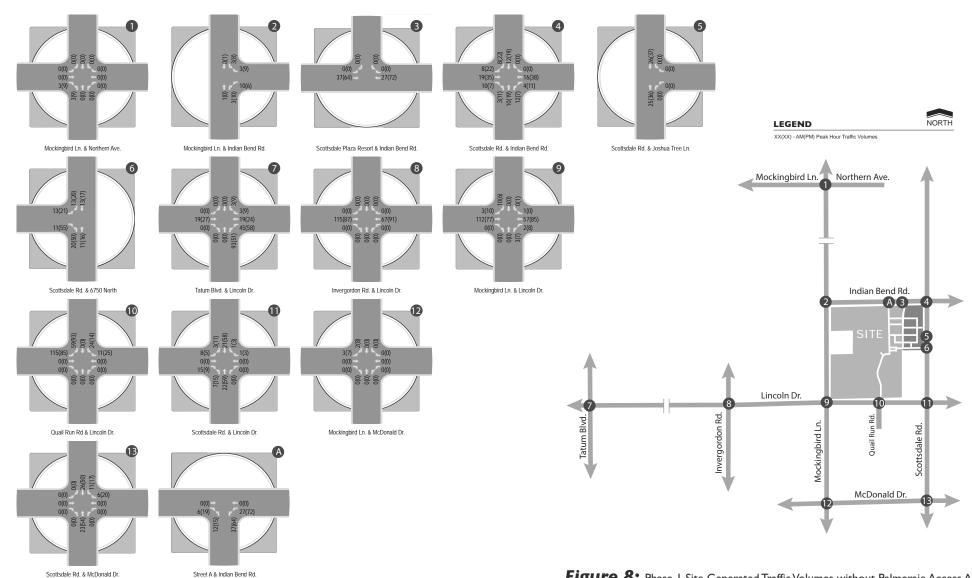


Figure 8: Phase I Site Generated Traffic Volumes without Palmeraie Access A

APPENDIX G

2020 PEAK HOUR ANALYSIS



Smoke Tree Resort 1: Mockingbird Ln & Lincoln Drive 2020 Background AM

| | 37 | 4 | 88 | 38 | NA | 8 | | 8 | | 7.0 | ti. | 0. | % | 4.0 | 2.5 | 0.0 | 6.5 | | | et. | .2 | 20 | 34 | .2 | 0.0 | .2 | D | 9. | D | | | | | | | | | | |
|-------------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| → | BL SBT | je. | | 3 9/ | | | ∞ | m | | 3.5 7 | | 9.0 53.0 | 3% 40.8% | 3.0 4 | | | 4.0 6 | ad | Yes | ne None | 3.7 26.2 | 22 0.20 | 0.30 0.84 | | | 41.8 50.2 | ٥ | 48.6 | | | | | | | | | | | |
| ← | NBT SBI | 2 | 34 | | NA pm+ | 4 | | 4 3 | | | 33.5 8 | | 9 | | | | | _ | | None None | | | | | | 32.4 41 | ပ | 33.7 | ပ | | | | | | | | LOS: C | ICU Level of Service D | |
| • | NBL | r | 2 | 2 | Perm | | 4 | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 17.4 | 0.13 | 0.08 | 46.2 | 0.0 | 46.2 | ٥ | | | | | | Green | | | | Intersection LOS: C | J Level of | |
| ţ | WBT | ₩ | 890 | 890 | Ϋ́ | 2 | | 7 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 70.1 | 0.54 | 0.55 | 25.3 | 0.0 | 25.3 | ပ | 25.1 | ပ | | | | Start of (| | | | <u>ir</u> | ਹੁ | |
| > | WBL | r | 23 | 23 | Perm | | 2 | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 70.1 | 0.54 | 0.10 | 18.3 | 0.0 | 18.3 | В | | | | | | d 6:EBTL, | | | | | | |
| † | EBT | ₽ | 971 | 971 | ΑN | 9 | | 9 | | 15.0 | 27.0 | 77.0 | 59.2% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 91.3 | 0.70 | 0.45 | 10.1 | 0.0 | 10.1 | В | 10.6 | Ω | | | | WBTL an | | | | | | |
| • | EBL | r | 222 | 222 | pm+pt | - | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 93.3 | 0.72 | 0.57 | 13.0 | 0.0 | 13.0 | В | | | | | | phase 2:1 | | linated | | _ | n 74.7% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | ros | Approach Delay | Approach LOS | Intersection Summary | Cycle Lenath: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.84 | Intersection Signal Delay: 22.1 | Intersection Capacity Utilization 74.7% | Analysis Period (min) 15 |

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Smoke Tree Resort 2020 Background AM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | | | ٠ | | | | - | - | | | | |
|------------------------------|------|----------|------|------|------------|------|------|------|------|------|------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| -ane Configurations | F | ₽ | | F | ₽ ₽ | | F | £\$ | | je. | 2 | |
| Fraffic Volume (veh/h) | 222 | 97.1 | 30 | 23 | 890 | 42 | 2 | 34 | 22 | 16 | 88 | 233 |
| -uture Volume (veh/h) | 222 | 971 | 30 | 23 | 890 | 42 | 2 | 34 | 22 | 9/ | 88 | 233 |
| nitial 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 | | 9 | | | 9 | | | 8 | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 247 | 1079 | 33 | 26 | 686 | 47 | 9 | 38 | 24 | 84 | 86 | 259 |
| Peak Hour Factor | 0.00 | 06.0 | 06:0 | 06:0 | 06.0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.00 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 397 | 2334 | 71 | 316 | 1919 | 91 | 88 | 184 | 116 | 313 | 109 | 289 |
| Arrive On Green | 0.08 | 99.0 | 99.0 | 0.56 | 0.56 | 0.56 | 0.17 | 0.17 | 0.17 | 0.04 | 0.24 | 0.24 |
| Sat Flow, veh/h | 1781 | 3520 | 108 | 203 | 3454 | 164 | 1024 | 1072 | 119 | 1781 | 454 | 1200 |
| Grp Volume(v), veh/h | 247 | 545 | 292 | 26 | 209 | 527 | 9 | 0 | 62 | 84 | 0 | 357 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1851 | 203 | 1777 | 1841 | 1024 | 0 | 1749 | 1781 | 0 | 1654 |
| 2 Serve(g_s), s | 7.4 | 19.4 | 19.4 | 3.4 | 23.2 | 23.2 | 0.7 | 0.0 | 4.0 | 2.0 | 0.0 | 27.2 |
| Cycle Q Clear(g_c), s | 7.4 | 19.4 | 19.4 | 8.8 | 23.2 | 23.2 | 18.9 | 0.0 | 4.0 | 2.0 | 0.0 | 27.2 |
| Prop In Lane | 1.00 | | 90.0 | 1.00 | | 60:0 | 1.00 | | 0.39 | 1.00 | | 0.73 |
| -ane Grp Cap(c), veh/h | 397 | 1178 | 1227 | 316 | 789 | 1023 | 88 | 0 | 300 | 313 | 0 | 398 |
| //C Ratio(X) | 0.62 | 0.46 | 0.46 | 0.08 | 0.52 | 0.52 | 0.07 | 0.00 | 0.21 | 0.27 | 0.00 | 0.90 |
| Avail Cap(c_a), veh/h | 276 | 1178 | 1227 | 316 | 786 | 1023 | 208 | 0 | 204 | 313 | 0 | 592 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Jpstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.56 | 0.56 | 0.56 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Jniform Delay (d), s/veh | 13.8 | 10.6 | 9.01 | 16.2 | 18.0 | 18.0 | 61.3 | 0.0 | 46.2 | 41.1 | 0.0 | 47.8 |
| ncr Delay (d2), s/veh | 1.6 | 1.3 | 1.3 | 0.3 | 1. | 1.0 | 0.3 | 0.0 | 0.3 | 0.5 | 0.0 | 11.7 |
| nitial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 7.7 | 8.0 | 0.4 | 6.7 | 10.0 | 0.2 | 0.0 | 1.8 | 2.2 | 0.0 | 12.5 |
| Jnsig. Movement Delay, s/veh | | | | | | | | | | | | |
| _nGrp Delay(d),s/veh | 15.4 | 12.0 | 11.9 | 16.5 | 19.1 | 19.0 | 9.19 | 0.0 | 46.6 | 41.5 | 0.0 | 59.5 |
| LnGrp LOS | В | В | В | В | В | В | ш | A | ۵ | ۵ | A | ш |
| Approach Vol, veh/h | | 1359 | | | 1062 | | | 89 | | | 441 | |
| Approach Delay, s/veh | | 12.6 | | | 19.0 | | | 47.9 | | | 56.1 | |
| Approach LOS | | В | | | В | | | D | | | ш | |
| Fimer - Assigned Phs | - | 2 | 3 | 4 | | 9 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.0 | 78.2 | 0.6 | 28.8 | | 92.2 | | 37.8 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 25.2 | 7.0 | 20.9 | | 21.4 | | 29.5 | | | | |
| Green Ext Time (p_c), s | 9.0 | 7.1 | 0.0 | 0.2 | | 8.6 | | 2.2 | | | | |
| ntersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 22.2 | | | | | | | | | |
| | | | ('/ | | | | | | | | | |

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> Synchro 10 Report Page 1

Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2020 Background AM

| | 1 | 1 | > | ţ | ← | • | - | |
|---|----------|----------|-------------|------------|------------|-----------------------|-------|--|
| Lane Group | EBL | EBT | WBL | WBT | NBT | SBL | SBT | |
| Lane Configurations | * | ₩ | * | ₩ | 4 | * | 43 | |
| Traffic Volume (vph) | 115 | 1017 | 2 | 853 | 0 | 26 | .0 | |
| Future Volume (vph) | 115 | 1017 | 2 | 853 | 0 | 26 | 0 | |
| Turn Type | pm+pt | NA | Perm | NA | NA | Perm | ΑN | |
| Protected Phases | 7 | 4 | | ∞ | 2 | | 9 | |
| Permitted Phases | 4 | | ∞ | | | 9 | | |
| Detector Phase | 7 | 4 | ∞ | ∞ | 2 | 9 | 9 | |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 3.5 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | |
| Minimum Split (s) | 8.0 | 28.0 | 28.0 | 28.0 | 33.0 | 33.0 | 33.0 | |
| Total Split (s) | 20.0 | 94.0 | 74.0 | 74.0 | 36.0 | 36.0 | 36.0 | |
| Total Split (%) | 15.4% | 72.3% | 26.9% | 26.9% | 27.7% | 27.7% | 27.7% | |
| Yellow Time (s) | 3.0 | 4.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | |
| All-Red Time (s) | 1.0 | 2.5 | 2.5 | 2.5 | 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) | 4.0 | 6.9 | 6.9 | 6.5 | 0.9 | 0.9 | 0.9 | |
| Lead/Lag | Lead | | Lag | Lag | | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | |
| Act Effct Green (s) | 64.0 | 61.5 | 46.2 | 46.2 | 26.0 | 26.0 | 26.0 | |
| Actuated g/C Ratio | 0.49 | 0.47 | 0.36 | 0.36 | 0.43 | 0.43 | 0.43 | |
| v/c Ratio | 0.53 | 89.0 | 0.02 | 0.76 | 0.01 | 0.02 | 0.00 | |
| Control Delay | 29.9 | 35.8 | 23.5 | 40.9 | 0.0 | 26.1 | 0.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 29.9 | 35.8 | 23.5 | 40.9 | 0.0 | 26.1 | 0.2 | |
| TOS | O | ۵ | O | | ⋖ | S | V | |
| Approach Delay | | 35.2 | | 40.8 | | | 7.6 | |
| Approach LOS | | D | | O | | | A | |
| Intersection Summary | | | | | | | | |
| Cycle Lenath: 130 | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | phase 2: | NBTL an | d 6:SBTL | , Start of | Green | | | |
| Natural Cycle: 70 | | | | | | | | |
| Control Type: Actuated-Coordinated | dinated | | | | | | | |
| Maximum v/c Ratio: 0.76 | | | | | | | | |
| Intersection Signal Delay: 36.2 | .2 | | | _ | ntersectio | Intersection LOS: D | | |
| Intersection Capacity Utilization 64.6% | on 64.6% | | | ⊻ | CU Level | CU Level of Service C | e C | |
| Analysis Period (min) 15 | | | | | | | | |

Splits and Phases: 2: Quail Run Rd & Lincoln Drive



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Smoke Tree Resort 2020 Background AM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| Movement Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) | Č | | | | | | | | | | | |
|---|------|--------------|-------|------|--------------|------|------|--------|------|------|--------|------|
| Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) | 5 | LDT | CDD | MDI | TOW | WDD | ION | TOIN | NDD | CDI | CDT | CDD |
| Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) | EBL | EBI | EBK | WBL | WBI | WBK | NBL | NBI | NBK | SBL | SBI | SBK |
| Traffic Volume (veh/h) Future Volume (veh/h) | | * | | - | * | | | 4 | | - | Ť | |
| Future Volume (veh/h) | 115 | 1017 | က | 2 | 853 | 12 | 0 | 0 | 7 | 26 | 0 | 92 |
| | 115 | 1017 | 3 | 2 | 853 | 12 | 0 | 0 | 7 | 26 | 0 | 92 |
| 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 | | 9 | | | 9 | | | S N | | | S N | |
| Adj Sat Flow, veh/h/ln 1 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 128 | 1130 | က | 2 | 948 | 13 | 0 | 0 | ∞ | 56 | 0 | 72 |
| Peak Hour Factor | 06.0 | 0.00 | 06:0 | 06.0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 |
| h, % | 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 210 | 1517 | 4 | 195 | 1161 | 16 | 0 | 0 | 177 | 737 | 0 | 771 |
| Arrive On Green | 0.13 | 0.83 | 0.83 | 0.22 | 0.22 | 0.22 | 0.00 | 00:0 | 0.49 | 0.49 | 0.00 | 0.49 |
| Sat Flow, veh/h | 1781 | 3636 | 10 | 497 | 3589 | 49 | 0 | 0 | 1585 | 1407 | 0 | 1585 |
| Grp Volume(v), veh/h | 128 | 552 | 581 | 2 | 469 | 492 | 0 | 0 | ∞ | 29 | 0 | 72 |
| /ln | 1781 | 1777 | 1869 | 497 | 1777 | 1862 | 0 | 0 | 1585 | 1407 | 0 | 1585 |
| | 6.1 | 17.7 | 17.7 | 0.4 | 32.7 | 32.7 | 0:0 | 0:0 | 0.3 | 1.4 | 0.0 | 3.2 |
| Cycle Q Clear(g_c), s | 6.1 | 17.7 | 17.7 | 5.9 | 32.7 | 32.7 | 0.0 | 0.0 | 0.3 | 1.7 | 0.0 | 3.2 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.03 | 0.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 210 | 741 | 780 | 195 | 575 | 602 | 0 | 0 | 177 | 737 | 0 | 771 |
| | 0.61 | 0.74 | 0.74 | 0.01 | 0.82 | 0.82 | 0.00 | 0.00 | 0.01 | 0.04 | 0.00 | 0.0 |
| /h | 317 | 1196 | 1258 | 292 | 923 | 196 | 0 | 0 | 171 | 737 | 0 | 771 |
| 0 | 2.00 | 2.00 | 2.00 | 0.67 | 19.0 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | 0.90 | 0.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| e | 28.8 | 7.7 | 7.7 | 39.0 | 47.2 | 47.2 | 0.0 | 0.0 | 17.2 | 17.7 | 0.0 | 17.9 |
| Incr Delay (d2), s/veh | 5.6 | 1.4 | 1.3 | 0.0 | 3.1 | 2.9 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.5 | 3.4 | 3.6 | 0.1 | 15.5 | 16.2 | 0.0 | 0:0 | 0.1 | 0.5 | 0.0 | 1.2 |
| ay, s/veh | | | | | | | | | | | | |
| y(d),s/veh | 31.4 | 9.1 | 0.6 | 39.0 | 50.3 | 50.2 | 0.0 | 0.0 | 17.2 | 17.8 | 0.0 | 18.2 |
| LnGrp LOS | ပ | A | A | ۵ | ۵ | Ω | A | A | В | В | A | B |
| Approach Vol, veh/h | | 1261 | | | 696 | | | ∞ | | | 101 | |
| Approach Delay, s/veh | | 11.3 | | | 50.2 | | | 17.2 | | | 18.1 | |
| Approach LOS | | В | | | ٥ | | | В | | | В | |
| Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | 00 | | | | |
| Phs Duration (G+Y+Rc), s | | 69.3 | | 60.7 | | 69.3 | 12.2 | 48.6 | | | | |
| Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.3 | | 19.7 | | 5.2 | 8.1 | 34.7 | | | | |
| Green Ext Time (p_c) , s | | 0.0 | | 10.3 | | 0.4 | 0.2 | 7.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 4th Chil Dalay | | | 77.70 | | | | | | | | | |
| HOM OUI CUI DEIGN | | | 1.12 | | | | | | | | | |

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3: Smole Tree West & Lincoln Dr HCM 6th TWSC

Smoke Tree Resort 2020 Background AM

4: Smoke Tree East & Lincoln Dr $_{\mbox{\scriptsize HCM}}$ 6th TWSC

| 100000 | | | | | | | |
|--------------------------|--------|-------|--------|------|--------|------|--|
| ntersection | | | | | | | |
| nt Delay, síveh | 0 | | | | | | |
| Movement E | EBT 1 | EBR | WBL | WBT | NBL | NBR | |
| SU | 4₽ | | F | ₩ | À | | |
| _ | 1047 | 2 | 0 | 863 | 0 | 0 | |
| Future Vol, veh/h 1 | 1047 | 7 | 0 | 863 | 0 | 0 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | - | None | ٠ | None | | None | |
| Storage Length | | ٠ | 25 | | 0 | | |
| Veh in Median Storage, # | 0 | ٠ | ٠ | 0 | 0 | • | |
| 3rade, % | 0 | ٠ | | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 06 | 06 | 8 | |
| cles, % | 7 | 7 | 7 | 7 | 7 | 2 | |
| Mvmt Flow 1 | 1163 | 2 | 0 | 626 | 0 | 0 | |
| | | | | | | | |
| Major/Minor Ma | Major1 | ≥ | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 0 1165 | 0 | 0 1644 | 583 | |
| Stage 1 | | ٠ | ٠ | ٠ | 1164 | • | |
| Stage 2 | , | ٠ | • | • | 480 | • | |
| Critical Hdwy | ÷ | ŕ | 4.14 | 1 | 6.84 | 6.94 | |
| Critical Holwy Stg 1 | | ٠ | ٠ | ٠ | 5.84 | | |
| Critical Holwy Stg 2 | ÷ | 1 | 1 | 1 | 5.84 | 1 | |
| -ollow-up Hdwy | ÷ | ٠ | 2.22 | • | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | ÷ | ÷ | 262 | 1 | 06 | 456 | |
| Stage 1 | | ٠ | • | ٠ | 259 | 1 | |
| Stage 2 | ÷ | ŕ | 1 | 1 | 288 | 1 | |
| Platoon blocked, % | | ٠ | | ٠ | | | |
| Mov Cap-1 Maneuver | | ٠ | 262 | • | 06 | 456 | |
| Vov Cap-2 Maneuver | | ٠ | • | ٠ | 197 | • | |
| Stage 1 | | • | | • | 259 | 1 | |
| Stage 2 | ٠ | ٠ | ٠ | • | 288 | 1 | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 0 | | |
| HCM LOS | | | | | A | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | S | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | | 1 | 1 | 262 | 1 | |
| HCM Lane V/C Ratio | | ٠ | ٠ | | | | |
| HCM Control Delay (s) | | 0 | • | | 0 | • | |
| HCM Lane LOS | | ⋖ | ٠ | | ۷ | • | |
| | | | | | : | | |

| Int Delay, s/veh | 0.1 | | | | | |
|--------------------------|--------|-----------|-------------|--------|--------|------|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ₹ | | F | ‡ | > | |
| Traffic Vol, veh/h | 1049 | 0 | · — | 860 | 2 | 2 |
| Future Vol, veh/h | 1049 | 0 | | 860 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free Free | Free | Free | Stop | Stop |
| RT Channelized | 1 | - None | 1 | - None | 1 | None |
| Storage Length | | | 22 | | 0 | |
| Veh in Median Storage, # | 0 # ' | 1 | • | 0 | 0 | |
| Grade, % | 0 | • | • | 0 | 0 | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 06 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1166 | 0 | | 926 | 9 | 2 |
| Major/Minor | Major1 | 2 | Major2 | 2 | Minor1 | |
| low All | 0 | 0 | 1166 | 0 | 0 1646 | 583 |
| Stage 1 | • | ٠ | 1 | ٠ | 1166 | |
| Stage 2 | ľ | • | ľ | | 480 | |
| Critical Hdwv | • | ٠ | 4.14 | ٠ | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | ľ | | | | 5.84 | |
| Critical Hdwy Stg 2 | 1 | 1 | | • | 5.84 | |
| Follow-up Hdwy | | • | 2.22 | | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | • | • | 595 | • | 8 | 456 |
| Stage 1 | | • | 1 | • | 259 | - |
| Stage 2 | • | ٠ | | • | 288 | |
| Platoon blocked, % | 1 | 1 | | 1 | | |
| Mov Cap-1 Maneuver | 1 | 1 | 262 | 1 | 8 | 456 |
| Mov Cap-2 Maneuver | 1 | 1 | 1 | 1 | 197 | |
| Stage 1 | • | • | | • | 258 | |
| Stage 2 | | | | | 288 | |
| Approach | H | | WR | | N N | |
| UCM Control Dolay c | 3 0 | | | | 000 | |
| HCM LOS | > | | 0 | | 20.0 | |
| | | | | |) | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT |
| Capacity (veh/h) | | 235 | 1 | | 595 | |
| HCM Lane V/C Ratio | | 0.033 | ľ | | 0.002 | |
| HCM Control Delay (s) | | 20.8 | • | 1 | 11.1 | |
| HCM Lane LOS | | C | ľ | ľ | α | |
| | |) | | | د | |

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Synchro 10 Report Page 5

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5: Lincoln Medical West & Lincoln Dr

6: Lincoln Medical East & Lincoln Dr Smoke Tree Resort 2020 Background AM

| Smoke Tree Resort 2020 Background AM | . W | | | | | 5: Lincoln Medical West & Lincoln Dr HCM 6th TWSC |
|---|-------|--------|------|--------|------|--|
| | | | | | | |
| Intersection | | | | | | |
| Int Delay, síveh 0.4 | 4 | | | | | |
| Movement EBT | T EBR | WBL | WBT | NBL | NBR | |
| igurations | | | | > | | |
| | | | 854 | 9 | 6 | |
| 103 | | Ì | | 9 | 6 | |
| eds, #/hr | | | | 0 | 0 | |
| Sign Control Free | | Pree. | | Stop | Stop | |
| Storage Longth | 2 | , 70 | Nore | ۰ - | None | |
| Storage # | | | | | | |
| | 0 | ľ | 0 | 0 | | |
| r Factor | | 06 | | 06 | 06 | |
| ,o | 2 2 | | | 2 | 2 | |
| Mvmt Flow 1149 | 9 19 | 47 | 949 | 7 | 10 | |
| | | | | | | |
| Major/Minor Major1 | 1 | Major2 | | Minor1 | | |
| w All | 0 0 | 1168 | 0 | 1728 | 584 | |
| Stage 1 | | , | • | 1159 | | |
| | | | 1 | 269 | | |
| Critical Howy | 1 | 4.14 | | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | 1 | | 1 | 5.84 | | |
| Critical Howy Stg 2 | | | 1 | 5.84 | ' 4 | |
| | | | 1 | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | | 594 | | 6/ | 455 | |
| | | ' | ' | 261 | | |
| Stage 2 | | | • | 230 | | |
| | | | 1 | ì | į | |
| | | 594 | | 73 | 455 | |
| ineuver | | | ' | 1/5 | | |
| | | | | 240 | | |
| siage z | | ' | ' | 230 | | |
| | | | | | | |
| Approach EB | В | WB | | NB | | |
| rol Delay, s | 0 | 0.5 | | 18.8 | | |
| HCM LOS | | | | U | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 277 | ľ | | 294 | | |
| HCM Lane V/C Ratio | 0.06 | | • | 0.079 | | |
| HCM Control Delay (s) | 18.8 | | 1 | 11.6 | · | |
| HCM Lane LOS | 0 8 | | 1 | a 9 | | |
| HCM 95th %tile Q(veh) | 0.7 | | | 0.3 | | |

| NRP | | 6 | 6 | 0 | Stop | None | | | | 06 | 70 | 2 | | 578 | | | 6.94 | | · | 3.32 | 459 | | | | 459 | | | | ı | | | | WBT | | | | | |
|------------------|-----------------------|--------------------|-------------------|------------------------|--------------|----------------|----------------|--------------------------|----------|------------------|---|---|---------------|----------------------|---------|---------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|---|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| R | 2 | | 0 | | Stop | | 0 | 0 | 0 | 8 | 7 0 | | Minor1 | 1660 | 1150 | 510 | 6.84 | 5.84 | 5.84 | 3.52 | 88 | 264 | 298 | | 87 | 1% | 261 | 268 | ă | 12 | 2 00 | 1 | WBL | 009 | 0.009 | 11.1 | В | C |
| WRT | * | 968 | 968 | 0 | Free: | None | 1 | 0 | 0 | 06 | 7 | | _ | 0 | | | 1 | | 1 | | 1 | | | 1 | 1 | • | | | | | | | EBR | | | | | • |
| WRI | 1 | 2 | 2 | 0 | Free | • | 22 | 1 | | 8 | 7 9 | | Major2 | 0 1156 | • | | 4.14 | | 1 | 2.22 | 009 | , | | | 009 | • | | | WB | 5 6 | - - | | EBT | | | | | • |
| FRP | Ę | - | Ħ | 0 | | None | • | • | 1 | 06 | 12 | ! | 2 | 0 | • | , | • | | 1 | , | • | 1 | • | • | 1 | • | | 1 | | | | | NBLn1 | 459 | 0.022 | 13 | В | 0 1 |
| U. L | * | 1030 | 1030 | 0 | Free | 1 | | | 0 | 8 | 1144 | | Major1 | 0 | | | | | 1 | | • | | | 1 | 1 | 1 | | | a a | 3 0 | | | | | | | | |
| Int Delay, s/veh | l ane Confidentations | Traffic Vol. veh/h | Future Vol, veh/h | Conflicting Peds, #/hr | Sign Control | KI Channelized | Storage Length | Veh in Median Storage, # | Grade, % | Peak Hour Factor | Heavy Vehicles, % | | Major/Minor N | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | UCM Control Dolour o | HCM LOS | | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile O(veh) |

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Synchro 10 Report Page 7

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7: Apartment Drwy & Lincoln Dr

Smoke Tree Resort 2020 Background AM

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

| Monorman | Intersection | | | | | | | | | | | | | |
|--|---------------------------------|--------|-------|-------|--------|------|-------|------------|------|-------|-----------|-----|------|--|
| FBI FBI FBI WEI WBI NBI NBI NBI SBI SBI SBI NBI NBI NBI NBI SBI SBI SBI NBI NBI NBI SBI SBI SBI NBI NBI NBI NBI SBI SBI | Int Delay, síveh | 9.2 | | | | | | | | | | | | |
| Note | Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| National Part National Par | Lane Configurations | F | 4₽ | | F | 4₽ | | | 4 | | je- | | ¥ | |
| Free Free Free Free Stop Stop Stop Stop Stop Stop Stop Stop | Traffic Vol, veh/h | 27 | 616 | 35 | 19 | 836 | 10 | 25 | 0 | 30 | 2 | 0 | 12 | |
| Name Color Name | Future Vol, veh/h | 27 | 626 | 32 | 19 | 836 | 10 | 52 | 0 | 30 | 2 | 0 | 12 | |
| Free | Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | |
| None | Sign Control | Free | Free | Free | | Free | Free | Stop | | Stop | Stop | | Stop | |
| Najert N | RT Channelized | • | | None | • | | None | | | None | ٠ | | None | |
| # - 0 0 0 0 0 - 0 - 0 - | Storage Length | | • | | 25 | • | • | • | • | • | 0 | • | 0 | |
| 10 0 0 0 0 0 0 0 0 0 | Veh in Median Storag | # 10 | 0 | • | 1 | 0 | • | 1 | 0 | ٠ | ì | 0 | | |
| 90 90 90 90 90 90 90 90 | Grade, % | • | 0 | • | ٠ | 0 | • | ٠ | 0 | ٠ | ٠ | 0 | | |
| 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | |
| 30 1088 39 21 929 11 58 0 33 6 0 34 1088 39 21 929 11 58 0 33 6 0 4-14 0 0 1177 0 0 1675 2150 564 1581 4-14 0 0 1177 0 0 1675 2150 564 1581 4-14 0 0 1177 0 0 1675 516 4-14 0 0 172 | Heavy Vehicles, % | 2 | 7 | 7 | 2 | 7 | 2 | 2 | 2 | 7 | 2 | 7 | 2 | |
| Minor Major Minor Minor Minor | Mvmt Flow | 30 | 1088 | 39 | 21 | 929 | = | 28 | 0 | 33 | 9 | 0 | 13 | |
| 940 0 0 1127 0 0 1675 2150 564 1581 | Major/Minor | Major1 | | | Major2 | | _ | /linor1 | | 2 | linor2 | | | |
| 1.08 | Conflicting Flow All | 940 | 0 | 0 | 1127 | 0 | 0 | 1675 | 2150 | 564 | 1581 | ŀ | 470 | |
| 1.1 1.1 1.1 1.1 1.2 1.507 982 1.604 1.507 | Stage 1 | • | | | | | | 1168 | 1168 | | 776 | | | |
| 4.14 4.14 7.54 6.54 6.94 7.54 | Stage 2 | | ľ | ľ | ' | ľ | ľ | 207 | 982 | | 604 | | | |
| 2.22 | Critical Holwy | 4.14 | 1 | 1 | 4.14 | 1 | 1 | 7.54 | 6.54 | 6.94 | 7.54 | | 6.94 | |
| 1.05 0.4 | Critical Hdwy Stg 1 | | | | • | | ٠ | 6.54 | 5.54 | ٠ | 6.54 | ٠ | | |
| 722 222 352 402 332 352 | Critical Hdwy Stg 2 | • | 1 | 1 | 1 | 1 | 1 | 6.54 | 5.54 | 1 | 6.54 | • | | |
| 725 616 62 48 469 73 0 | Follow-up Hdwy | 2.22 | • | • | 2.22 | • | | 3.52 | 4.02 | 3.32 | 3.52 | ٠ | 3.32 | |
| 1.05 | Pot Cap-1 Maneuver | 725 | | | 616 | | • | 62 | 48 | 469 | 73 | 0 | 240 | |
| 1.5 | Stage 1 | • | • | • | 1 | • | • | 206 | 266 | ٠ | 269 | 0 | | |
| 725 616 57 | Stage 2 | • | • | • | • | • | • | 516 | 325 | • | 452 | 0 | | |
| 725 - 616 - 57 44 469 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 - 67 64 64 64 64 64 64 64 64 64 64 64 64 64 | Platoon blocked, % | | | 1 | | | 1 | | | | | | | |
| NBLn EBL EBT EBR WBL WBT WBR SBLn1SBLn2 | Mov Cap-1 Maneuver | 725 | | • | 616 | | • | ~ 57 | 44 | 469 | 64 | • | 540 | |
| FB WB NB SES 258 | Mov Cap-2 Maneuver | • | | 1 | • | | 1 | ~ 57 | 44 | • | 64 | ٠ | | |
| EB WB NB SB | Stage 1 | • | 1 | 1 | 1 | 1 | 1 | 198 | 255 | 1 | 258 | • | | |
| NB | Stage 2 | • | • | • | ' | • | • | 486 | 314 | • | 403 | ٠ | | |
| 0.3 0.2 212.8 F F F F F F F F F F F F F F F F F F F | | i | | | | | | | | | | | | |
| 0.3 0.2 212.8 F F F F F F F F F F F F F F F F F F F | Approach | | | | WB | | | NB | | | SB | | | |
| NBLn1 EBL EBT EBR WBL WBT WBRSBLn1 84 725 - 616 - 64 1085 0.041 - 0.034 - 0.087 21.8 10.2 - 11.1 - 6.65 F B - 6.5 | HCM Control Delay, s HCM LOS | | | | 0.5 | | | 212.8 F | | | 27.9 D | | | |
| NBLn1 EBL EBT EBR WBL WBT WBRSBLn1 84 725 - 616 - 64 1085 0.041 - 0.034 - 0.087 21.8 10.2 - 11.1 - 65 F B - 65 | | | | | | | | | | | 1 | | | |
| 84 725 616 64 1.085 0.041 0.034 0.087 2128 102 11, 66.5 F B B 66.5 | Minor Lane/Major Mvr | | JBLn1 | EBL | EBT | EBR | WBL | WBT | WBRS | BLn1S | BLn2 | | | |
| 1.085 0.041 0.034 0.087 212.8 10.2 - 11.1 66.5 F B B F | Capacity (veh/h) | | 84 | 725 | 1 | | 616 | • | • | 64 | 540 | | | |
| 212.8 10.2 - 11.11 - 66.5 F B - F F | HCM Lane V/C Ratio | | 1.085 | 0.041 | | | 0.034 | | | 0.087 | 0.025 | | | |
| F B B F | HCM Control Delay (s | _ | 212.8 | 10.2 | • | | 11.1 | | ٠ | 999 | 11.8 | | | |
| | HCM Lane LOS | | ш | C | | | ۵ | | | L | c | | | |

| Synchro 10 Report Page 9 |
|-----------------------------|
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Notes -: Volume exceeds capacity S: Delay exceeds 300s +: Computation Not Defined :: All major volume in platoon

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NBLn1 EBL EBT WBR WBL WBT WBRSBLn1SBLn2
244 718 - 617 - 62 535
0.219 0.005 - 0.079 - 0.072 0.25
238 10 - 0.113 - 675 119
C B - B - B - B
0.8 0 - 0.3 - 0.2 0.1

Minor Lane/Major Mwmt Capacity (vehh) HCM Lane V/C Ratio HCM Control Delay (s) HCM Lane LOS HCM Bane LOS

9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2020 Background AM

| | 1 | † | ~ | > | ļ | • | - | ٠ | → | • | |
|---|-----------|----------|------------|-------------|------------------------|------------|-------|-------------|----------|-------|--|
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | <u>r</u> | 4 | ¥C. | je- | ₩ | F | 4413 | * | 444 | * | |
| Traffic Volume (vph) | 450 | 38 | 460 | 37 | 36 | 295 | 1316 | 51 | 1669 | 109 | |
| Future Volume (vph) | 450 | 38 | 460 | 37 | 36 | 295 | 1316 | 21 | 1669 | 601 | |
| Turn Type | Split | Ν | hm+ov | Split | NA | Prot | Ν | Prot | A | hm+ov | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | _ | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 30.0 | 30.0 | 30.0 | 13.0 | 13.0 | 30.0 | 73.0 | 14.0 | | 30.0 | |
| Total Split (%) | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Lost Time Adjust (s) | 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 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Act Effct Green (s) | 23.6 | 23.6 | 42.3 | 7.2 | 7.2 | 18.7 | 71.5 | 7.6 | 58.1 | 87.4 | |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.33 | 90:0 | 90:0 | 0.14 | 0.55 | 90:0 | 0.45 | 0.67 | |
| v/c Ratio | 0.89 | 0.88 | 0.91 | 0.42 | 0.40 | 99.0 | 0.54 | 0.55 | 0.82 | 0.59 | |
| Control Delay | 81.3 | 80.8 | 47.0 | 72.5 | 33.9 | 58.8 | 20.4 | 79.0 | 35.9 | 10.8 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 81.3 | 80.8 | 47.0 | 72.5 | 33.9 | 28.8 | 20.4 | 79.0 | 35.9 | 10.8 | |
| FOS | ш | ш | ۵ | ш | ပ | ш | O | ш | ٥ | В | |
| Approach Delay | | 64.5 | | | 45.7 | | 27.3 | | 30.4 | | |
| Approach LOS | | ш | | | D | | ပ | | O | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Length: 130 | | | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6:5 | SBT, Sta | t of Green | _ | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | inated | | | | | | | | | | |
| Maximum v/c Ratio: 0.91 | | | | | | | | | | | |
| Intersection Signal Delay: 36.1 | _ | | | 드 | Intersection LOS: D | LOS: D | | | | | |
| Intersection Capacity Utilization 80.6% | %9.08 u | | | 2 | ICU Level of Service D | of Service | D | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | |

₹ Splits and Phases: 9: Scottsdale Rd & Lincoln Dr ▼ Ø6 (R) \$€ \$€

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Synchro 10 Report Page 11

Smoke Tree Resort 2020 Background AM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | | | | | | | | | , | | | |
|------------------------------|------|----------|----------|----------|------|-------|------|----------|------|------|----------|------|
| | • | † | <u> </u> | \ | ţ | 4 | • | ← | • | ۶ | → | • |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | K | 4 | × | K | 4 | | KK | 441 | | K | *** | × |
| Traffic Volume (veh/h) | 450 | 38 | 460 | 37 | 36 | 48 | 295 | 1316 | 39 | 21 | 1669 | 601 |
| Future Volume (veh/h) | 450 | 38 | 460 | 37 | 36 | 48 | 295 | 1316 | 39 | 21 | 1669 | 601 |
| 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 | | 2 | | | 2 | | | 9 | | | 9 ! | 1 |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 230 | 0 | 211 | 41 | 40 | 23 | 328 | 1462 | 43 | 22 | 1854 | 899 |
| Peak Hour Factor | 0.90 | 0.00 | 0.90 | 0.90 | 06:0 | 06:0 | 06:0 | 0.00 | 06:0 | 0.00 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 671 | 0 | 477 | 95 | 95 | 82 | 388 | 2382 | 70 | 73 | 2015 | 924 |
| Arrive On Green | 0.19 | 0.00 | 0.19 | 0.05 | 0.02 | 0.05 | 0.11 | 0.47 | 0.47 | 0.04 | 0.39 | 0.39 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 2098 | 150 | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h | 530 | 0 | 511 | 41 | 40 | 53 | 328 | 916 | 529 | 22 | 1854 | 999 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| Q Serve(g_s), s | 18.4 | 0.0 | 24.5 | 2.9 | 2.8 | 4.3 | 12.1 | 27.9 | 27.9 | 4.1 | 44.9 | 39.5 |
| Cycle Q Clear(g_c), s | 18.4 | 0.0 | 24.5 | 5.9 | 2.8 | 4.3 | 12.1 | 27.9 | 27.9 | 4.1 | 44.9 | 39.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 671 | 0 | 477 | 96 | 95 | 82 | 388 | 1590 | 861 | 73 | 2015 | 924 |
| V/C Ratio(X) | 0.79 | 0.00 | 1.07 | 0.43 | 0.42 | 0.63 | 0.85 | 0.61 | 0.61 | 0.78 | 0.92 | 0.72 |
| Avail Cap(c_a), veh/h | 671 | 0 | 477 | 101 | 101 | 06 | 651 | 1762 | 954 | 119 | 2015 | 924 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.3 | 0.0 | 45.5 | 9.69 | 9.69 | 60.3 | 9.99 | 25.9 | 25.9 | 61.7 | 37.4 | 19.5 |
| Incr Delay (d2), s/veh | 2.8 | 0.0 | 61.9 | 1.1 | 1.1 | 8.2 | 2.2 | 0.3 | 9.0 | 6.5 | 8.4 | 4.9 |
| 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 | 80.0 | 0.0 | 23.4 | 1.3 | 1.3 | 1.9 | 5.4 | 11.3 | 12.3 | 2.0 | 20.0 | 23.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 56.1 | 0.0 | 107.4 | 8.09 | 60.7 | 68.4 | 28.8 | 26.2 | 26.5 | 68.2 | 45.8 | 24.4 |
| Annroach Vol. veh/h | _ | 1041 | - | _ | 134 | ١ | 1 | 1833 |) | _ | 25.70 |) |
| Approach Delay, skieh | | 813 | | | 63.8 | | | 32.1 | | | 40.7 | |
| Approach LOS | | <u>ı</u> | | | ш | | | O | | | ۵ | |
| | 7 | c | | , | L | , | | c | | | | |
| Illinei - Assigned Pils | 10 4 | 7 77 | ı | 4 00 | 201 | 0 0 0 | ı | 17 1 | ı | ı | ı | |
| PIIs Dulation (G+1+RJ), s | 0.0 | 4.00 | | 0.00 | 70.1 | 0.70 | | 0.7 | | | | |
| Change Perlod (Y+RC), S | 5.0 | 7.0 | | U.C. | 0.0 | 7.7 | | 0.0 | | | | |
| Max O'Clear Time (a c.11) c | 6.1 | 5.70 | | 24.3 | 14.1 | 01.0 | | 4.7 | | | | |
| Green Ext Time (p. c). s | 0.0 | 2.2 | | 0.0 | 0.5 | 1.9 | | 0.0 | | | | |
| | | | ı | | | | ı | | | ı | ı | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 46.0 | | | | | | | | | |
| HCIM OILI FOS | | | | | | | | | | | | |
| Notes | | | | | | | | | | | | |

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement.

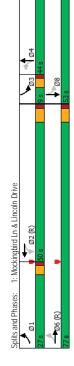
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Q2/11/2019

CV/Tech BR

1: Mockingbird Ln & Lincoln Drive

| | 37 | 2 | 48 | 48 | NA. | 8 | | 8 | | 7.0 | r. | 0. | % | 4.0 | 2.5 | 0.0 | 6.5 | | | er. | .4 | 14 | 54 | Т. | 0.0 | 7. | S | 33.2 | <u>ي</u> | | | | | | | | | | |
|-------------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| → | SBL SBT | je. | 62 4 | | _ | 33 | 80 | co | | 3.5 7 | 8.0 33.5 | 9.0 53.0 | 6.9% 40.8% | 3.0 4 | | 0.0 | 4.0 6 | Lead | Yes | None None | 20.9 18.4 | 0.16 0.14 | 0.37 0.64 | 51.4 27.7 | | 51.4 27.7 | D | 33 | | | | | | | | | | | |
| - | NBT S | ¢\$ | 62 | | NA pm | 4 | | 4 3 | | 7.0 | 33.5 | | 33.8% 6.9 | | | | | | | _ | | | 0.54 0. | 61.4 51 | | 61.4 57 | ш | 8.09 | ш | | | | | | | | .OS: B | Service C | |
| • | NBL | <u>, -</u> | 7 | 7 | Perm | | 4 | 4 | | 7.0 | 33.5 | 44.0 | 33.8% 3 | 4.0 | 2.5 | 0.0 | | | | | | 0.09 | 0.09 | 54.9 | 0:0 | 54.9 | D | | | | | | Green | | | | Intersection LOS: B | ICU Level of Service C | |
| ţ | WBT | ₩₽ | 937 | 937 | NA | 2 | | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 76.2 | 0.59 | 0.54 | 19.4 | 0.0 | 19.4 | В | 19.2 | В | | | | , Start of (| | | | ħ | ⊇ | |
| > | WBL | je. | 23 | 23 | Perm | | 2 | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 76.2 | 0.59 | 0.08 | 10.2 | 0.0 | 10.2 | В | | | | | | d 6:EBTL, | | | | | | |
| † | EBT | ₽ | 875 | 875 | ΑN | 9 | | 9 | | 15.0 | 27.0 | 77.0 | 59.2% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 99.1 | 0.76 | 0.37 | 6.1 | 0.0 | 6.1 | A | 7.2 | A | | | | WBTL an | | | | | | |
| 4 | EBL | r | 246 | 246 | pm+pt | - | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 101.1 | 0.78 | 0.58 | 11.3 | 0.0 | 11.3 | В | | | | | | phase 2: | | linated | | 9 | on 67.4% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | TOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.64 | Intersection Signal Delay: 16.6 | Intersection Capacity Utilization 67.4% | Analysis Period (min) 15 |



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Synchro 10 Report Page 1

Smoke Tree Resort 2020 Background PM

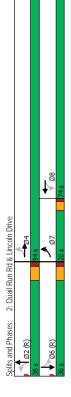
1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | | | • | - | | | - | - | | | - | |
|------------------------------|------|------------|------|------|----------|-------|------|------|------|----------|------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | ₽ ₽ | | F | ₩ | | r | 2 | | <u>r</u> | 2 | |
| Traffic Volume (veh/h) | 246 | 875 | 29 | 23 | 937 | 63 | 7 | 62 | 18 | 62 | 48 | 156 |
| Future Volume (veh/h) | 246 | 875 | 29 | 23 | 937 | 63 | 7 | 62 | 18 | 62 | 48 | 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 | | 0 1 | | | 0 1 | | | 2 | | | 2 | į |
| Adj Sat Flow, veh/h/In | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 273 | 972 | 32 | 26 | 1041 | 70 | ∞ | 69 | 20 | 69 | 23 | 173 |
| Peak Hour Factor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 0.00 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 468 | 2610 | 98 | 416 | 2172 | 146 | 98 | 127 | 37 | 181 | 62 | 202 |
| Arrive On Green | 0.07 | 0.74 | 0.74 | 0.85 | 0.85 | 0.85 | 0.09 | 0.09 | 0.09 | 0.04 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1781 | 3511 | 116 | 261 | 3379 | 227 | 1155 | 1394 | 404 | 1781 | 386 | 1258 |
| Grp Volume(v), veh/h | 273 | 492 | 512 | 26 | 547 | 564 | ∞ | 0 | 86 | 69 | 0 | 226 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1850 | 261 | 1777 | 1829 | 1155 | 0 | 1798 | 1781 | 0 | 1644 |
| Q Serve(g_s), s | 6.4 | 12.8 | 12.8 | 6.0 | 8.6 | 8.6 | 6.0 | 0.0 | 6.2 | 4.5 | 0.0 | 17.4 |
| Cycle Q Clear(g_c), s | 6.4 | 12.8 | 12.8 | 6.0 | 8.6 | 8.6 | 9.3 | 0.0 | 6.2 | 4.5 | 0.0 | 17.4 |
| Prop In Lane | 1.00 | | 90:0 | 1.00 | | 0.12 | 1.00 | | 0.22 | 1.00 | | 0.77 |
| Lane Grp Cap(c), veh/h | 468 | 1321 | 1375 | 416 | 1142 | 1176 | 98 | 0 | 164 | 181 | 0 | 264 |
| V/C Ratio(X) | 0.58 | 0.37 | 0.37 | 90.0 | 0.48 | 0.48 | 0.09 | 0.00 | 0.54 | 0.38 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 929 | 1321 | 1375 | 416 | 1142 | 1176 | 314 | 0 | 519 | 181 | 0 | 588 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 8.9 | 5.9 | 5.9 | 3.4 | 4.1 | 4.1 | 62.0 | 0.0 | 29.5 | 49.7 | 0.0 | 53.1 |
| Incr Delay (d2), s/veh | 1.2 | 0.8 | 0.8 | 0.2 | 0.8 | 0.8 | 0.5 | 0.0 | 2.8 | 1.3 | 0.0 | 7.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.4 | 4.6 | 4.8 | 0.1 | 2.8 | 2.9 | 0.3 | 0.0 | 2.9 | 2.1 | 0.0 | 7.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 8.0 | 6.7 | 6.7 | 3.6 | 4.9 | 4.9 | 62.5 | 0.0 | 59.3 | 51.0 | 0.0 | 61.0 |
| LnGrp LOS | A | A | A | A | A | A | ш | A | ш | ٥ | A | Ш |
| Approach Vol, veh/h | | 1277 | | | 1137 | | | 4 | | | 295 | |
| Approach Delay, síveh | | 7.0 | | | 4.8 | | | 59.5 | | | 58.7 | |
| Approach LOS | | A | | | A | | | ш | | | ш | |
| Timer - Assigned Phs | - | 2 | 3 | 4 | | 9 | | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 13.1 | 9.68 | 0.6 | 18.3 | | 102.7 | | 27.3 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 11.8 | 6.5 | 11.3 | | 14.8 | | 19.4 | | | | |
| Green Ext Time (p_c), s | 0.7 | 9.2 | 0.0 | 0.5 | | 8.4 | | 1.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 10 / | | | | | | | | | |
| 0.000 | | | 1.0 | | | | | | | | | |

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Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2020 Background PM

| → | SBT | ¢\$ | 0 | 0 | N A | 9 | | 9 | | 7.0 | 33.0 | 36.0 | 27.7% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 52.6 | 0.40 | 0.13 | 0.3 | 0:0 | 0.3 | Α | 4.1 | А | | | | | | | | Intersection LOS: C | ICU Level of Service B |
|----------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|
| ۶ | SBL | F | 14 | 14 | Perm | | 9 | 9 | | 7.0 | 33.0 | 36.0 | 27.7% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 52.6 | 0.40 | 0.03 | 28.5 | 0.0 | 28.5 | ပ | | | | | | reen | | | | ersection |) Level (|
| ← | NBT | 4 | 0 | 0 | NA | 2 | | 2 | | 7.0 | 33.0 | 36.0 | 27.7% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 52.6 | 0.40 | 0.00 | 0.0 | 0.0 | 0.0 | A | | | | | | Start of G | | | | in in | ᅙ |
| ţ | WBT | ₩. | 929 | 929 | NA | ∞ | | ∞ | | 15.0 | 28.0 | 74.0 | 26.9% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 20.7 | 0.39 | 0.77 | 38.2 | 0.0 | 38.2 | ۵ | 38.2 | ۵ | | | | 6:SBTL, | | | | | |
| † | EBT | ₩. | 988 | 988 | NA | 4 | | 4 | | 15.0 | 28.0 | 94.0 | 72.3% | 4.0 | 2.5 | 0.0 | 6.5 | | | None | 64.9 | 0.50 | 0.56 | 35.1 | 0.0 | 35.1 | ۵ | 34.7 | O | | | | JBTL and | | | | | |
| • | EBL | <u></u> | 82 | 82 | pm+pt | 7 | 4 | 7 | | 3.5 | 8.0 | 20.0 | 15.4% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 67.4 | 0.52 | 0.42 | 30.0 | 0.0 | 30.0 | S | | | | | | phase 2:N | | dinated | | .7 | on 60.3% |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | LOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | Natural Cycle: 70 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.77 | Intersection Signal Delay: 34.7 | Intersection Capacity Utilization 60.3% Analysis Period (min) 15 |



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Smoke Tree Resort 2020 Background PM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| Chebric Cheb | | 4 | † | ~ | > | ţ | √ | • | ← | • | ٠ | → | • |
|--|------------------------------|------|-------------|--------------|-------------|-------------|----------|------|----------|------|------|----------|------|
| No. | Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Bi Bi Bi 1 | Lane Configurations | F | ₩ | | F | ₩ | | | 4 | | F | 2, | |
| 85 886 | Traffic Volume (veh/h) | 82 | 988 | - | 0 | 929 | 25 | 0 | 0 | 2 | 14 | 0 | 93 |
| ach 100 1.00 1.00 1.00 1.00 1.00 1.00 1.00 | Future Volume (veh/h) | 82 | 988 | - | 0 | 929 | 25 | 0 | 0 | 2 | 14 | 0 | 93 |
| 100 100 100 100 100 100 100 100 100 100 | Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ach 100 100 100 100 100 100 100 100 100 10 | Ped-Bike Adj(A_pbT) | 1.00 | 1 | 1.00 | 1.00 | 1 | 1.00 | 1.00 | 1 | 0.1 | 1.00 | | 1.00 |
| ach 1870 1870 1870 1870 1870 1870 1870 1870 | Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 | Work Zone On Approach | 0 | 0 0 0 | 0 | 0 | 0 0 0 | 0 | 0 | 0 S | 0 | 0 | 0 N | 0 |
| 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| 6 90 090 090 090 090 090 090 090 090 090 | Adj Flow Rate, veh/h | 94 | 984 | - | 0 | 1032 | 58 | 0 | 0 | 5 | 91 | 0 | 103 |
| 6, 183 1554 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 0.90 | 0.00 | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | 06:0 | 0.90 | 0.00 | 0.90 | 0.90 |
| 183 1554 2 55 1230 33 0 0 0 756 730 1781 1872 1876 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0.10 0.85 0.85 0.00 0.35 0.35 0.00 0.00 0.048 0. | Cap, veh/h | 183 | 1554 | 2 | 22 | 1230 | 33 | 0 | 0 | 756 | 730 | 0 | 756 |
| 1781 3643 4 571 3534 96 0 0 1585 1415 Mn 1781 71870 505 0 519 541 0 0 1585 1415 4.3 11.2 11.2 0.0 35.0 35.0 0.0 0.0 1.0 1.0 1.0 1.0 0.0 0.0 0.0 0 | Arrive On Green | 0.10 | 0.85 | 0.85 | 0.00 | 0.35 | 0.35 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 |
| 94 480 505 0 519 541 0 0 2 16 173 177 1870 571 1777 1853 0 0 1585 1415 4.3 11.2 11.2 0.0 350 350 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0 0 | Sat Flow, veh/h | 1781 | 3643 | 4 | 571 | 3534 | 96 | 0 | 0 | 1585 | 1415 | 0 | 1585 |
| 1781 1777 1870 571 1777 1853 0 0 1585 1415 | Grp Volume(v), veh/h | 94 | 480 | 202 | 0 | 519 | 541 | 0 | 0 | 2 | 16 | 0 | 103 |
| O, s. 4.3 11.2 11.2 0.0 35.0 35.0 0.0 0.0 0.1 0.8 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.9 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1870 | 571 | 1777 | 1853 | 0 | 0 | 1585 | 1415 | 0 | 1585 |
| 4.3 11.2 11.2 0.0 35.0 35.0 0.0 1.00 1. | Q Serve(g_s), s | 4.3 | 11.2 | 11.2 | 0.0 | 35.0 | 35.0 | 0.0 | 0.0 | 0.1 | 0.8 | 0.0 | 4.7 |
| 1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,00 | Cycle Q Clear(g_c), s | 4.3 | 11.2 | 11.2 | 0.0 | 35.0 | 35.0 | 0.0 | 0.0 | 0.1 | 6.0 | 0.0 | 4.7 |
| 183 758 798 55 619 645 0 0 0 756 730 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.05 | 0.00 | | 1.00 | 1.00 | | 1.00 |
| 051 063 063 0.00 084 084 0.00 0.00 0.00 0.00 0.00 0 | Lane Grp Cap(c), veh/h | 183 | 758 | 798 | 22 | 619 | 645 | 0 | 0 | 756 | 730 | 0 | 756 |
| 317 1196 1258 153 923 962 0 0 756 730 200 200 200 100 1100 100 100 100 100 1 | V/C Ratio(X) | 0.51 | 0.63 | 0.63 | 0.00 | 0.84 | 0.84 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.14 |
| 200 200 100 100 100 100 100 100 100 100 | Avail Cap(c_a), veh/h | 317 | 1196 | 1258 | 153 | 923 | 962 | 0 | 0 | 756 | 730 | 0 | 756 |
| 286 6.3 6.0 300 100 000 000 100 100 C 286 6.3 6.0 390 390 00 00 178 180 C 2.1 08 08 00 45 43 00 00 00 178 180 C 00 00 00 00 00 00 00 00 00 00 00 00 00 | 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 |
| 28.6 6.3 6.3 0.0 390 390 0.0 0.0 17.8 18.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Upstream Filter(I) | 0.93 | 0.93 | 0.93 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| 2.1 0.8 0.8 0.0 4.5 4.3 0.0 0.0 0.0 0.1 1.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 | Uniform Delay (d), s/veh | 28.6 | 6.3 | 6.3 | 0.0 | 39.0 | 39.0 | 0:0 | 0.0 | 17.8 | 18.0 | 0.0 | 19.0 |
| 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Incr Delay (d2), s/veh | 2.1 | 0.8 | 0.8 | 0.0 | 4.5 | 4.3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.4 |
| 18 2.5 2.6 0.0 15.9 16.6 0.0 0.0 0.0 0.3 30.7 7.1 7.1 0.0 43.5 43.3 0.0 0.0 17.8 181 C A A A D D A A B B 1079 1060 2.2 2 4 6 7 8 6.0 6.2 0 68.0 10.2 51.8 6.0 6.5 6.0 40 6.5 2.1 13.2 6.7 6.3 37.0 0.0 8.2 0.6 0.1 8.3 25.7 C C C A A B B B B B B B B B B B B B B B B B B | Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 0.0 | 0:0 | 0.0 |
| 30.7 7.1 7.1 0.0 43.5 43.3 0.0 0.0 17.8 181 C A A A D D D A B B B 1079 1060 2 8 9.1 43.4 17.8 A B B B B 1 1060 2 8 C A A A B B B 1 1060 2 8 C A A B B B 1 1080 2 8 C A A B B B 1 1080 2 8 C A B B B 1 17.8 17.8 17.8 1 17.8 17.8 1 17.8 17.8 1 17.8 17.8 1 17.8 1 17.8 1 18.2 6.0 4.0 6.5 1 18.2 6.0 6.5 2 1 18.2 6.7 6.3 37.0 2 2 1 18.2 6.7 6.3 37.0 2 2 1 18.2 6.7 6.3 37.0 2 2 1 18.2 6.7 6.3 37.0 2 2 2 2 3 37.0 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 | %ile BackOfQ(50%),veh/ln | 0.0 | 2.5 | 5.6 | 0.0 | 15.9 | 16.6 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 1.8 |
| 30.7 7.1 7.1 0.0 43.5 43.3 0.0 0.0 17.8 18.1 C A A A B B B C O O O O O O O O O O O O O O O O | Unsig. Movement Delay, s/veh | | 1 | 1 | 0 | | | d | c | 1 | 1 | c | |
| C A A A D D A A B B B B 1079 1060 2 2 8 8 8 8 9 9 1 8 9 9 1 8 9 9 9 9 9 9 9 9 | LnGrp Delay(d),s/ven | 30.7 | Γ., | F. « | 0.0 | 43.5 | 43.3 | 0.0 | 0.0 | 8./ | | 0.0 | 19.4 |
| 10/9 1060 2 4 A D B B 2 4 6 7 8 68.0 62.0 68.0 10.2 51.8 6.0 6.5 6.0 4.0 6.5 30.0 87.5 30.0 16.0 6.7.5 2.1 13.2 6.7 6.3 37.0 0.0 8.2 0.6 0.1 8.3 | LNGrp LOS | د | V S | ⋖ | ⋖ | ٦ | اد | ⋖ | Α (| 20 | 20 | V, | 2 |
| 9.1 43.4 17.8 A | Approach Vol, veh/h | | 1079 | | | 1060 | | | 2 | | | 119 | |
| A D B B 2 4 6 7 8 68.0 62.0 68.0 10.2 518 6.0 6.5 6.0 4.0 6.5 30.0 87.5 30.0 16.0 67.5 0.0 8.2 0.6 0.1 8.3 25.7 C. | Approach Delay, sweh | | 9.1 | | | 43.4 | | | 17.8 | | | 19.2 | |
| 25.7 25.7 2.1 25.7 2.1 25.7 2.2 2.3 25.7 25.7 25.7 26.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 | Approach LOS | | ⋖ | | | ٥ | | | œ | | | B | |
| 68.0 62.0 68.0 10.2 E 6.0 65 60 4.0 30.0 87.5 30.0 16.0 6 2.1 13.2 6.7 6.3 5 0.0 8.2 0.6 0.1 | Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | ∞ | | | | |
| 6.0 6.5 6.0 4.0 3.0 87.5 6.0 4.0 2.1 13.2 6.7 6.3 3 0.0 8.2 0.6 0.1 25.7 | Phs Duration (G+Y+Rc), s | | 0.89 | | 62.0 | | 0.89 | 10.2 | 51.8 | | | | |
| 30.0 87.5 30.0 16.0 2.1 13.2 6.7 6.3 0.0 8.2 0.6 0.1 25.7 | Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| 2.1 13.2 6.7 6.3 0.0 8.2 0.6 0.1 25.7 C | Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.5 | | | | |
| e (p_c), s 0.0 8.2 0.6 0.1 nimany 25.7 Delay C. | Max Q Clear Time (g_c+I1), s | | 2.1 | | 13.2 | | 6.7 | 6.3 | 37.0 | | | | |
| ımmary Jelay | Green Ext Time (p_c), s | | 0.0 | | 8.2 | | 9.0 | 0.1 | 8.3 | | | | |
| Delay | Intersection Summary | | | | | | | | | | | | |
| | HCM 6th Ctrl Delay | | | 25.7 | | | | | | | | | |
| | HCM 6th LOS | | | U | | | | | | | | | |

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Intersection Int Delay, s/veh

- None

Lane Configurations 4.6.
Traffic Vol, vehh 902
Conflicting Peds, #hr 0
Sign Conford
R T Chamelized - No
Storage Leight - No
Veh in Medan Storage, # 0
Grade, % 0
Peak Hour Factor 90
Heavy Vehicles, % 2
Mwmt Flow

Major1

Major/Minor M
Conflicting Flow All
Stage 1
Stage 2
Critical Howy
Critical Howy Sig 1
Critical Howy Sig 2
Critical Howy Sig 2
Critical Howy Poly
Pol Cap-1 Maneuver

3: Smole Tree West & Lincoln Dr HCM 6th TWSC

530 - 6.84 6.94 - 5.84 - 5.84 - 3.52 3.32 - 107 5T - 315 - 555 0 2 9 515 502 WBL WBT 107 227 315 555 0 0 0 0 0 0 0 Minor1 0 1533 - 1003 NB 0 A 2 2 0 1059 EBR 0 % - 4.14 Major2 0 1003 2.22 06 989 WB NBLn1 EBT

EB 0

Approach HCM Control Delay, s HCM LOS

Slage 1 Slage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Slage 1 Slage 2

Minor LaneMajor Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) HCM Lane LOS HCM Lane LOS

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4: Smoke Tree East & Lincoln Dr HCM 6th TWSC

| Int Delay, s/veh | 0 | | i l | | l | | |
|--------------------------|--------|--------------|--------|------|---------|------|--|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | ~ |
| Lane Configurations | ₽ | | F | ‡ | > | | |
| Traffic Vol, veh/h | 901 | - | 2 | 953 | 7 | 2 | 2 |
| Future Vol, veh/h | 901 | - | 2 | 953 | 2 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | C |
| | Free | Free | Free | Free | Stop | Stop | α. |
| RT Channelized | | None | | None | | None | n |
| Storage Length | | ٠ | 22 | ٠ | 0 | ľ | |
| Veh in Median Storage, # | 0 # | 1 | | 0 | 0 | 1 | |
| Grade, % | 0 | ٠ | ' | 0 | 0 | ľ | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 8 | C |
| Heavy Vehicles, % | 7 | 2 | 7 | 2 | 7 | 2 | 2 |
| Mvmt Flow | 1001 | | 2 | 1059 | 2 | 2 | 2 |
| | | | | | | | |
| Major/Minor Ma | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 0 1002 | 0 | 0 1536 | 501 | |
| Stage 1 | | ٠ | 1 | ٠ | 1002 | ľ | |
| Stage 2 | 1 | • | ' | ' | 534 | ľ | |
| Critical Hdwy | | | 4.14 | | 6.84 | 6.94 | 4 |
| Critical Hdwy Stg 1 | 1 | • | ľ | • | 5.84 | ľ | |
| Critical Hdwy Stg 2 | | | | | 5.84 | ľ | |
| Follow-up Hdwv | | ľ | 2.22 | ľ | 3.52 | 3.32 | 2 |
| Pot Cap-1 Maneuver | | | 687 | ٠ | 107 | 515 | |
| Stane 1 | | ľ | ' | ľ | 316 | , | |
| Stane 2 | | | | | 552 | | |
| Platoon blocked % | ľ | | | ľ | 700 | | |
| May Can 1 Managara | | | 497 | | 107 | 7 | LE |
| Mov Cap-1 Maireuvel | | | 100 | | 107 | 5 | , and the second se |
| Mov Cap-2 Maneuver | ٠ | ١ | ۱ | ١ | 177 | | |
| Stage 1 | | | • | • | 315 | | |
| Stage 2 | • | • | • | • | 222 | | |
| | | | | | | | |
| Approach | EB | | WB | | BB | | |
| HCM Control Delay, s | 0 | | 0 | | 16.6 | | |
| HCM LOS | | | | | ပ | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | ~ | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 315 | | • | 189 | | |
| HCM Lane V/C Ratio | | 0.014 | | | - 0.003 | ľ | |
| HCM Control Delay (s) | | 16.6 | • | • | 10.3 | | |
| HCM Lane LOS | | U | , | , | В | ľ | |
| | | | | | | | |

5: Lincoln Medical West & Lincoln Dr

EBT 918 0.2

Int Delay, s/veh

6: Lincoln Medical East & Lincoln Dr

| Intersection | | | | | | | |
|------------------------|--------|----------|--------|------|--------|------|--|
| nt Delay, s/veh | 0.7 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | r | ‡ | > | | |
| Traffic Vol, veh/h | 968 | 7 | 21 | 925 | 30 | 26 | |
| Future Vol, veh/h | 968 | 7 | 21 | 925 | 30 | 79 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | | None | 1 | None | | None | |
| Storage Length | ٠ | ٠ | 25 | ٠ | 0 | ٠ | |
| Veh in Median Storage, | ## | 1 | 1 | 0 | 0 | 1 | |
| Grade, % | 0 | • | | 0 | 0 | • | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 8 | 8 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Vivmt Flow | 966 | ∞ | 23 | 1028 | 33 | 53 | |
| Major/Minor M | Major1 | 2 | Major2 | 2 | Minor1 | | |
| low All | 0 | 0 | 0 1004 | 0 | 0 1560 | 502 | |
| Stage 1 | ٠ | ٠ | | ٠ | 1000 | | |
| Stage 2 | ٠ | | ' | | 260 | | |
| Critical Hdwy | ٠ | | 4.14 | ٠ | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | ٠ | | ٠ | 5.84 | ٠ | |
| Critical Hdwy Stg 2 | ٠ | • | 1 | • | 5.84 | | |
| Follow-up Hdwy | ٠ | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | ì | 1 | 989 | 1 | 103 | 515 | |
| Stage 1 | ٠ | • | • | ٠ | 317 | • | |
| Stage 2 | ٠ | 1 | 1 | 1 | 535 | 1 | |
| Platoon blocked, % | ٠ | • | | ٠ | | | |
| Mov Cap-1 Maneuver | ٠ | • | 989 | • | 66 | 515 | |
| Mov Cap-2 Maneuver | ٠ | • | • | ٠ | 216 | • | |
| Stage 1 | | 1 | 1 | | 306 | | |
| Stage 2 | ٠ | ٠ | • | ٠ | 535 | ٠ | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.2 | | 20.4 | | |
| HCM LOS | | | | | U | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 296 | 1 | • | 989 | 1 | |
| HCM Lane V/C Ratio | | 0.21 | • | ٠ | 0.034 | • | |
| HCM Control Delay (s) | | 20.4 | 1 | • | 10.4 | • | |
| HCM Lane LOS | | (| | | | | |
| | | ر | | | Ω | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR | 3 |
|--------------------------|--------|--------|--------|------|--------|------|-----|
| Lane Configurations | ₹ | | F | \$ | >- | | |
| Traffic Vol, veh/h | 918 | 4 | 0 | 945 | 2 | 30 | 0 |
| Future Vol, veh/h | 918 | 4 | 0 | 945 | 7 | 8 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop | a |
| RT Channelized | - | None | ٠ | None | ٠ | None | . Ф |
| Storage Length | ٠ | ٠ | 22 | ٠ | 0 | ľ | |
| Veh in Median Storage, # | 0 # | 1 | 1 | 0 | 0 | ľ | |
| Grade, % | 0 | ٠ | | 0 | 0 | ľ | |
| Peak Hour Factor | 06 | 06 | 8 | 06 | 8 | 8 | 0 |
| Heavy Vehicles, % | 2 | 7 | 7 | 7 | 2 | 7 | 2 |
| Mvmt Flow | 1020 | 4 | 0 | 1050 | 2 | 33 | 3 |
| | | | | | | | |
| Major/Minor M | Major1 | ≥ | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1024 | 0 | 1547 | 512 | 2 |
| Stage 1 | ٠ | ٠ | ٠ | ٠ | 1022 | · | |
| Stage 2 | ٠ | ٠ | ٠ | ٠ | 525 | ľ | |
| Critical Hdwy | ٠ | ٠ | 4.14 | ٠ | 6.84 | 6.94 | 4 |
| Critical Hdwy Stg 1 | ٠ | ٠ | ٠ | ٠ | 5.84 | ľ | |
| Critical Hdwy Stg 2 | ÷ | ٠ | ٠ | ٠ | 5.84 | Ċ | |
| Follow-up Hdwy | ٠ | ٠ | 2.22 | ٠ | 3.52 | 3.32 | 2 |
| Pot Cap-1 Maneuver | ٠ | ٠ | 674 | ٠ | 105 | 507 | 7 |
| Stage 1 | ٠ | ٠ | • | • | 308 | | |
| Stage 2 | • | 1 | 1 | 1 | 228 | Ċ | |
| Platoon blocked, % | • | , | | , | | | |
| Mov Cap-1 Maneuver | ì | 1 | 674 | 1 | 105 | 507 | 7 |
| Mov Cap-2 Maneuver | ٠ | ٠ | • | ٠ | 224 | | |
| Stage 1 | ŕ | 1 | 1 | 1 | 308 | | |
| Stage 2 | ٠ | ٠ | ٠ | ٠ | 228 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 13.3 | | |
| HCM LOS | | | | | Ω | | |
| Minor Lane/Major Mvmt | | NBI n1 | FRT | FRR | WBI | WRT | |
| Capacity (veh/h) | | 470 | | | | | |
| HCM Lane V/C Ratio | | 9.000 | ŀ | ľ | | ľ | |
| HCM Control Delay (s) | | 13.3 | ٠ | | 0 | · | |
| HCM Lane LOS | | В | | | ⋖ | ľ | |
| HCM 95th %tile Q(veh) | | 0.2 | ٠ | ٠ | 0 | · | |
| | | | | | | | |

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Synchro 10 Report Page 7

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7: Apartment Drwy & Lincoln Dr HCM 6th TWSC

Smoke Tree Resort 2020 Background PM

nt Delay, s/veh

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

Stop

Stop 0

Stop

Free

55 55 0 Free None

Lane Configurations Traffic Vol. vehh 11
Frutine Vol. vehh 11
Conflicting Pees, #/hr 0
Sign Control
Sign Control
Storage Length 25
Veh in Median Storage, # Grade, % Peak Hour Factor 90
Heavy Vehicles, % 2
Mmit Flow 12

880 880 0 Free

0 O Stop

92 92 0 Stop

847 847 63 63 0 Free 8

0 7 0

90 2 102 . 0 0 8 4 -

2 2 1

61 2 90

0 0 90 2 2 941

6.94

Minor2 1600 1086 514 7.54 6.54 6.54 3.52 71 231

2123 11033 11090 6.54 5.54 4.02 49 308 289

2.22

2.22

Majorfulinor Mal
Conflicting Flow All
Stage 1
Stage 1
Stage 2
Critical Hdwy Stg 1
Critical Hdwy Stg 1
Critical Hdwy 2
Fortown Hdwy 2
Fortown

6.94

- 4.14

3.32

. 0

3.32

536

501

999

719

50 50 227 398

43 43 303 259

59 245 395

S 8 3 3 €

NB 33.7

WB 0.8

0.1

Approach HCM Control Delay, s HCM LOS

475

520

Major2 1039

0

0

Major1 950

| 2020 Background PM | 요 고 | | | | | | | | | | | | HCM 6th 1WSC |
|---------------------------------|----------|-------|-------|--------|----------|------|--------|-----------------|---------------|--------|------|------|--------------|
| acito conclui | | | | | | | | | | | | | |
| Intersection Int Delay skieh | 13.1 | | | | | | | | | | | | |
| Movement | <u> </u> | FRT | EBD | IMM | WRT | WBD | IBN | MRT | MBD | as | CRT | CBD | |
| Lane Configurations | , k | 4 | Ę | * | 4 | Š | 305 | 4 | | - A | 5 | ¥. | |
| Traffic Vol, veh/h | _ | 886 | 42 | 9 | 849 | 6 | 89 | c | 49 | _ | 0 | 35 | |
| Future Vol, veh/h | 7 | 988 | 42 | 9 | 849 | 6 | 89 | co | 49 | 7 | 0 | 35 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | |
| RT Channelized | 1 | 1 | None | 1 | 1 | None | | | None | | | None | |
| Storage Length | 22 | 1 | ٠ | 22 | 1 | ٠ | | | | 0 | | 0 | |
| Veh in Median Storage, | * | 0 | • | • | 0 | • | • | 0 | • | • | 0 | · | |
| Grade, % | ٠ | 0 | ٠ | | 0 | ٠ | ' | 0 | | • | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 7 | 7 | 2 | 7 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 2 | |
| Mvmt Flow | 00 | 984 | 47 | 7 | 943 | 10 | 16 | 3 | 24 | ∞ | 0 | 39 | |
| | | | | | | | | | | | | | |
| Major/Minor Ma | Major1 | | 2 | Major2 | | 2 | Minor1 | | _ | Minor2 | | | |
| Conflicting Flow All | 953 | 0 | 0 | 1031 | 0 | 0 | 1510 | 1991 | 516 | 1472 | ١. | 477 | |
| Stage 1 | ٠ | | | | | | 1024 | 1024 | | 962 | | · | |
| Stage 2 | | | • | | | • | 486 | 296 | | 210 | | | |
| Critical Hdwy | 4.14 | • | • | 4.14 | • | • | 7.54 | 6.54 | 6.94 | 7.54 | ٠ | 6.94 | |
| Critical Hdwy Stg 1 | • | • | • | • | • | • | 6.54 | 5.54 | • | 6.54 | • | | |
| Critical Hdwy Stg 2 | 1 | 1 | 1 | 1 | 1 | 1 | 6.54 | 5.54 | 1 | 6.54 | 1 | | |
| Follow-up Hdwy | 2.22 | • | • | 2.22 | • | • | 3.52 | 4.02 | 3.32 | 3.52 | ٠ | 3.32 | |
| Pot Cap-1 Maneuver | 717 | | • | 920 | | • | 83 | 9 | 204 | 88 | 0 | 534 | |
| Stage 1 | • | | • | • | | • | 252 | 311 | • | 275 | 0 | | |
| Stage 2 | • | | ٠ | 1 | | ٠ | 531 | 331 | 1 | 514 | 0 | | |
| Platoon blocked, % | | • | ٠ | | • | ٠ | | | | | | | |
| Mov Cap-1 Maneuver | 717 | 1 | • | 929 | 1 | • | 16 | 26 | 204 | 74 | • | 534 | |
| Mov Cap-2 Maneuver | ٠ | • | ٠ | • | • | ٠ | 9/ | 26 | • | 74 | ٠ | | |
| Stage 1 | 1 | 1 | 1 | 1 | 1 | 1 | 249 | 308 | 1 | 272 | 1 | í | |
| Stage 2 | ٠ | • | ٠ | ٠ | • | ٠ | 487 | 328 | ٠ | 448 | ٠ | | |
| | | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 0.1 | | | 0.1 | | | 204.9 | | | 20.1 | | | |
| HCM LOS | | | | | | | ш | | | ပ | | | |
| | | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR SBLn1 SBLn2 | 3BLn1S | 3BLn2 | | | |
| Capacity (veh/h) | | 115 | 717 | | | 670 | | | 74 | 534 | | | |
| HCM Lane V/C Ratio | | 1.159 | 0.011 | • | • | 0.01 | • | • | - 0.105 0.073 | 0.073 | | | |
| HCM Control Delay (s) | | 204.9 | 10.1 | | | 10.4 | | | 59.3 | 12.3 | | | |
| HOIM LAIR LOS | | _ | ۵ | • | | ۵ | • | • | _ | ۵ | | | |

| | Ì | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|----------------------|---------|---------|---------------|----------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | 477 | | | 6.94 | | | 3.32 | 534 | | ì | | 534 | | | | | | | | | | | | |
| | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | 0 | 0 | 0 | | ٠ | • | ٠ | ٠ | | | | | | | | | |
| Minor2 | 1472 | 362 | 510 | 7.54 | 6.54 | 6.54 | 3.52 | 88 | 275 | 514 | | 74 | 74 | 272 | 448 | SB | 20.1 | ပ | 3BLn2 | 534 | 0.073 | 12.3 | В | 0.2 |
| 2 | 516 | ٠ | ٠ | 6.94 | ٠ | ٠ | 3.32 | 204 | | ٠ | | 204 | • | ٠ | ٠ | | | | WBR SBLn1 SBLn2 | 74 | 0.105 0.073 | 59.3 | ш | 0.3 |
| | 1991 | 1024 | 196 | 6.54 | 5.54 | 5.54 | 4.02 | 9 | 311 | 331 | | 26 | 26 | 308 | 328 | | | | WBR S | • | , | ٠ | • | 1 |
| Minor1 | 1510 | 1024 | 486 | 7.54 | 6.54 | 6.54 | 3.52 | 83 | 252 | 531 | | 9/ | 76 | 249 | 487 | NB | 204.9 | ш | WBT | • | • | ٠ | • | 1 |
| 2 | 0 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | | ٠ | ٠ | ٠ | • | ٠ | ٠ | | | | WBL | 0/9 | 0.01 | 10.4 | В | 0 |
| | 0 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | | ٠ | ٠ | ٠ | • | ٠ | ٠ | | | | EBR | • | • | ٠ | 1 | • |
| Major2 | 1031 | ٠ | ٠ | 4.14 | ٠ | ٠ | 2.22 | 0.79 | | ٠ | | 079 | • | ٠ | ٠ | WB | 0.1 | | EBT | • | • | ٠ | • | 1 |
| 2 | 0 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | | ٠ | ٠ | ٠ | • | ٠ | ٠ | | | | EBL | 717 | 0.011 | 10.1 | В | 0 |
| | 0 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | | ٠ | ٠ | ٠ | • | ٠ | ٠ | | | | NBLn1 | 115 | 1.159 0.011 | 204.9 | ш | 8.3 |
| Major1 | 953 | | ٠ | 4.14 | ٠ | | 2.22 | 717 | | • | | 711 | • | | ٠ | EB | 0.1 | | | | | | | |
| Major/Minor M | Conflicting Flow All | Stage 1 | Stage 2 | Critical Howy | Critical Holwy Stg 1 | Critical Howy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

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. 50 536 . 0.089 0.015 . 83.9 11.8 . F F B . 0.3 0

- 665 - 0.105 - 11 - B - B

NBLn1 EBL 241 719 0.493 0.017 33.7 10.1 D B 2.5 0.1

Minor Lane/Major Mvmt
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s)
HCM Lane LOS
HCM Lane LOS
HCM 95th %tile Q(veh)

WBT

WBL

EBR

EBT

NBLn1

9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2020 Background PM

| Lane Group EBI EBI EBI MBI MBI NBI NBI SBI |) | 1 | † | ^ | \ • | ↓ | • | - | • | - | • | |
|--|-----------------------------------|----------|----------|-------------|----------|--------------|-----------|--------|-------|-------|-------|--|
| rations | 2000 | 5 | Fal | | . Idw | TOW | - [| - FOIN | - | - FOS | 000 | |
| rations | Lane Group | EBL | EBI | FBK | WBL | WBI | NBL | NBI | SBL | SBI | SBK | |
| e (vph) 510 56 431 56 62 411 1624 61 1569 e (vph) 510 56 431 56 62 411 1624 61 1569 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 4 4 5 8 8 5 2 1 6 sses 5 130 130 130 130 130 130 130 150 100 50 100 t(s) 300 300 300 130 130 130 130 160 150 100 t(s) 300 300 300 130 130 130 130 160 100 t(s) 15 15 15 20 20 15 10 10 10 10 10 10 10 10 10 10 10 10 10 | Lane Configurations | F | ŧ | ¥ | J | * | F | 4 | F | ## | ¥C | |
| e (vph) 510 56 431 56 62 411 1624 61 1569 sess 4 4 5 8 8 5 2 1 6 sess 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 4 4 4 5 8 8 5 2 1 6 see 1 20 300 300 300 300 130 130 130 130 167 110 160 see 1 23.1% 23.1% 130 130 130 130 167 110 160 see 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Traffic Volume (vph) | 510 | 26 | 431 | 26 | 62 | 411 | 1624 | 61 | 1569 | 486 | |
| Split NA pm+ov Split NA Prof N | Future Volume (vph) | 510 | 26 | 431 | 26 | 62 | 411 | 1624 | 61 | 1569 | 486 | |
| sses 4 4 5 8 8 5 2 1 6 6 sees 4 4 5 8 8 5 2 1 6 6 sees 4 4 5 8 8 5 2 1 6 6 sees 4 4 4 5 8 8 5 2 1 6 6 sees 4 4 4 5 8 8 5 2 1 6 6 sees 4 4 4 5 8 8 5 2 1 1 6 6 sees 4 4 4 5 8 8 8 5 2 1 1 6 6 sees 4 4 4 5 8 8 8 5 2 1 1 6 6 sees 6 sees 4 4 4 5 8 8 8 5 2 1 1 6 6 sees 6 sees 4 4 4 5 8 8 8 5 2 1 1 6 6 sees 6 | Turn Type | Split | Ν | vo+mq | Split | NA | Prot | Ν | Prot | NA | hm+ov | |
| ses 4 4 4 5 8 8 5 2 1 6 6 al | Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | - | 9 | 4 | |
| 15 15 15 15 15 15 15 15 | Permitted Phases | | | 4 | | | | | | | 9 | |
| 1,000 1,00 | Detector Phase | 4 | 4 | 2 | ∞ | ∞ | വ | 2 | - | 9 | 4 | |
| 1,0 | Switch Phase | | | | | | | | | | | |
| (k) 130 130 130 130 130 140 150 140 150 130 130 130 130 130 130 130 130 130 13 | Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| 300 300 300 130 130 300 730 140 57.0 5) 231% 231% 231% 100% 100% 231% 56.2% 108% 438% 2) (s) 15 15 15 20 20 115 10 2.0 1.0 Just (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Just (s) 25 55 55 56 56 56 55 57 53 57 Annual (s) 245 445 477 73 71 212 704 79 54.6 Annual (s) 245 245 457 73 71 212 704 79 54.6 Annual (s) 245 245 457 75 73 71 212 704 79 54.6 Annual (s) 245 245 457 75 73 71 212 704 79 54.6 Annual (s) 245 245 457 75 75 75 75 75 85.4 37.6 Annual (s) 245 245 245 45 75 75 75 75 75 85.4 37.6 Annual (s) 245 245 245 25 76 25 | Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| 331% 231% 231% 100% 100% 231% 56.2% 108% 438% 25 40 4.7 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 | Total Split (s) | 30.0 | 30.0 | 30.0 | 13.0 | 13.0 | 30.0 | 73.0 | 14.0 | 57.0 | 30.0 | |
| S | Total Split (%) | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% | |
| (s) 1.5 1.5 1.5 2.0 2.0 1.5 1.0 2.0 1.0 lost(s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0. | Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| Just (s) 0.0 | All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Initize? None None None None None None None None | Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Intige? None None None None None None None None | Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Itinize? None None None None None None None C-Max Parl(s) 245 45 73 73 73 73 73 73 75 75 64 75 64 67 67 64 67 67 64 67 67 64 67 67 64 67 67 64 67 67 67 67 67 67 67 67 67 67 67 67 67 | Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| None None None None None None None None None C-Max None None None None None None C-Max None | Lead-Lag Optimize? | | | | | | | | | | | |
| Ratio 0.99 (245 45.7 73 73 712 704 79 54.6 Ratio 0.19 0.19 0.35 0.06 0.06 0.16 0.54 0.06 0.17 0.04 0.05 0.09 0.99 0.89 0.89 0.06 0.06 0.01 0.06 0.04 0.02 0.09 0.99 0.89 0.89 0.89 0.89 0.89 0.89 | Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Ratio 0.19 0.19 0.35 0.06 0.06 0.16 0.54 0.06 0.42 0.09 0.99 0.99 0.99 0.98 0.68 0.68 0.64 0.82 0.09 0.09 0.09 0.08 0.68 0.08 0.06 0.00 0.00 0.00 0.00 | Act Effct Green (s) | 24.5 | 24.5 | 45.7 | 7.3 | 7.3 | 21.2 | 70.4 | 7.9 | 54.6 | 84.8 | |
| 1007 1006 330 688 088 088 084 088 088 089 08 | Actuated g/C Ratio | 0.19 | 0.19 | 0.35 | 90:0 | 90:0 | 0.16 | 0.54 | 90.0 | 0.42 | 0.65 | |
| 1001 1006 330 868 379 646 237 854 376 1001 1006 330 868 379 646 237 854 376 1001 1006 330 868 379 646 237 854 376 101 1006 330 88 379 646 237 854 376 101 1006 530 88 379 646 27 854 376 102 F F C F D E C F D C F D E C C F D C C C C C C C C C C C C C C C C | v/c Ratio | 0.99 | 0.99 | 0.80 | 0.63 | 0.58 | 0.82 | 0.68 | 0.64 | 0.82 | 0.50 | |
| 1001 1006 330 806 807 908 90 | Control Delay | 100.1 | 100.6 | 33.0 | 8.98 | 37.9 | 64.6 | 23.7 | 85.4 | 37.6 | 11.3 | |
| 868 37.9 64.6 23.7 85.4 37.6 F D E C F D C C D C C D C C D C C C D C C C D C C C D C C C D C C C C D C | Oueue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| F D E C F D 52.2 31.8 33.0 C C C C Intersection LOS: D | Total Delay | 100.1 | 100.6 | 33.0 | 8.98 | 37.9 | 9.49 | 23.7 | 85.4 | 37.6 | 11.3 | |
| 52.2 31.8 D C C Intersection LOS: D | ros | ш | ш | S | ш | ۵ | ш | ပ | ш | ٥ | В | |
| | Approach Delay | | 71.2 | | | 52.2 | | 31.8 | | 33.0 | | |
| | Approach LOS | | Ш | | | D | | ပ | | O | | |
| | Intersection Summary | | | | | | | | | | | |
| | Cycle Length: 130 | | | | | | | | | | | |
| | Actuated Cycle Length: 130 | | | | | | | | | | | |
| | Offset: 0 (0%). Referenced to | phase 6: | SBT, Sta | rt of Greel | _ | | | | | | | |
| | Natural Cycle: 90 | | | | | | | | | | | |
| - % | Control Type: Actuated-Coord | linated | | | | | | | | | | |
| . 40.3 zation 82.1% | Maximum v/c Ratio: 0.99 | | | | | | | | | | | |
| | Intersection Signal Delay: 40. | 3 | | | Ξ | ersection | LOS: D | | | | | |
| Analysis Period (min) 15 | Intersection Capacity Utilization | on 82.1% | | | ೦ | U Level o | f Service | ш | | | | |
| | Analysis Period (min) 15 | | | | | | | | | | | |

₹ Splits and Phases: 9: Scottsdale Rd & Lincoln Dr ▼ Ø6 (R) \$Ø **₹**

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Smoke Tree Resort 2020 Background PM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | 4 | † | / | > | ţ | 4 | • | • | • | ٠ | → | • |
|------------------------------|-------|--------|------|-------------|------|-------|------|-------------|--------|------|----------|------|
| Movement | EBI | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | 4 | ĸ | K | 4 | | K | 441 | | k | *** | × |
| Traffic Volume (veh/h) | 510 | 26 | 431 | 26 | 62 | 72 | 411 | 1624 | 45 | 61 | 1569 | 486 |
| Future Volume (veh/h) | 510 | 26 | 431 | 26 | 62 | 72 | 411 | 1624 | 45 | 19 | 1569 | 486 |
| 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 | 0 | 0 2 | 0 | 0 | oN s | 0 | 0 | 0N 5 | 0 10 1 | 0 | 9 S | 0 |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Kate, ven/h | 119 | 0 | 4/9 | 79 | 69 | 08 | 45/ | 1804 | 20 | 89 | 1/43 | 540 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 06:0 | 0.90 | 06:0 | 0.90 | 06:0 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 671 | 0 | 535 | 101 | 101 | 06 | 515 | 2537 | 70 | 87 | 2015 | 924 |
| Arrive On Green | 90:0 | 0.00 | 90.0 | 90.0 | 90.0 | 90.0 | 0.15 | 0.50 | 0.50 | 0.05 | 0.39 | 0.39 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5107 | 141 | 1781 | 2106 | 1585 |
| Grp Volume(v), veh/h | 611 | 0 | 479 | 62 | 69 | 80 | 457 | 1202 | 652 | 89 | 1743 | 540 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1845 | 1781 | 1702 | 1585 |
| O Serve(g_s), s | 22.2 | 0.0 | 24.5 | 4.4 | 2.0 | 6.5 | 16.9 | 35.7 | 35.8 | 4.9 | 40.8 | 28.0 |
| Cycle Q Clear(g_c), s | 22.2 | 0.0 | 24.5 | 4.4 | 2.0 | 6.5 | 16.9 | 35.7 | 35.8 | 4.9 | 40.8 | 28.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 671 | 0 | 535 | 101 | 101 | 06 | 515 | 1691 | 916 | 87 | 2015 | 924 |
| V/C Ratio(X) | 0.91 | 0.00 | 0.00 | 0.61 | 89.0 | 0.89 | 0.89 | 0.71 | 0.71 | 0.78 | 0.87 | 0.58 |
| Avail Cap(c_a), veh/h | 671 | 0 | 535 | 101 | 101 | 06 | 651 | 1762 | 955 | 119 | 2015 | 924 |
| HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 59.9 | 0.0 | 46.1 | 59.9 | 60.1 | 60.9 | 54.2 | 25.5 | 25.5 | 61.2 | 36.2 | 17.1 |
| Incr Delay (d2), s/veh | 16.2 | 0.0 | 17.0 | 7.6 | 14.4 | 57.9 | 10.3 | | 2.0 | 13.9 | 5.3 | 2.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 0:0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.2 | 0.0 | 16.7 | 2.2 | 5.6 | 4.1 | 8.1 | 14.5 | 15.9 | 5.6 | 17.7 | 16.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.97 | 0.0 | 63.1 | 67.5 | 74.6 | 118.8 | 64.5 | 26.5 | 27.5 | 75.1 | 41.4 | 19.8 |
| LnGrp LOS | ш | ⋖ | ш | ш | ш | ш | ш | ပ | ပ | ш | | m |
| Approach Vol, veh/h | | 0601 | | | 71.1 | | | 2311 | | | 7351 | |
| Approach Delay, sweh | | 70.4 | | | 89.3 | | | 34.3 | | | 37.4 | |
| Approach LOS | | ш | | | _ | | | د | | | | |
| Timer - Assigned Phs | _ | 2 | | 4 | 2 | 9 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.6 | 70.3 | | 30.0 | 24.9 | 57.0 | | 13.0 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.9 | | | | |
| Max Green Setting (Gmax), s | * 8.7 | 67.3 | | 24.5 | 24.5 | 51.3 | | 7.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.9 | 37.8 | | 26.5 | 18.9 | 42.8 | | 8.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.9 | | 0.0 | 0.5 | 2.5 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 44.1 | | | | | | | | | |
| HCM 6th LOS | | | ۵ | | | | | | | | | |
| | | | | | | | | | | | | |

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the larnes for furning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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Smoke Tree Resort 1: Mockingbird Ln & Lincoln Drive 2020 Total AM

| | 4 | † | > | ţ | • | ← | ۶ | → | |
|---|----------|---------|-------------|------------|---|------------|-------|----------|--|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | |
| Lane Configurations | * | ₩. | je- | ₩. | <u>, , , , , , , , , , , , , , , , , , , </u> | æ. | F | æ | |
| Traffic Volume (vph) | 222 | 981 | 24 | 868 | 2 | 34 | 78 | 88 | |
| Future Volume (vph) | 222 | 981 | 24 | 868 | 2 | 34 | 78 | 88 | |
| Turn Type | pm+pt | NA | Perm | NA | Perm | NA | pm+pt | NA | |
| Protected Phases | - | 9 | | 2 | | 4 | m | 00 | |
| Permitted Phases | 9 | | 2 | | 4 | | ∞ | | |
| Detector Phase | - | 9 | 2 | 2 | 4 | 4 | က | ∞ | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 3.5 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 3.5 | 7.0 | |
| Minimum Split (s) | 8.0 | 27.0 | 27.0 | 27.0 | 33.5 | 33.5 | 8.0 | 33.5 | |
| Total Split (s) | 27.0 | 77.0 | 20.0 | 20.0 | 44.0 | 44.0 | 0.6 | 53.0 | |
| Total Split (%) | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | %6.9 | 40.8% | |
| Yellow Time (s) | 3.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 1.0 | 2.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 0.9 | 0.9 | 0.9 | 6.5 | 6.5 | 4.0 | 6.5 | |
| Lead/Lag | Lead | | Lag | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | C-Max | C-Max | C-Max | None | None | None | None | |
| Act Effct Green (s) | 93.3 | 91.3 | 70.1 | 70.1 | 17.4 | 17.4 | 28.7 | 26.2 | |
| Actuated g/C Ratio | 0.72 | 0.70 | 0.54 | 0.54 | 0.13 | 0.13 | 0.22 | 0.20 | |
| v/c Ratio | 0.58 | 0.45 | 0.11 | 0.55 | 0.08 | 0.25 | 0.32 | 0.84 | |
| Control Delay | 13.3 | 10.2 | 18.5 | 25.6 | 46.2 | 31.3 | 42.1 | 50.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 13.3 | 10.2 | 18.5 | 25.6 | 46.2 | 31.3 | 42.1 | 50.2 | |
| TOS | В | В | В | S | ۵ | S | ۵ | ۵ | |
| Approach Delay | | 10.7 | | 25.4 | | 32.6 | | 48.6 | |
| Approach LOS | | В | | O | | O | | O | |
| Intersection Summary | | | | | | | | | |
| Cycle Length: 130 | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | phase 2: | WBTL an | d 6:EBTL | , Start of | Green | | | | |
| Natural Cycle: 90 | | | | | | | | | |
| Control Type: Actuated-Coordinated | dinated | | | | | | | | |
| Maximum v/c Ratio: 0.84 | | | | | | | | | |
| Intersection Signal Delay: 22.3 | c, | | | ⊑ | Intersection LOS: C | LOS: C | | | |
| Intersection Capacity Utilization 74.9% | on 74.9% | | | 2 | CU Level of Service D | of Service | _ | | |
| Analysis Period (min) 15 | | | | | | | | | |

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Synchro 10 Report Page 1

Smoke Tree Resort 2020 Total AM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

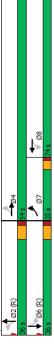
| | 1 | † | / | > | | ✓ | √ | ← | • | • | - | \ |
|--------------------------------------|------|----------|------|-------------|--------------|------|----------|------|------|------|------|----------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | * | | K | * | | r | 2, | | K | 2, | |
| Traffic Volume (veh/h) | 222 | 981 | 30 | 24 | 868 | 44 | 2 | 34 | 24 | 78 | 88 | 233 |
| Future Volume (veh/h) | 222 | 981 | 30 | 24 | 868 | 44 | 2 | 34 | 24 | 78 | 88 | 233 |
| Initial O (Ob), veh | 0 9 | 0 | 0 9 | 0 9 | 0 | 0 9 | 0 9 | 0 | 0 9 | 0 9 | 0 | 0 ; |
| Ped-Bike Adj(A_pb1) Parking Bus Adi | 00.1 | 100 | 00.1 | 1.00 | 100 | 00.1 | 00.1 | 100 | 90.1 | 8.6 | 00 | 90.1 |
| Work Zone On Approach | 2 | 8 8 | 20. | 2 | N ON | 8 | 8 | N ON | 0.1 | 3 | 8 ON | 2 |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 247 | 1090 | 33 | 27 | 866 | 49 | 9 | 38 | 27 | 87 | 86 | 259 |
| Peak Hour Factor | 06:0 | 06:0 | 0.00 | 06:0 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 394 | 2335 | 11 | 312 | 1915 | 94 | 88 | 175 | 124 | 310 | 109 | 289 |
| Arrive On Green | 0.08 | 99.0 | 99.0 | 0.56 | 0.56 | 0.56 | 0.17 | 0.17 | 0.17 | 0.04 | 0.24 | 0.24 |
| Sat Flow, veh/h | 1781 | 3521 | 107 | 205 | 3447 | 169 | 1024 | 1017 | 723 | 1781 | 454 | 1200 |
| Grp Volume(v), veh/h | 247 | 220 | 573 | 27 | 514 | 533 | 9 | 0 | 92 | 87 | 0 | 357 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1851 | 205 | 1777 | 1840 | 1024 | 0 | 1740 | 1781 | 0 | 1654 |
| O Serve(g_s), s | 7.4 | 19.6 | 19.6 | 3.6 | 23.5 | 23.5 | 0.7 | 0.0 | 4.2 | 2.0 | 0.0 | 27.2 |
| Cycle Q Clear(g_c), s | 7.4 | 19.6 | 19.6 | 9.3 | 23.5 | 23.5 | 18.9 | 0.0 | 4.2 | 2.0 | 0.0 | 27.2 |
| Prop In Lane | 1.00 | | 90:0 | 1.00 | | 0.09 | 1.00 | | 0.42 | 1.00 | | 0.73 |
| Lane Grp Cap(c), veh/h | 394 | 1178 | 1227 | 312 | 787 | 1022 | 88 | 0 | 299 | 310 | 0 | 398 |
| V/C Ratio(X) | 0.63 | 0.47 | 0.47 | 0.09 | 0.52 | 0.52 | 0.07 | 0.00 | 0.22 | 0.28 | 0.00 | 0.0 |
| Avail Cap(c_a), veh/h | 572 | 1178 | 1227 | 312 | 786 | 1022 | 208 | 0 | 205 | 310 | 0 | 592 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.0 | 10.7 | 10.7 | 16.4 | 18.1 | 18.1 | 61.3 | 0:0 | 46.3 | 41.3 | 0:0 | 47.8 |
| Incr Delay (d2), s/veh | 1.6 | 1.3 | 1.3 | 0.3 | | 1.0 | 0.3 | 0.0 | 0.4 | 0.5 | 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 | 3.0 | 7.8 | 8.2 | 0.4 | 8.6 | 10.2 | 0.2 | 0.0 | 1.9 | 2.3 | 0.0 | 12.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 15.7 | 12.0 | 12.0 | 16.7 | 19.2 | 19.1 | 61.6 | 0:0 | 46.7 | 41.8 | 0.0 | 59.5 |
| LnGrp LOS | Я | В | m | В | В | В | ш | ⋖ | ۵ | ۵ | ¥ | ال |
| Approach Vol, veh/h | | 1370 | | | 1074 | | | 71 | | | 444 | |
| Approach Delay, sweh | | 12.7 | | | 19.1 | | | 48.0 | | | 26.0 | |
| Approach LOS | | В | | | В | | | Ω | | | ш | |
| Timer - Assigned Phs | _ | 2 | 3 | 4 | | 9 | | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 14.0 | 78.2 | 9.0 | 28.8 | | 92.2 | | 37.8 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.4 | 25.5 | 7.0 | 20.9 | | 21.6 | | 29.2 | | | | |
| Green Ext Time (p_c), s | 9.0 | 7.1 | 0.0 | 0.2 | | 6.6 | | 2.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 22.3 | | | | | | | | | |
| HCM 6th LOS | | | O | | | | | | | | | |
| | | | | | | | | | | | | |

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Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2020 Total AM

| EEL EBT | WBL | ₩ | ✓ NBL | → | ♪ SBL | → |
|--|--|--|---|---|---|----------|
| 4 | * | ₩. | | 4 | F | æ, |
| | 2 | 863 | _ | 0 | 56 | 0 |
| | 2 | 863 | _ | 0 | 56 | 0 |
| pm+pt NA | Perm | NA | Perm | NA | Perm | NA |
| 7 4 | | ∞ | | 2 | | 9 |
| 4 | ∞ | | 2 | | 9 | |
| 7 4 | ∞ | ∞ | 2 | 2 | 9 | 9 |
| | | | | | | |
| | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| | 28.0 | 28.0 | 33.0 | 33.0 | 33.0 | 33.0 |
| | 74.0 | 74.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| | 26.9% | 26.9% | 27.7% | 27.7% | 27.7% | 27.7% |
| | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| | 2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | 6.5 | 6.5 | | 0.9 | 0.9 | 0.9 |
| Lead | Lag | Lag | | | | |
| | Yes | Yes | | | | |
| _ | None | None | С-Мах | С-Мах | C-Max | С-Мах |
| | 46.6 | 46.6 | | 22.7 | 22.7 | 22.7 |
| | 0.36 | 0.36 | | 0.43 | 0.43 | 0.43 |
| | 0.05 | 0.77 | | 0.01 | 0.02 | 0.09 |
| | 26.0 | 43.2 | | 0.0 | 26.3 | 0.2 |
| | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | 26.0 | 43.2 | | 0.0 | 26.3 | 0.2 |
| ٥ | S | ٥ | | A | O | A |
| 35.3 | | 43.1 | | | | 7.7 |
| D | | Ω | | | | A |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 2:NBTL an | d 6:SBTL | Start of | Green | | | |
| | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | |
| | | | | | | |
| | | 드 | tersection | LOS: D | | |
| ntersection Capacity Utilization 64.4% | | $_{\odot}$ | :U Level | of Service | S | |
| | | | | | | |
| | EBL EBT 115 1030 115 1030 115 1030 115 1030 115 1030 115 1030 115 1030 115 1030 115 115 1030 115 | L EBIT WBL 1 1030 2 1030 2 | L EBI WBL WBT 1030 2 863 1030 2 863 1030 2 863 1030 2 863 1030 2 86 1030 2 80 1030 2 80 1030 2 80 1030 2 80 1030 2 80 1040 740 740 1050 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | EBT WBL WBT 1030 2 863 1030 2 863 1040 140 140 1050 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | L EBT WBL WBT NBL NBT | T NBT 3 |

Splits and Phases: 2: Quail Run Rd & Lincoln Drive



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Smoke Tree Resort 2020 Total AM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| | | | • | | | | | • | | | | |
|------------------------------|------|----------------|------|------|--------------|------|--------------|------|------|------|------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | * | | r | * | | | 4 | | K | 2, | |
| Traffic Volume (veh/h) | 115 | 1030 | 4 | 2 | 863 | 12 | | 0 | 7 | 26 | 0 | 92 |
| Future Volume (veh/h) | 115 | 1030 | 4 | 2 | 863 | 12 | - | 0 | 7 | 26 | 0 | 9 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | N _o | | | 9 | | | 9 | | | 9 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 128 | 1144 | 4 | 2 | 959 | 13 | - | 0 | ∞ | 29 | 0 | 72 |
| Peak Hour Factor | 0.90 | 0.00 | 0.00 | 06:0 | 06:0 | 0.00 | 06:0 | 06:0 | 0.00 | 06:0 | 06:0 | 0.00 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 210 | 1506 | 2 | 187 | 1152 | 16 | 94 | 22 | 681 | 745 | 0 | 775 |
| Arrive On Green | 0.13 | 0.83 | 0.83 | 0.32 | 0.32 | 0.32 | 0.49 | 0.00 | 0.49 | 0.49 | 0.00 | 0.49 |
| Sat Flow, veh/h | 1781 | 3632 | 13 | 490 | 3590 | 49 | 130 | 44 | 1393 | 1407 | 0 | 1585 |
| Grp Volume(v), veh/h | 128 | 260 | 288 | 2 | 475 | 497 | 6 | 0 | 0 | 29 | 0 | 72 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1868 | 490 | 1777 | 1862 | 1567 | 0 | 0 | 1407 | 0 | 1585 |
| Q Serve(g_s), s | 6.1 | 18.9 | 18.9 | 0.4 | 32.2 | 32.2 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | 3.2 |
| Cycle Q Clear(g_c), s | 6.1 | 18.9 | 18.9 | 7.1 | 32.2 | 32.2 | 0.4 | 0.0 | 0.0 | 1.3 | 0.0 | 3.2 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.03 | 0.11 | | 0.89 | 1:00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 210 | 737 | 775 | 187 | 220 | 265 | 797 | 0 | 0 | 745 | 0 | 775 |
| V/C Ratio(X) | 0.61 | 0.76 | 0.76 | 0.01 | 0.83 | 0.83 | 0.01 | 0.00 | 0.00 | 0.04 | 0.00 | 0.09 |
| Avail Cap(c_a), veh/h | 317 | 1196 | 1257 | 285 | 923 | 196 | 797 | 0 | 0 | 745 | 0 | 775 |
| 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) | 0.90 | 0.90 | 06.0 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 28.9 | | | 34.8 | 40.9 | 40.9 | 17.1 | 0.0 | 0.0 | 17.3 | 0.0 | 17.8 |
| Incr Delay (d2), s/veh | 5.6 | 1.5 | 1.4 | 0.0 | 3.6 | 3.4 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 0:0 | 0:0 | 0.0 | 0:0 | 0.0 |
| %ile BackOfQ(50%),veh/lin | 2.5 | 3.6 | 3.7 | 0.0 | 14.6 | 15.2 | 0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 1.2 |
| Unsig. Movement Delay, s/veh | | | L C | | : | | 1 | c | 9 | | c | 9 |
| LnGrp Delay(d),s/veh | 31.4 | 9.6 | 9.5 | 34.9 | 44.5 | 44.3 | 17.1 | 0.0 | 0.0 | 17.4 | 0.0 | 18.0 |
| LnGrp LOS | ن | ⋖ | A | ی | ۵ | ۵ | В | ¥ | A | Я | A | B |
| Approach Vol, veh/h | | 1276 | | | 974 | | | 6 | | | 101 | |
| Approach Delay, s/veh | | 11.7 | | | 44.4 | | | 17.1 | | | 17.8 | |
| Approach LOS | | В | | | Ω | | | В | | | B | |
| Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | | 9.69 | | 60.4 | | 9.69 | 12.2 | 48.2 | | | | |
| Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.4 | | 20.9 | | 5.2 | 8.1 | 34.2 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 10.5 | | 0.4 | 0.2 | 7.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 3 30 | | | | | | | | | |
| | | | | | | | | | | | | |

02/11/2019 CivTech BR

Smoke Tree Resort 2020 Total AM

| 2020 Total AM | | | | | | | HCM 6th TWSC |
|--------------------------|------|----------------|------|------|------|------|--------------|
| | | | | | | | |
| Intersection | | | | | | | |
| Int Delay, s/veh | 0.5 | | | | | | |
| Movement | EBT | EBR WBL WBT | WBL | | NBL | NBR | |
| Lane Configurations | ₹ | | * | ‡ | > | | |
| Traffic Vol, veh/h | 1049 | 17 | 26 | 860 | 15 | 22 | |
| Future Vol, veh/h | 1049 | 17 | 26 | 860 | 12 | 22 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free Free Free | Free | Free | Stop | Stop | |
| RT Channelized | 1 | - None | • | None | • | None | |
| Storage Length | | | 25 | | 0 | | |
| Veh in Median Storage, # | 0 # | • | • | 0 | 0 | | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 06 | 06 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mymt Flow | 1166 | 10 | 20 | 056 | 17 | 24 | |

| | 593 | | | 6.94 | | | 3.32 | 449 | | | | 449 | | | | | | | WBT | | | | | |
|-------------|----------------------|---------|---------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| Minor1 | 1712 | 1176 | 536 | 6.84 | 5.84 | 5.84 | 3.52 | 81 | 255 | 221 | | 77 | 180 | 242 | 221 | NB | 20.1 | ပ | | 282 | - 0.049 | 11.5 | В | 0.2 |
| 2 | 0 | ٠ | ٠ | ٠ | | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | 1 | ٠ | ٠ | | | | | EBR WBL | | | ٠ | ٠ | 1 |
| Major2 | 1185 | ٠ | ٠ | 4.14 | | ٠ | 2.22 | 282 | ٠ | ٠ | | 585 | ٠ | ٠ | | WB | 0.3 | | EBT | | ٠ | ٠ | ٠ | 1 |
| | 0 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | • | ٠ | • | ٠ | | | | NBLn1 | 280 | 0.147 | 20.1 | O | 0.5 |
| Major1 | 0 | | | | ľ | | | | | | | | | | | EB | 0 | | = | | | | | |
| Major/Minor | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

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Smoke Tree Resort 2020 Total AM

5: Lincoln Medical West & Lincoln Dr HCM 6th TWSC

| Int Delay, s/veh | 0.4 | | | | | | |
|--------------------------|----------|-------|--------|------|--------|------|--|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₽ | | - | ‡ | > | | |
| Traffic Vol, veh/h | 1054 | 17 | 42 | 879 | 9 | 6 | |
| Future Vol, veh/h | 1054 | 17 | 42 | 879 | 9 | 6 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | ٠ | None | | None | | None | |
| Storage Length | | | 22 | ٠ | 0 | | |
| Veh in Median Storage, # | 0 # | | | 0 | 0 | | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 7 | 2 | 2 | 2 | 2 | 2 | |
| | 1171 | 19 | 47 | 776 | 7 | 10 | |
| | | | | | | | |
| Major/Minor Ma | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1190 | 0 | 1764 | 595 | |
| Stage 1 | | | | • | 1181 | | |
| Stage 2 | | | | | 583 | | |
| Critical Hdwy | | | 4.14 | • | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | | | | ' | 5.84 | | |
| Critical Hdwy Stg 2 | | • | | 1 | 5.84 | | |
| Follow-up Hdwy | • | • | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | | | 582 | • | 75 | 447 | |
| Stage 1 | • | • | • | • | 254 | | |
| Stage 2 | | | | • | 521 | | |
| Platoon blocked, % | • | • | | ٠ | | | |
| Mov Cap-1 Maneuver | • | 1 | 582 | • | 69 | 447 | |
| Mov Cap-2 Maneuver | ٠ | • | • | ٠ | 170 | | |
| Stage 1 | • | • | 1 | • | 233 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 521 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.5 | | 19.2 | | |
| HCM LOS | | | | | U | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | 2 | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 271 | | ٠ | 582 | | |
| HCM Lane V/C Ratio | | 0.062 | ľ | ľ | 0.08 | | |
| HCM Control Delay (s) | | 19.2 | | | 11.7 | | |
| HCM I and I OS | | ر | | | ۵ | | |
| | | - | | | _ | | |

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Smoke Tree Resort 6: Lincoln Medical East & Lincoln Dr 2020 Total AM

| Intersection Inte | | | | | | | | |
|--|------------------------|---------|-------|--------|------|--------|------|--|
| Name | Intersection | | | | | | | |
| FERT FERR WIGH MIST NIBLI 1050 11 5 921 0 0 0 0 0 0 0 0 0 | Int Delay, s/veh | 0.1 | | | | | | |
| A | Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| 1050 | Lane Configurations | ₹ | | | ‡ | | ¥C | |
| 1050 | Traffic Vol, veh/h | 1050 | = | 2 | 921 | 0 | 6 | |
| Free Free Free Sup None | Future Vol, veh/h | 1050 | 7 | 2 | 921 | 0 | 6 | |
| Free Free Free Stop None | Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| # 0 | Sign Control | Free | Free | Free | Free | Stop | Stop | |
| # 0 | RT Channelized | • | None | 1 | None | | None | |
| # 0 | Storage Length | | | | ٠ | | 0 | |
| 0 | Veh in Median Storage, | # | | • | 0 | 0 | ٠ | |
| Major1 Major2 Minor1 | Grade, % | | | | 0 | 0 | ľ | |
| Najor1 | Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | |
| 1167 12 6 1023 0 | Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| ejor1 Major2 Minor1 0 0 1179 0 | Mvmt Flow | 1167 | 12 | 9 | 1023 | 0 | 10 | |
| Minor Major Minor | | | | | | | | |
| 0 0 1179 0 0 1 1 1 1 1 2 2 2 2 2 | | /lajor1 | _ | /ajor2 | 2 | linor1 | | |
| ## A 1.4 | Conflicting Flow All | 0 | 0 | 1179 | 0 | 1 | 200 | |
| EB WB NB NB NB 0022 - 0009 11.2 SB8 - 0 0 0 1 13.2 SB | Stage 1 | • | 1 | 1 | • | 1 | 1 | |
| EB WB WBL NBLN 451 13.2 | Stage 2 | • | • | • | ٠ | • | • | |
| EB WB NB NBLNI EBT EBR WBI 451 - 588 0022 - 0009 132 - 112 132 - 112 0 0.1 - 0009 | Critical Hdwy | • | • | 4.14 | ٠ | 1 | 6.94 | |
| EB WB NB | Critical Hdwy Stg 1 | • | • | | • | • | • | |
| EB WB NB NBLN1 EBT EBR WBL 451 - 588 0.022 - 0.009 132 - 112 B 0.112 - 0.009 | Critical Hdwy Stg 2 | • | 1 | | • | 1 | | |
| EB NBLM EBT EBR WBL WB 451 C 0002 | Follow-up Hdwy | ٠ | • | 2.22 | ٠ | • | 3.32 | |
| EB NB | Pot Cap-1 Maneuver | 1 | 1 | 288 | 1 | 0 | 451 | |
| EB WB NB WB NB O 0.1 13.2 NBLNI EBT EBR WBL WB 451 - 588 | Stage 1 | 1 | 1 | • | • | 0 | • | |
| EB WB NB | Stage 2 | • | • | | ٠ | 0 | | |
| EB NB | Platoon blocked, % | ٠ | 1 | | ٠ | | | |
| EB WB NB NB O | Mov Cap-1 Maneuver | • | 1 | 288 | • | 1 | 451 | |
| EB WB NB | Mov Cap-2 Maneuver | ٠ | • | | ٠ | • | | |
| EB WB NB | Stage 1 | • | • | • | • | 1 | • | |
| NBLn1 EBR WBL WB WB WB WB WB WB WB | Stage 2 | • | 1 | • | 1 | 1 | 1 | |
| NB | | | | | | | | |
| 0 0.1 13.2 B B NBLn1 EBT EBR WBL WB 451 588 0.022 0.009 13.2 11.2 B B B B 0.1 0 | Approach | EB | | WB | | NB | | |
| MBLn1 EBT EBR WBL WB 451 - 588 0.022 - 0.009 13.2 - 11.2 B B B B 0.1 - 0 | HCM Control Delay, s | 0 | | 0.1 | | 13.2 | | |
| MBLn1 EBT ERR WBL WB 451 - 588 0.022 - 0.009 13.2 - 11.2 B B B 0.1 - 0 | HCM LOS | | | | | Ф | | |
| 451 588 0022 0.009 13.2 11.2 B B 0.1 0 | Minor Lane/Major Mvmt | | Bl n1 | FBT | FBR | WBI | WBT | |
| 0.022 | Consoits (sobjet) | | 451 | 2 | Ĭ | 100 | 2 | |
| 13.2 - 11.2 B - B | Capacity (venin) | | 451 | | | 288 | | |
| 13.2 - 11.2 B - B 0.1 - 0 | HCIM Lane V/C Ratio | | 0.022 | 1 | | 0.003 | ۱ | |
| O(veh) 0.1 - B | HCM Control Delay (s) | | 13.2 | • | 1 | 711.7 | | |
| 0.1 | HCM Lane LOS | | 2 | 1 | ١ | Ω. | ١ | |
| | HCM 95th %tile Q(veh) | | 0.1 | 1 | 1 | 0 | 1 | |

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Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined ∵ All major volume in platoon

Smoke Tree Resort 2020 Total AM

7: Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Majorial continuity | | | | | | | | | | | | | |
|--|-------------------------------|-----|-------|-------|-------|-----|------------|-------|--------|----------|--------|------|------|
| Name | | | EBT | EBR | WBL | | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| National Color Nati | | r | 4 | | r | ₹ | | | 4 | | - | | ¥L. |
| Free Free Free Free Free Stop Stop Stop Stop Stop Stop Stop Stop | | 27 | 666 | 32 | 19 | 861 | 10 | 52 | 0 | 30 | 2 | 0 | 12 |
| Free Free Free Free Stop Stop Stop Stop Stop Stop Stop Stop | | 27 | 666 | 33 | 19 | 861 | 9 | 25 | 0 | 30 | വ | 0 | 12 |
| Free Free Free Free Free Shp | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 10 10 10 10 10 10 10 | ≒± | | | | Free | | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| age, # - 0 - 0 0 - 0 0 - 0 0 0 0 0 0 0 0 - 0 0 0 - 0 | 14: | i | 7 | None | 1 | 7 | None | 1 | 1 | None | 1 | 1 | None |
| age, # . 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Veh in Median Storage, # | 22 | ٠ | ٠ | 25 | ٠ | ٠ | ٠ | ٠ | | 0 | | 0 |
| National Color Nati | | | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | | • | 0 | |
| Majort | Grade, % | | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | | • | 0 | |
| Majort | Peak Hour Factor | 06 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | 8 | 06 | 06 |
| Majort | Heavy Vehicles, % | | 2 | 2 5 | 2 5 | 2 | 7 2 | 2 | 7 | 2 | 7 | 7 | 7 5 |
| Majort | WINTER FLOW | | 2 | 60 | 7 | 104 | = | 00 | > | S | 0 | | 2 |
| 968 0 0 1149 0 0 1711 2200 575 1620 - 46 1190 1190 - 1105 - 105 1190 1190 - 1105 - 105 1190 1190 - 1105 - 105 1190 1190 - 1105 - 105 1190 1190 - 1105 - 105 1190 1190 - 105 654 554 - 654 - 654 - 654 654 554 - 654 - 654 654 554 - 654 - 654 654 554 - 654 - 654 654 12 33 3 35 2 35 199 259 - 259 0 191 246 - 59 - 62 | | or1 | | ≥ | ajor2 | | 2 | inor1 | | _ | Minor2 | | |
| 4.14 1190 1190 1005 | | 896 | 0 | | 1149 | 0 | 0 | 1711 | 2200 | 575 | 1620 | ١. | 484 |
| 4.14 | Stage 1 | | ٠ | ٠ | ٠ | ٠ | ٠ | 1190 | 1190 | | 1005 | | |
| 4.14 4.14 7.54 6.54 6.94 7.54 . 6.9 2.22 2.22 6.54 6.54 6.54 6.54 6.54 2.22 2.22 6.54 5.54 6.54 6.54 7.07 6.04 59 44 461 68 0 52 7.07 6.04 50 34 461 68 0 52 7.07 6.04 507 31 445 0 7.07 6.04 6.4 4 461 68 0 52 7.07 6.04 6.4 4 461 68 0 62 7.07 6.04 | Stage 2 | | • | ٠ | ٠ | ٠ | ٠ | 521 | 1010 | | 615 | | |
| 2.22 | | 14 | ÷ | ٠ | 4.14 | ٠ | ٠ | 7.54 | 6.54 | 6.94 | 7.54 | 1 | 6.94 |
| 2.22 654 5.54 654 654 7.7 | Critical Hdwy Stg 1 | | ٠ | | ٠ | | ٠ | 6.54 | 5.54 | | 6.54 | | |
| 2.22 2.22 352 4.02 3.32 3.52 3.37 707 604 507 316 259 0 0 570 604 607 316 445 0 0 670 607 316 445 0 0 670 | Critical Hdwy Stg 2 | | ٠ | ٠ | ٠ | ٠ | ٠ | 6.54 | 5.54 | | 6.54 | | |
| 707 604 59 44 461 68 0 52 199 259 259 0 | | .22 | • | | 2.22 | | • | 3.52 | 4.02 | 3.32 | 3.52 | • | 3.32 |
| 19 | | 707 | 1 | 1 | 604 | 1 | 1 | 26 | 44 | 461 | 89 | 0 | 529 |
| 707 507 316 | Stage 1 | | | | • | | • | 199 | 259 | • | 259 | 0 | |
| 707 60454 41 461 59 52 | Stage 2 | | ٠ | ٠ | ٠ | ٠ | ٠ | 202 | 316 | | 445 | 0 | |
| 707 60454 41 461 59 52 54 41 59 52 191 248 248 248 477 305 395 477 305 395 | | | ٠ | ٠ | | ٠ | ٠ | | | | | | |
| Color Colo | | 707 | 1 | • | 604 | • | • | ~ 54 | 41 | 461 | 26 | 1 | 529 |
| Fig. 10 Fig. 10 Fig. 10 Fig. 10 | Mov Cap-2 Maneuver | | ٠ | ٠ | ٠ | ٠ | ٠ | ~ 54 | 41 | • | 26 | • | |
| EB | Stage 1 | ÷ | ٠ | • | ٠ | • | ٠ | 191 | 248 | • | 248 | • | |
| Color | Stage 2 | | • | • | • | • | • | 477 | 305 | 1 | 395 | 1 | |
| 0.3 0.2 236.3 F F F NBL NBL WBL WBL SBLn1 80 707 - 604 - 59 17.139 0.042 - 0.035 - 0.094 236.3 10.3 - 11.2 - 7.5 F F B - F F B - F F S | | EB | | | WB | | | 8 | | | SB | | ı |
| NBLn1 EBL EBT EBR WBL WBT WBRSBLn1 80 707 - 604 - 59 1.139 0.042 - 0.035 - 0.094 2.36.3 10.3 - 11.2 - 7.18 - 7.2 | | 0.3 | | | 0.2 | | | 236.3 | | | 29.7 | | |
| NBLn1 EBL EBT EBR WBL WBT WBRSBLn1 80 707 · 604 · 59 17139 0.042 · 0.035 · 0.094 236.3 10.3 · 11.2 · 7.5 F B · F B · F S | HCM LOS | | | | | | | ш | | | Ω | | |
| 1.139 0.042 - 0.035 - 0.094 2.36.31 - 0.035 - 0.0035 - 0.094 F B - B - F S | Minor Lang/Major Mumt | Ž | 1 n | ā | FDT | QQJ | Id/M | TGW | N/BD 0 | D Lu Id | Cald | | |
| 80 /0/ 004 37 1.139 0.042 0.035 0.094) 236.3 10.3 11.2 72.3 F B B F | MILLOI Laireriviajoi iviviiit | | 200 | 707 | רחו | LDN | WDL VOA | - A | MOM | , DEIII, | SULLIZ | | |
| (1.137 0.042 - 0.033 - 0.034 (1.137 0.042 - 0.034 (1.137 0.034 - | Capacity (vervn) | 7 | 120 | /0/ | | | 604 02E | | | 29 | 676 | | |
| lay(s) 236.3 l0.3 - 11.2 - 12.3 F B - E | HCM Larie V/C Rallo | _ < | . 139 | 7.042 | ٠ | | 0.035 | ١ | | 0.094 | 0.020 | | |
| | HCM Control Delay (s) | 7 | 36.3 | 10.3 | | | 711.2 | | | 72.3 | 7 2 | | |
| | HCM Lane LOS | | _ | 2 | 1 | ٠ | Я | 1 | • | _ | Ω | | |

Smoke Tree Resort 2020 Total AM

| Intersection | | | | | | | | | | | | | |
|--------------------------|------|------|---------|----------|---------|------|------|-----------|------|------|--------------|------|--|
| Int Delay, s/veh | - | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR WBL | | WBT WBR | | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | r | ₹ | | <u>r</u> | ₹ | | | 4 | | K- | | W. | |
| Traffic Vol, veh/h | က | 8/6 | 22 | 44 | 873 | 00 | 9 | 0 | 42 | 4 | - | 12 | |
| Future Vol, veh/h | m | 978 | 22 | 44 | 873 | ∞ | 9 | 0 | 42 | 4 | - | 12 | |
| 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 | • | ٠ | None | | • | None | | | None | |
| Storage Length | 25 | | ٠ | 22 | ٠ | ٠ | ٠ | ٠ | ٠ | 0 | ٠ | 0 | |
| Veh in Median Storage, # | * | 0 | 1 | , | 0 | • | | 0 | • | | 0 | | |
| Grade, % | | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | ٠ | • | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | |
| Heavy Vehicles, % | 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 7 | 2 | 2 | |
| Mvmt Flow | c | 1087 | 61 | 49 | 026 | 6 | 7 | 0 | 47 | 4 | - | 13 | |
| | | | | | | | | | | | | | |

| | 490 | | | 6.94 | | | 3.32 | 524 | | | | 524 | | | | | | | | | | | | |
|---------------|----------------------|---------|---------|---------------|----------------------|----------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| | 2227 | 1073 | 1154 | 6.54 | 5.54 | 5.54 | 4.02 | 43 | 295 | 270 | | 39 | 36 | 271 | 269 | | | | | | | | | |
| Minor2 | 1623 | 1073 | 550 | 7.54 | 6.54 | 6.54 | 3.52 | 89 | 235 | 487 | | 27 | 22 | 234 | 436 | SB | 27.4 | ۵ | BLn2 | 524 | 0.025 | 12.1 | В | 0.1 |
| 2 | 574 | | • | 6.94 | ٠ | ٠ | 3.32 | 462 | ٠ | ٠ | | 462 | • | ٠ | • | | | | BLn1S | 22 | - 0.078 0.025 | 73.4 | ш. | 0.2 |
| | 2201 | 1124 | 1077 | 6.54 | 5.54 | 5.54 | 4.02 | 44 | 279 | 293 | | 40 | 40 | 278 | 269 | | | | WBR SBLn1 SBLn2 | • | - | 1 | • | ٠ |
| Minor1 | 0 1708 | 1124 | 584 | 7.54 | 6.54 | 6.54 | 3.52 | 26 | 219 | 465 | | 53 | 53 | 218 | 415 | NB | 24.8 | U | WBT | | • | 1 | • | • |
| 2 | 0 | • | • | 1 | ٠ | • | • | • | ٠ | ٠ | • | 1 | • | • | • | | | | WBL | 604 | - 0.081 | 11.5 | В | 0.3 |
| | 0 | • | • | 1 | ٠ | • | • | • | ٠ | ٠ | • | 1 | • | • | • | | | | EBR | • | | 1 | ٠ | • |
| Major2 | 0 1148 | | • | 4.14 | ٠ | ٠ | 2.22 | 604 | ٠ | ٠ | | 604 | • | ٠ | • | WB | 0.5 | | EBT | • | | 1 | ٠ | • |
| 2 | 0 | • | • | 1 | ٠ | ٠ | • | ٠ | ٠ | ٠ | • | 1 | • | ٠ | • | | | | EBL | 701 | 0.005 | 10.2 | В | 0 |
| | 0 | | • | 1 | ٠ | ٠ | • | ٠ | ٠ | ٠ | • | 1 | • | ٠ | • | | | | NBLn1 | 235 | 0.227 0.005 | 24.8 | ပ | 0.8 |
| Major1 | 616 | | • | 4.14 | ٠ | ٠ | 2.22 | 701 | ٠ | ٠ | | 701 | • | ٠ | • | FB | 0 | | Z | | | | | |
| Major/Minor N | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Holwy Stg 1 | Critical Holwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

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Smoke Tree Resort 2020 Total AM

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

9: Scottsdale Rd & Lincoln Dr

| | SBR | R _ | 615 | 615 | ۸۵ | 4 | 9 | 4 | | 7.0 | 13.0 | 01 | % | 4.0 | 1.5 | 0.0 | 5.5 | | | ЭL | 8.98 | 57 | 51 | 11.6 | 0.0 | 11.6 | В | | | | | | | | | | | | |
|-------------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| * | | L | | | vo+md v | | | _ | | | | | 33.1% | | | | | _ | | None | | 19.0 | | | | | _ | | | | | | | | | | | | |
| → | SBT | ₩ | 1669 | 1669 | NA | 9 | | 9 | | 10.0 | 16.0 | 57.0 | 43.8% | 4.7 | 1.0 | 0.0 | 5.7 | Lag | | C-Max | 57.4 | 0.44 | 0.83 | 36.8 | 0.0 | 36.8 | | 31.1 | O | | | | | | | | | | |
| ۶ | SBL | * | 51 | 21 | Prot | - | | - | | 2.0 | 11.0 | 14.0 | 10.8% | 3.3 | 2.0 | 0.0 | 5.3 | Lead | | None | 7.6 | 90:0 | 0.55 | 79.0 | 0.0 | 79.0 | ш | | | | | | | | | | | | |
| — | NBT | 4413 | 1316 | 1316 | ¥ | 2 | | 2 | | 10.0 | 16.7 | 73.0 | 56.2% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | None | 71.3 | 0.55 | 0.54 | 20.5 | 0.0 | 20.5 | O | 27.5 | S | | | | | | | | | ۵ | |
| • | NBL | F | 307 | 307 | Prot | 2 | | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 19.3 | 0.15 | 19:0 | 58.4 | 0.0 | 58.4 | ш | | | | | | | | | | LOS: D | ICU Level of Service D | |
| ţ | WBT | ₩\$ | 36 | 36 | ¥ | 80 | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.2 | 90.0 | 0.40 | 33.9 | 0.0 | 33.9 | O | 45.7 | O | | | | | | | | ntersection LOS: D | U Level o | |
| > | WBL | <i>y</i> - | 37 | 37 | Split | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.2 | 90:0 | 0.42 | 72.5 | 0.0 | 72.5 | ш | | | | | | _ | | | | 교 | ೨ | |
| <u>/-</u> | EBR | ¥C. | 469 | 469 | vo+mq | 2 | 4 | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 43.1 | 0.33 | 0.91 | 39.4 | 0.0 | 39.4 | ۵ | | | | | | t of Greer | | | | | | |
| † | EBT | ÷ | 38 | 38 | NA | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 23.8 | 0.18 | 06:0 | 92.7 | 0.0 | 92.7 | ш | 0.79 | ш | | | | SBT, Star | | | | | | |
| 1 | EBL | * | 461 | 461 | Split | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 23.8 | 0.18 | 06:0 | 93.2 | 0.0 | 93.2 | ш | | | | | | to phase 6: | | ordinated | | 7.1 | ition 81.1% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Oueue Delay | Total Delay | SOT | Approach Delay | Approach LOS | Intersection Summary | Cycle Lenath: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.91 | Intersection Signal Delay: 37.1 | Intersection Capacity Utilization 81.1% | Analysis Period (min) 15 |

Splits and Phases: 9: Scottsdale Rd & Lincoln Dr

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Smoke Tree Resort 2020 Total AM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

2 924 0.39 11585 683 683 11585 1100 924 924 924 11.00 11.00 11.00 11.00 11.00 24.0 1870 683 0.90 1.00 0.92 2015 1.00 1.00 37.4 8.4 0.0 1.00 No 1870 2015 0.39 0.39 11854 1702 44.9 2594 40.8 D 1669 1669 51 001.00 57 2 2 73 73 781 4.1 4.1 1.00 73 9.07 781 1.100 1.10 68.2 39 39 30 00 00 26.1 1.00 No 1870 1462 0.90 C C 1846 32.1 2401 0.47 0.47 5098 976 976 27.7 27.7 0.61 1762 1.00 1.00 25.5 25.5 0.3 0.0 12.5 5.6 7.4 6.3 0.0 307 307 307 1.00 1.00 59.4 84 84 0 0. 1870 53 0.90 57.0 5.7 51.3 46.9 1.9 68.4 98 80 8.8 1870 40 0.90 2 95 0.05 40 7771 2.8 2.8 95 0.42 1.00 1.00 59.6 1.1 0.0 2.09 134 20.6 5.5 24.5 14.6 0.5 8.09 1870 41 2 2 95 95 0.05 41 2.9 2.9 2.9 11.00 95 0.43 11.00 11.00 11.00 11.10 0.00 0.00 30.0 5.5 24.5 26.5 0.0 37 0 0 1.00 46.4 D 469 469 0 1.00 1.00 1870 521 0.90 0.00 0.0 1.00 No 1870 0.90 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 A 1063 82.8 66.9 5.7 67.3 29.7 2.2 t 1870 542 0.90 461 0 1.00 1.00 57.2 Max Green Setting (Gmax), s *8.7 Max Q Clear Time (g_c+I1), s 6.1 Green Ext Time (p_c), s 0.0 Ind Delay (d2), siveh Initial Q Delay(d3),siveh %ile BackOfQ(50%),veh/in Unsig. Movement Delay, siveh LnGrp Delay(d),siveh 5 Timer - Assigned Phs Phs Duration (G+Y+Rc), s Change Period (Y+Rc), s Initial Q (Qb), veh Ped-Bike Adj(A_pbT) Parking Bus, Adj Work Zone On Approach Grp Volume(v), veh/h Grp Sat Flow(s), veh/h/ln Q Serve(g_s), s Cycle Q Clear(g_c), s Prop in Lane Lane Grp Cap(c), veh/h V/C Ratio(X) Avail Cap(c_a), veh/h HCM Platoon Ratio Adj Sat Flow, vehrhin Adj Flow Rate, vehrh Peak Hour Factor Percent Heavy Veh, % Cap, vehrh Arrive On Green Sat Flow, vehrh Upstream Filter(I) Uniform Delay (d), s/veh LnGrp LOS Approach Vol, veh/h Approach Delay, s/veh Approach LOS Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) ntersection Summary HCM 6th Ctrl Delay HCM 6th LOS

User approved pedestrian interval to be less than phase max green. User approved volume balancing among the lanes for furning movement.

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Smoke Tree Resort 2020 Total AM

10: Quail Run Rd & Access A HCM 6th TWSC

| Intersection Intersection Intersection Movement Intersection Intersect |
|--|
|--|

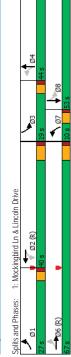
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HCM 6th computational engine requires equal clearance times for the phases crossing the barrier

Smoke Tree Resort 2020 Total AM Mitigated

1: Mockingbird Ln & Lincoln Drive Timings

| | | ٤ | .88 | 88 | NA | 80 | | 8 | | 0: | .5 | 0: | % | 4.0 | 2.5 | 0: | 6.5 | 10 | SS | 91 | 2 | 0. | 24 | .3 | 0. | .3 | D | 0. | D | | | | | | | | | |
|-------------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|--|--------------------------|
| → | SBL SB1 | | 78 8 | | _ | | œ | m | | 3.5 7. | | | 4.6% 40.8% | | | | 4.0 6. | | | _ | 30.7 26.2 | | | | 0.0 0.0 | 38.7 50.3 | _ | 48.0 | | | | | | | | | | |
| ← | NBT | £\$ | 34 | | NA p | 4 | | 4 | | 7.0 | 33.5 | | 33.8% 1 | 4.0 | 2.5 | 0.0 | 6.5 | Lag | | | 14.2 | 0.11 | 0.30 | 34.2 | 0.0 | 34.2 | ပ | 34.0 | ပ | | | | | | | | Intersection LOS: C | 3 |
| • | NBL | * | 2 | 2 | pm+pt | 7 | 4 | 7 | | 2.0 | 9.5 | 10.0 | 7.7% | 3.5 | 1.0 | 0.0 | 4.5 | Lead | Yes | None | 19.9 | 0.15 | 0.02 | 32.0 | 0.0 | 32.0 | ပ | | | | | | i Green | | | | Intersection LOS: C | 2 |
| ţ | WBT | ₩. | 868 | 868 | NA | 2 | | 2 | | 15.0 | 27.0 | 40.0 | 30.8% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 1.89 | 0.53 | 0.56 | 19.1 | 0.0 | 19.1 | В | 19.0 | В | | | | L, Start ol | | | | _ = | |
| > | WBL | * | 24 | 24 | Perm | | 2 | 2 | | 15.0 | 27.0 | 40.0 | 30.8% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 68.7 | 0.53 | 0.11 | 15.2 | 0.0 | 15.2 | В | | | | | | nd 6:EBTI | | | | | |
| † | EBT | ₩ | 981 | 981 | NA | 9 | | 9 | | 15.0 | 27.0 | 67.0 | 51.5% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 89.3 | 69.0 | 0.46 | 11.8 | 0.0 | 11.8 | В | 12.7 | В | | | | WBTL ar | | | | | |
| 1 | EBL | * | 222 | 222 | pm+pt | _ | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 91.3 | 0.70 | 19.0 | 16.5 | 0.0 | 16.5 | В | | | | | 130 | ed to phase 2: | - | coordinated | | r. 20.8 Ization 74 9% | Editor / T ro |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Oueue Delay | Total Delay | TOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Lenath: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Lype: Actuated-Coordinated | Maximum v/c Ratio: 0.84 | Intersection Signal Delay: 20.8 Intersection Capacity Hilization 74 9% | Analysis Period (min) 15 |



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Smoke Tree Resort 2020 Total AM Mitigated

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| Movement EB | Movement Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) | | | ۰ | | | | _ | - | | | | |
|---|---|------|----------|------|------|----------|------|-------|------|-------|------|-------|------|
| 100 100 | Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 222 981 30 24 898 44 5 34 24 78 88 82 22 981 30 24 898 44 5 34 24 78 88 88 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Traffic Volume (veh/h) Future Volume (veh/h) | F | ₩ | | r | ₩ | | r | 2, | | K | 2, | |
| 222 981 30 24 898 44 5 34 24 78 88 100 100 100 100 100 100 100 100 100 10 | Future Volume (veh/h) | 222 | 981 | 30 | 24 | 868 | 44 | 2 | 34 | 24 | 78 | 88 | 233 |
| 1.00 | | 222 | 981 | 30 | 24 | 868 | 44 | 2 | 34 | 24 | 78 | 88 | 233 |
| 1,00 | Initial O (Ob), veh | 0 9 | 0 | 0 ; | 0 9 | 0 | 0 9 | 0 9 | 0 | 0 9 | 0 9 | 0 | 0 ; |
| 100 100 | Ped-Bike Adj(A_pbT) | 1.00 | 6 | 1.00 | 1.00 | 6 | 1.00 | 1.00 | | 1.00 | 1.00 | 5 | 1.00 |
| 1870 | Parking Bus, Adj | 00.1 | 00.I | 1.00 | 1.00 | 00.1 | 00.1 | 1.00 | 00.1 | 00.1 | 00.1 | 00.1 | 9. |
| 180 180 | work zone On Approach | 0101 | NO | 010 | 0107 | NO | 0107 | 0101 | NO | 0101 | 010 | NO | 0101 |
| 247 1070 353 27 79 479 8 30 27 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Adj Sat Flow, veryn/in | 18/0 | 1000 | 0/81 | 0/81 | 0/81 | 0/81 | 0/81 | 0/81 | 0/81 | 0/81 | 0/81 | 18/0 |
| 29 2 186 66 282 1747 86 101 204 145 374 109 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0. | Adj Flow Rate, Velini | / 47 | 0601 | 200 | 17 | 0 00 | 44 | 0 0 | 000 | 17 | 000 | 0, 0 | 607 |
| 369 2186 66 282 144 8 101 204 145 314 109 108 0.62 0.62 0.65 1051 0.51 0.51 0.50 0.50 0.50 0.54 1781 105 1781 132 1 132 1 133 1 107 123 1 141 0.5 1 141 141 141 141 141 141 141 141 141 | Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| 369 2180 0.00 282 144 180 101 240 145 314 109 100 0.08 101 240 145 314 109 100 0.08 101 240 145 314 109 1781 3521 107 502 3447 169 1781 107 723 1781 454 17 1840 1781 107 723 1781 454 17 1840 1781 107 177 1840 1781 107 1840 1781 107 172 1781 107 170 1781 107 170 170 170 170 170 170 170 170 17 | elceill Heavy ven, % | 7 | 7000 | 7 | 7 | 7 | 7 7 | 7 704 | 7 | 7 111 | 7 | 7 00, | 7 |
| 1781 3221 107 500 247 169 1781 1017 273 1781 454 1781 3221 1077 500 247 1861 261 041 042 042 042 042 042 042 042 042 042 042 | ap, ven/n | 369 | 7180 | 90 | 787 | 1/4/ | 80 | 101 | 204 | 145 | 3/4 | 601 | 687 |
| 1/61 354 107 302 3447 109 101 723 1781 434 434 1781 1777 1851 302 3447 1781 1777 1851 302 1777 1840 1781 0 1740 1781 0 1781 1777 1851 302 1777 1840 1781 0 1740 1781 0 0 1781 1777 1851 302 1777 1840 1781 0 1740 1781 0 0 0 0 0 0 0 0 0 | Allive Officien | 0.08 | 0.02 | 10.0 | 0.0 | 10.0 | 10.0 | 10.0 | 0.20 | 0.20 | 0.00 | 0.24 | 120 |
| 1781 1772 1881 502 1777 1880 1781 0 0 0 0 0 0 0 0 0 | Sat Flow, velVII | 10/1 | 1200 | 101 | 200 | 2447 | 601 | 10/1 | 101 | 173 | 101 | 404 | 2021 |
| 1781 177 1881 502 1777 1880 1781 0 1740 1781 0 1781 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | orp Volume(v), ven/h | 747 | 220 | 5/3 | 17 | 514 | 533 | 9 | 0 | 65 | 8 | 0 | 35/ |
| 8.3 22.1 22.1 4.1 2.61 2.61 0.3 00 4.0 4.9 0.0 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | 3rp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1851 | 205 | 1777 | 1840 | 1781 | 0 | 1740 | 1781 | 0 | 1654 |
| 8.3 22.1 22.1 11.3 26.1 26.1 0.3 0.0 4.0 4.9 0.0 3.60 1103 1149 282 901 933 101 0 349 374 0 3.65 0.50 0.50 0.10 0.57 0.57 0.06 0.00 0.19 0.23 0.00 3.65 1103 1149 282 901 933 101 0 349 374 0 3.60 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1 | 2 Serve(g_s), s | 8.3 | 22.1 | 22.1 | 4.1 | 26.1 | 26.1 | 0.3 | 0.0 | 4.0 | 4.9 | 0:0 | 27.2 |
| 1100 0066 1000 0099 100 042 1100 0349 1103 1149 282 901 933 1163 0 349 174 0 0 036 0110 0 1149 282 901 933 163 0 0 0 036 0110 0 1100 1100 1100 1 | Sycle Q Clear(g_c), s | 8.3 | 22.1 | 22.1 | 11.3 | 26.1 | 26.1 | 0.3 | 0.0 | 4.0 | 4.9 | 0.0 | 27.2 |
| 369 1103 1149 282 901 933 101 0 349 334 0 067 050 050 010 0157 057 050 000 019 033 0 1100 <td>Prop In Lane</td> <td>1.00</td> <td></td> <td>90.0</td> <td>1.00</td> <td></td> <td>0.09</td> <td>1.00</td> <td></td> <td>0.42</td> <td>1.00</td> <td></td> <td>0.73</td> | Prop In Lane | 1.00 | | 90.0 | 1.00 | | 0.09 | 1.00 | | 0.42 | 1.00 | | 0.73 |
| 0.67 0.56 0.56 0.50 0.10 0.57 0.57 0.06 0.00 0.19 0.23 0.00 0.00 1.00 1.00 1.00 1.00 1.00 1.0 | ane Grp Cap(c), veh/h | 369 | 1103 | 1149 | 282 | 901 | 933 | 101 | 0 | 349 | 374 | 0 | 398 |
| 535 1103 1149 282 901 933 163 0 502 488 0 1.00 | //C Ratio(X) | 0.67 | 0.50 | 0.50 | 0.10 | 0.57 | 0.57 | 90.0 | 0.00 | 0.19 | 0.23 | 0.00 | 0.90 |
| 1.00 | 4vail Cap(c_a), veh/h | 535 | 1103 | 1149 | 282 | 901 | 933 | 163 | 0 | 205 | 488 | 0 | 265 |
| 1100 1100 0.055 0.55 0.55 100 0.00 1100 1.00 0.00 1104 13.5 13.5 20.7 22.3 22.3 22.3 22.3 22.3 22.3 22.3 22 | HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1:00 | 1.00 | 1.00 |
| 174 135 135 207 223 223 427 00 431 368 000 21 1 16 15 04 15 140 02 00 03 03 03 25 9.1 9.5 0.5 11.2 11.6 0.2 0.0 1.8 2.2 0.0 26 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 27 15.1 15.1 21.1 23.7 23.7 43.0 0.0 43.4 37.1 0.0 28 B B C C C D A D D A H 1370 1074 C D A B S5.1 23.6 4.3 4 8.6 7 8 24.0 6.0 4.0 6.5 6.0 4.5 6.5 25.3 34 6.0 5.5 37.8 25.2 25 25 25 25 25 25 25 25 25 25 25 25 25 | Jpstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| 2.1 1.6 1.5 0.4 1.5 1.4 0.2 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Jniform Delay (d), s/veh | 17.4 | 13.5 | 13.5 | 20.7 | 22.3 | 22.3 | 42.7 | 0.0 | 43.1 | 36.8 | 0.0 | 47.8 |
| 100 0.0 | ncr Delay (d2), s/veh | 2.1 | 1.6 | 1.5 | 0.4 | 1.5 | 1.4 | 0.2 | 0.0 | 0.3 | 0.3 | 0.0 | 11.7 |
| 35 9,1 9,5 0,5 11,2 11,6 0,2 0,0 18 2,2 0,0 B B B C C C D A D D A 1370 1074 71 D D A 15,9 23,6 43,4 55,1 1 2 3 4 6 7 8 23,0 34,0 15,0 37,5 61,0 5,5 46,5 103 28,1 6,9 6,0 24,1 23 29,2 25,2 C C D A D D A 444 771 0 D A 444 55,1 E E 1 2 3 4 6 7 8 240 4,0 6,5 6,5 6,5 253 34,0 15,0 37,5 61,0 5,5 46,5 103 28,1 6,9 6,0 24,1 2,3 29,2 C C C C D A D D A 444 55,1 6 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 | nitial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 0.0 | 0.0 | 0:0 | 0:0 |
| 195 15.1 15.1 21.1 23.7 23.7 43.0 0.0 43.4 37.1 0.0 B B B C C C D A D D A 1370 | %ile BackOfQ(50%),veh/ln | 3.5 | 9.1 | 9.5 | 0.5 | 11.2 | 11.6 | 0.2 | 0.0 | 1.8 | 2.2 | 0.0 | 12.5 |
| 195 15,1 15,1 21,1 23,7 23,7 430 0.0 43,4 37,1 0.0 | Jnsig. Movement Delay, s/veh | | | | | | | | | | | | |
| B B C C C D A D D 1370 | _nGrp Delay(d),s/veh | 19.5 | 15.1 | 15.1 | 21.1 | 23.7 | 23.7 | 43.0 | 0.0 | 43.4 | 37.1 | 0.0 | 59.5 |
| 1370 1074 71 15.9 23.6 43.4 15 B C D D 14.8 71.9 10.7 32.6 86.7 55 37.8 4.0 6.0 4.0 6.5 6.0 4.5 6.5 7.5 23.0 34.0 15.0 37.5 61.0 5.5 46.5 7.5 10.3 28.1 6.9 6.0 24.1 2.3 29.2 0.6 3.3 0.1 0.3 9.5 0.0 2.2 C C | -nGrp LOS | В | В | В | ပ | ပ | ပ | O | Α | O | О | Α | ۳ |
| 15.9 23.6 43.4 B C D D 1 2 3 4 6 7 8 4.0 6.0 4.0 6.5 6.0 4.5 6.5 5.5 23.0 34.0 15.0 37.5 61.0 5.5 46.5 5.5 10.3 28.1 6.9 6.0 24.1 2.3 29.2 0.6 3.3 0.1 0.3 9.5 0.0 2.2 C C | Approach Vol, veh/h | | 1370 | | | 1074 | | | 71 | | | 444 | |
| 1 2 3 4 6 7 148 71.9 10.7 32.6 86.7 5.5 6.0 4.5 4.0 6.0 4.0 6.5 6.0 4.5 5.5 23.0 34.0 15.0 37.5 61.0 5.5 5.5 10.3 28.1 6.9 6.0 24.1 2.3 0.6 3.3 0.1 0.3 9.5 0.0 | Approach Delay, síveh | | 15.9 | | | 23.6 | | | 43.4 | | | 55.1 | |
| 148 71,9 10,7 32,6 86,7 55,5 10,0 8.0 10,0 32,6 86,7 55,5 10,2 33,0 34,0 15,0 37,5 61,0 5,5 10,3 28,1 6,9 6,0 24,1 2,3 0,6 3,3 0,1 0,3 9,5 0,0 C C | Approach LOS | | В | | | ပ | | | Ω | | | ш | |
| 14.8 71.9 10.7 32.6 86.7 5.5 4.0 6.0 4.0 6.5 6.0 4.5 5.5 23.0 34.0 15.0 37.5 61.0 5.5 5.5 10.3 28.1 6.9 6.0 24.1 2.3 0.6 3.3 0.1 0.3 9.5 0.0 | Timer - Assigned Phs | - | 2 | က | 4 | | 9 | 7 | 00 | | | | |
| 7,5 23.0 34.0 15.0 37.5 6.0 4.5 7.5 23.0 34.0 15.0 37.5 61.0 55.5 6.0 6.0 6.3 24.1 2.3 2.5 6.0 6.0 6.3 3.3 0.1 0.3 9.5 0.0 6.0 C. | Phs Duration (G+Y+Rc), s | 14.8 | 71.9 | 10.7 | 32.6 | | 86.7 | 5.5 | 37.8 | | | | |
| 23.0 34.0 15.0 37.5 61.0 5.5 10.3 28.1 6.9 6.0 24.1 2.3 0.6 3.3 0.1 0.3 9.5 0.0 25.2 C | Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | 4.5 | 6.5 | | | | |
| 10.3 28.1 6.9 6.0 24.1 2.3 0.6 3.3 0.1 0.3 9.5 0.0 25.2 C | Max Green Setting (Gmax), s | 23.0 | 34.0 | 15.0 | 37.5 | | 61.0 | 5.5 | 46.5 | | | | |
| 0.6 3.3 0.1 0.3 9.5 0.0 25.2 C | Max Q Clear Time (g_c+I1), s | 10.3 | 28.1 | 6.9 | 0.9 | | 24.1 | 2.3 | 29.5 | | | | |
| | Green Ext Time (p_c), s | 9.0 | 3.3 | 0.1 | 0.3 | | 9.5 | 0.0 | 2.2 | | | | |
| | Intersection Summary | | | | | | | | | | | | |
| | HCM 6th Ctrl Delay | | | 25.2 | | | | | | | | | |
| | HCM 6th LOS | | | ပ | | | | | | | | | |

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

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Synchro 10 Report Page 1

9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2020 Total AM Mitigated

| | | | | | | | | l | | | |
|---|----------|----------|------------|-------|------------------------|-----------|-------|-------|-------|-------|--|
| | 4 | 1 | 1 | \ | ţ | * | + | J | _ | • | |
| | | ì | • | • | | - | - | | • | , | |
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | * | 4 | * | je- | ₩\$ | F | 4413 | r | ** | ¥C_ | |
| Traffic Volume (vph) | 461 | 38 | 469 | 37 | 36 | 307 | 1316 | 51 | 1669 | 615 | |
| Future Volume (vph) | 461 | 38 | 469 | 37 | 36 | 307 | 1316 | 21 | 1669 | 615 | |
| Turn Type | Split | NA | vo+mq | Split | NA | Prot | NA | Prot | A | vo+mq | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | _ | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | വ | ∞ | 00 | വ | 2 | - | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 32.0 | 32.0 | 27.0 | 21.0 | 21.0 | 27.0 | 54.0 | 23.0 | 20.0 | 32.0 | |
| Total Split (%) | 24.6% | 24.6% | 20.8% | 16.2% | 16.2% | 20.8% | 41.5% | 17.7% | 38.5% | 24.6% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Lost Time Adjust (s) | 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 | 9.6 | 9.6 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Act Effct Green (s) | 24.9 | 24.9 | 42.4 | 8.1 | 8.1 | 17.4 | 68.3 | 9.8 | 57.2 | 87.8 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.33 | 90:0 | 90:0 | 0.13 | 0.53 | 0.07 | 0.44 | 89.0 | |
| v/c Ratio | 0.86 | 98.0 | 0.82 | 0.37 | 0.37 | 0.74 | 0.57 | 0.49 | 0.83 | 0.57 | |
| Control Delay | 95.4 | 95.1 | 34.7 | 1.79 | 32.0 | 63.9 | 23.3 | 71.6 | 37.1 | 7.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 95.4 | 95.1 | 34.7 | 1.79 | 32.0 | 63.9 | 23.3 | 71.6 | 37.1 | 7.2 | |
| TOS SOT | ш | ш | ပ | ш | ပ | ш | S | ш | ۵ | A | |
| Approach Delay | | 62.9 | | | 42.9 | | 30.8 | | 30.0 | | |
| Approach LOS | | ш | | | Q | | ပ | | ပ | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Length: 130 | | | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6: | SBT, Sta | rt of Gree | _ | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | dinated | | | | | | | | | | |
| Maximum v/c Ratio: 0.86 | | | | | | | | | | | |
| Intersection Signal Delay: 37.4 | 4. | | | Ī | Intersection LOS: D | LOS: D | | | | | |
| Intersection Capacity Utilization 81.1% | on 81.1% | | | ೦ | ICU Level of Service D | f Service | D | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | |

? Ø6 (R) 02 \$Ø **₹**

Splits and Phases: 9: Scottsdale Rd & Lincoln Dr

02/12/2019 CivTech BR

Smoke Tree Resort 2020 Total AM Mitigated

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | | | | | | | | | | | | , |
|------------------------------|-------|------|-----------|------|----------------|---------|-----------|------|------|------|-----------|------|
| | | Ì | • | • | | | - | - | | | • | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | 4 | ¥C. | K | * | | K | 441 | | je. | 444 | ×. |
| Traffic Volume (veh/h) | 461 | 38 | 469 | 37 | 36 | 48 | 307 | 1316 | 39 | 21 | 1669 | 615 |
| Future Volume (veh/h) | 461 | 38 | 469 | 37 | 36 | 48 | 307 | 1316 | 39 | 21 | 1669 | 615 |
| 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 | | 8 | | | 9 | | | 8 | | | 2 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 542 | 0 | 521 | 41 | 40 | 23 | 341 | 1462 | 43 | 27 | 1854 | 683 |
| Peak Hour Factor | 0.00 | 06:0 | 0.90 | 0.90 | 0.00 | 06:0 | 0.00 | 06:0 | 0.00 | 06:0 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 726 | 0 | 206 | 96 | 96 | 82 | 366 | 2123 | 62 | 74 | 1740 | 863 |
| Arrive On Green | 0.20 | 0.00 | 0.20 | 0.02 | 0.05 | 0.05 | 0.12 | 0.42 | 0.42 | 0.04 | 0.34 | 0.34 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 2008 | 150 | 1781 | 2106 | 1585 |
| Grp Volume(v), veh/h | 542 | 0 | 521 | 41 | 40 | 53 | 341 | 916 | 529 | 22 | 1854 | 683 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| O Serve(g_s), s | 18.6 | 0.0 | 26.5 | 5.9 | 2.8 | 4.3 | 12.6 | 30.5 | 30.5 | 4.1 | 44.3 | 44.3 |
| Cycle Q Clear(g_c), s | 18.6 | 0.0 | 26.5 | 5.9 | 2.8 | 4.3 | 12.6 | 30.5 | 30.5 | 4.1 | 44.3 | 44.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 726 | 0 | 206 | 95 | 95 | 82 | 366 | 1417 | 298 | 74 | 1740 | 863 |
| V/C Ratio(X) | 0.75 | 0.00 | 1.03 | 0.43 | 0.42 | 0.63 | 98.0 | 69:0 | 69:0 | 0.77 | 1.07 | 0.79 |
| Avail Cap(c_a), veh/h | 726 | 0 | 206 | 211 | 210 | 188 | 572 | 1417 | 299 | 243 | 1740 | 863 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 48.6 | 0.0 | 44.2 | 29.6 | 29.6 | 60.3 | 56.4 | 31.0 | 31.0 | 61.7 | 42.9 | 23.6 |
| Incr Delay (d2), s/veh | 3.8 | 0.0 | 47.8 | 1.7 | [] | 2.8 | 6.3 | 1.2 | 2.2 | 6.4 | 41.5 | 7.3 |
| 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 BackUrU(50%),ven/in | 8.6 | 0.0 | 8.77 | .3 | 3 | <u></u> | 2.8 | 177 | 13.9 | 7.0 | 72.1 | 24.4 |
| Unsig. Movement Delay, siven | F C 2 | 0 | 5 | 0 07 | 2 07 | 107 | 107 | ,,,, | 22.7 | 107 | 0.40 | 0.00 |
| Lingip Delay(u),s/veii | 4.2c | 0.0 | 1.27 F | 0.00 | . B | - СО | 02.7 F | 32.2 | 23.5 | - OO | 04.3 T | 20.7 |
| Approach Vol. veh/h | 2 | 1063 | | 1 | 134 | ı | 1 | 1846 | | ı | 2594 | |
| Approach Delay, s/veh | | 71.8 | | | 61.6 | | | 38.1 | | | 6.69 | |
| Approach LOS | | ш | | | ш | | | Q | | | ш | |
| Timer - Assianed Phs | - | 2 | | 4 | 2 | 9 | | 00 | | | | |
| Phs Duration (G+Y+Rc), s | 10.7 | 59.8 | | 32.0 | 20.5 | 50.0 | | 12.5 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.9 | | | | |
| Max Green Setting (Gmax), s | * 18 | 48.3 | | 26.5 | 21.5 | 44.3 | | 15.4 | | | | |
| Max U Clear Time (g_c+IT), s | P. 9 | 32.5 | | 28.5 | 14.6 | 46.3 | | 6.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.1 | | 0.0 | 0.4 | 0.0 | | 0.7 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 26.7 | | | | | | | | | |
| HCM 6th LOS | | | ш | | | | | | | | | |
| | | | J | | | | | | | | | |

Synchro 10 Report Page 10

neues

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement.

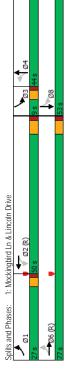
*HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

02/12/2019

CVTech BR

Smoke Tree Resort 1: Mockingbird Ln & Lincoln Drive 2020 Total PM

| | ^ | † | • | ţ | • | - | ۶ | → | |
|---|-------------|---------|----------|-------------|-----------------------|------------|-------|----------|--|
| ane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | |
| -ane Configurations | * | ₩. | * | ₩ | * | £, | * | æ. | |
| raffic Volume (vph) | 246 | 888 | 25 | 949 | 7 | 62 | 99 | 48 | |
| -uture Volume (vph) | 246 | 888 | 25 | 949 | 7 | 62 | 92 | 48 | |
| urn Type | pm+pt | NA | Perm | NA | Perm | NA | pm+pt | NA | |
| Protected Phases | | 9 | | 2 | | 4 | 3 | œ | |
| Permitted Phases | 9 | | 2 | | 4 | | ∞ | | |
| Detector Phase | - | 9 | 2 | 2 | 4 | 4 | 23 | ∞ | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 3.5 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 3.5 | 7.0 | |
| Minimum Split (s) | 8.0 | 27.0 | 27.0 | 27.0 | 33.5 | 33.5 | 8.0 | 33.5 | |
| otal Split (s) | 27.0 | 77.0 | 20.0 | 20.0 | 44.0 | 44.0 | 0.6 | 53.0 | |
| otal Split (%) | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | %6.9 | 40.8% | |
| (ellow Time (s) | 3.0 | 4.5 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 1.0 | 2.5 | |
| ost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| otal Lost Time (s) | 4.0 | 0.9 | 0.9 | 0.9 | 6.5 | 6.5 | 4.0 | 6.5 | |
| .ead/Lag | Lead | | Lag | Lag | Lag | Lag | Lead | | |
| .ead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | С-Мах | С-Мах | С-Мах | None | None | None | None | |
| Act Effct Green (s) | 101.1 | 99.1 | 76.2 | 76.2 | 11.2 | 11.2 | 20.9 | 18.4 | |
| Actuated g/C Ratio | 0.78 | 0.76 | 0.59 | 0.59 | 0.09 | 0.09 | 0.16 | 0.14 | |
| /c Ratio | 0.59 | 0.38 | 0.09 | 0.55 | 0.09 | 0.55 | 0.39 | 0.64 | |
| Control Delay | 11.8 | 6.2 | 10.4 | 19.8 | 54.7 | 61.1 | 51.9 | 27.6 | |
| Dueue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| otal Delay | 11.8 | 6.2 | 10.4 | 19.8 | 54.7 | 61.1 | 51.9 | 27.6 | |
| SO: | В | A | Ω | Ω | ٥ | ш | ۵ | O | |
| Approach Delay | | 7.4 | | 19.6 | | 9.09 | | 33.5 | |
| Approach LOS | | A | | В | | ш | | ပ | |
| ntersection Summary | | | | | | | | | |
| Sycle Length: 130 | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | phase 2: | WBTL an | d 6:EBTI | ., Start of | Green | | | | |
| Vatural Cycle: 90 | | | | | | | | | |
| Control Type: Actuated-Coordinated | dinated | | | | | | | | |
| Maximum v/c Ratio: 0.64 | | | | | | | | | |
| ntersection Signal Delay: 16.9 | 6. | | | 드 | Intersection LOS: B | LOS: B | | | |
| ntersection Capacity Utilization 67.8% | ion 67.8% | | | 2 | CU Level of Service C | of Service | S | | |
| Analysis Period (min) 15 | | | | | | | | | |



02/11/2019 Synchro 10 Report CivTech BR Page 1

Smoke Tree Resort 2020 Total PM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | 4 | † | <i>></i> | > | ţ | 4 | • | ← | • | ٠ | → | • |
|------------------------------|------|----------|-------------|-------------|----------|-------|------|----------|------|------|----------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | - | 4 | | r | 4 | | r | £3 | | K | 2 | |
| Traffic Volume (veh/h) | 246 | 888 | 29 | 25 | 949 | 99 | 7 | 62 | 20 | 99 | 48 | 156 |
| Future Volume (veh/h) | 246 | 888 | 29 | 25 | 949 | 99 | 7 | 62 | 20 | 99 | 48 | 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 | | 8 | | | 8 | | | 8 | | | 8 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 273 | 787 | 32 | 28 | 1054 | 73 | ∞ | 69 | 22 | 72 | 23 | 173 |
| Peak Hour Factor | 0.90 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 | 0.00 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 462 | 2612 | 82 | 411 | 2167 | 150 | 98 | 124 | 39 | 179 | 62 | 202 |
| Arrive On Green | 0.07 | 0.74 | 0.74 | 0.85 | 0.85 | 0.85 | 0.09 | 0.09 | 0.09 | 0.04 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1781 | 3513 | 114 | 553 | 3372 | 233 | 1155 | 1359 | 433 | 1781 | 386 | 1258 |
| Grp Volume(v), veh/h | 273 | 466 | 520 | 28 | 222 | 572 | ∞ | 0 | 91 | 72 | 0 | 226 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1850 | 553 | 1777 | 1828 | 1155 | 0 | 1792 | 1781 | 0 | 1644 |
| Q Serve(g_s), s | 6.4 | 13.0 | 13.0 | 1.0 | 10.1 | 10.1 | 6.0 | 0.0 | 6.3 | 4.7 | 0:0 | 17.4 |
| Cycle Q Clear(g_c), s | 6.4 | 13.0 | 13.0 | 1.0 | 10.1 | 10.1 | 9.3 | 0.0 | 6.3 | 4.7 | 0.0 | 17.4 |
| Prop In Lane | 1.00 | | 90.0 | 1.00 | | 0.13 | 1.00 | | 0.24 | 1.00 | | 0.77 |
| Lane Grp Cap(c), veh/h | 462 | 1321 | 1375 | 411 | 1142 | 1175 | 98 | 0 | 163 | 179 | 0 | 264 |
| V/C Ratio(X) | 0.59 | 0.38 | 0.38 | 0.07 | 0.49 | 0.49 | 0.09 | 0.00 | 0.56 | 0.40 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 653 | 1321 | 1375 | 411 | 1142 | 1175 | 314 | 0 | 217 | 179 | 0 | 588 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.54 | 0.54 | 0.54 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 6.9 | 5.9 | 5.9 | 3.4 | 4.1 | 4.1 | 62.0 | 0.0 | 9.99 | 49.8 | 0.0 | 53.1 |
| Incr Delay (d2), s/veh | 1.2 | 0.8 | 0.8 | 0.2 | 0.8 | 0.8 | 0.5 | 0.0 | 2.9 | 1.4 | 0.0 | 7.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0:0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.4 | 4.7 | 4.9 | 0.1 | 2.8 | 2.9 | 0.3 | 0.0 | 3.0 | 2.2 | 0.0 | 7.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 8.1 | 8.9 | 6.7 | 3.6 | 4.9 | 4.9 | 62.5 | 0.0 | 59.5 | 51.2 | 0.0 | 61.0 |
| LnGrp LOS | V | A | A | A | A | A | ш | A | ш | ٥ | A | ш |
| Approach Vol, veh/h | | 1292 | | | 1155 | | | 66 | | | 298 | |
| Approach Delay, s/veh | | 7.0 | | | 4.9 | | | 29.8 | | | 58.7 | |
| Approach LOS | | A | | | A | | | ш | | | ш | |
| Timer - Assigned Phs | - | 2 | က | 4 | | 9 | | 00 | | | | |
| Phs Duration (G+Y+Rc), s | 13.1 | 9.68 | 9.0 | 18.3 | | 102.7 | | 27.3 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 8.4 | 12.1 | 6.7 | 11.3 | | 15.0 | | 19.4 | | | | |
| Green Ext Time (p_c), s | 0.7 | 6.7 | 0.0 | 0.5 | | 8.6 | | 1.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 13.4 | | | | | | | | | |
| HCM 6th LOS | | | В | | | | | | | | | |

02/11/2019 Synchro 10 Report

Smoke Tree Resort 2020 Total PM Trinigs

| | 1 | † | ¥ | • | - | ٠ | - | |
|---|-------------|----------|----------|--------------|------------------------|------------|-------|--|
| ane Group | EBL | EBT | WBT | NBL | NBT | SBL | SBT | |
| ane Configurations | F | ₩ | ₩ | | 4 | * | 42 | |
| raffic Volume (vph) | 82 | 904 | 945 | - | 0 | 14 | 0 | |
| uture Volume (vph) | 82 | 904 | 945 | - | 0 | 14 | 0 | |
| Furn Type | pm+pt | NA | AA | Perm | NA | Perm | NA | |
| Protected Phases | 7 | 4 | ∞ | | 2 | | 9 | |
| Permitted Phases | 4 | | | 2 | | 9 | | |
| Detector Phase | 7 | 4 | ∞ | 2 | 2 | 9 | 9 | |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 3.5 | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | 7.0 | |
| Minimum Split (s) | 8.0 | 28.0 | 28.0 | 33.0 | 33.0 | 33.0 | 33.0 | |
| otal Split (s) | 20.0 | 94.0 | 74.0 | 36.0 | 36.0 | 36.0 | 36.0 | |
| otal Split (%) | 15.4% | 72.3% | 26.9% | 27.7% | 27.7% | 27.7% | 27.7% | |
| fellow Time (s) | 3.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 | |
| VII-Red Time (s) | 1.0 | 2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| ost Time Adjust (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| otal Lost Time (s) | 4.0 | 6.5 | 6.5 | | 0.9 | 0.9 | 0.9 | |
| .ead/Lag | Lead | | Lag | | | | | |
| .ead-Lag Optimize? | Yes | | Yes | | | | | |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max | C-Max | |
| Act Effet Green (s) | 0.89 | 65.5 | 51.3 | | 52.0 | 52.0 | 52.0 | |
| Actuated g/C Ratio | 0.52 | 0.50 | 0.39 | | 0.40 | 0.40 | 0.40 | |
| //c Ratio | 0.42 | 0.56 | 0.77 | | 0.00 | 0.03 | 0.13 | |
| Control Delay | 29.9 | 35.0 | 44.1 | | 0.0 | 28.9 | 0.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| otal Delay | 29.9 | 35.0 | 44.1 | | 0.0 | 28.9 | 0.3 | |
| SO: | S | O | ۵ | | A | O | ⋖ | |
| Approach Delay | | 34.5 | 44.1 | | | | 4.2 | |
| Approach LOS | | ပ | Ω | | | | A | |
| ntersection Summary | | | | | | | | |
| ycle Length: 130 | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | o phase 2:1 | NBTL and | 16:SBTL | Start of | Green | | | |
| Natural Cycle: 70 | | | | | | | | |
| Control Type: Actuated-Coordinated | rdinated | | | | | | | |
| Maximum v/c Ratio: 0.77 | | | | | | | | |
| ntersection Signal Delay: 37.4 | 7.4 | | | _ | Intersection LOS: D | n LOS: D | | |
| ntersection Capacity Utilization 59.2% | ion 59.2% | | | S | ICU Level of Service B | of Service | Ве | |
| Analysis Period (min) 15 | | | | | | | | |
| | | | | | | | | |

02/11/2019 Synchro 10 Report CivTech BR Page 3

Smoke Tree Resort 2020 Total PM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| | • | | , | ١ | Į | • | 1 | 4 | 4 | | | |
|------------------------------|------|----------|------|------|----------|------|--------------|-------|------|------|----------|------|
| | \ | Ť | ~ | - | , | / | | _ | • | ٠ | + | * |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | ₩ | | r | ₽ | | | ÷ | | K | 2, | |
| Traffic Volume (veh/h) | 82 | 904 | 2 | 0 | 945 | 25 | - | 0 | 2 | 14 | 0 | 93 |
| Future Volume (veh/h) | 82 | 904 | 2 | 0 | 945 | 25 | 1 | 0 | 2 | 14 | 0 | 93 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 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 | | N N | | | 9 | | | 9 | | | 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 | 94 | 1004 | 2 | 0 | 1050 | 28 | - | 0 | 2 | 16 | 0 | 103 |
| Peak Hour Factor | 06.0 | 06.0 | 06:0 | 06.0 | 06.0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.00 | 0.00 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 182 | 1571 | m | 22 | 1250 | 33 | 251 | 17 | 462 | 726 | 0 | 748 |
| Arrive On Green | 0.09 | 0.86 | 0.86 | 0.00 | 0.35 | 0.35 | 0.47 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h | 1781 | 3639 | 7 | 260 | 3536 | 94 | 453 | 36 | 876 | 1415 | 0 | 1585 |
| Grp Volume(v), veh/h | 94 | 490 | 516 | 0 | 528 | 220 | 3 | 0 | 0 | 16 | 0 | 103 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1869 | 260 | 1777 | 1853 | 1468 | 0 | 0 | 1415 | 0 | 1585 |
| Q Serve(g_s), s | 4.3 | 10.9 | 10.9 | 0.0 | 35.5 | 35.5 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 4.8 |
| Cycle Q Clear(g_c), s | 4.3 | 10.9 | 10.9 | 0.0 | 35.5 | 35.5 | 4.8 | 0.0 | 0.0 | 0.7 | 0.0 | 4.8 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.02 | 0.33 | | 19.0 | 1.00 | | 1.00 |
| -ane Grp Cap(c), veh/h | 182 | 767 | 807 | 22 | 628 | 655 | 730 | 0 | 0 | 726 | 0 | 748 |
| V/C Ratio(X) | 0.52 | 0.64 | 0.64 | 0.00 | 0.84 | 0.84 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.14 |
| 4vail Cap(c_a), veh/h | 317 | 1196 | 1258 | 148 | 923 | 962 | 730 | 0 | 0 | 726 | 0 | 748 |
| 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 |
| Jpstream Filter(I) | 0.93 | 0.93 | 0.93 | 0.00 | 1.00 | 1.00 | 1.00 | 00.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 28.4 | 9 | 2.8 | 0.0 | 38.6 | 38.6 | 18.2 | 0.0 | 0:0 | 18.3 | 0.0 | 19.4 |
| ncr Delay (d2), s/veh | 2.1 | 0.8 | 0.8 | 0.0 | 4.6 | 4.5 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.4 |
| nitial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 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 | 2.4 | 2.5 | 0.0 | 16.2 | 16.8 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 1.9 |
| Unsig. Movement Delay, s/veh | | | | d | 9 | | 0 | d | d | | c | 1 |
| LnGrp Delay(d),s/ven | 30.5 | 9.9 | 9.9 | 0.0 | 43.3 | 43.1 | 18.2 | 0.0 | 0.0 | 18.4 | 0.0 | 8.61 |
| LNGrp LUS | اد | ∢ . | ⋖ | ⋖ | اد | اد | 20 | ∢ | × | 20 | ∢ ! | 2 |
| Approach Vol, veh/h | | 1100 | | | 1078 | | | က | | | 119 | |
| Approach Delay, sweh | | 9.8 | | | 43.2 | | | 18.2 | | | 19.6 | |
| Approach LOS | | A | | | O | | | Ω | | | Ω | |
| Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 67.4 | | 62.6 | | 67.4 | 10.2 | 52.5 | | | | |
| Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.2 | | | | |
| Max Q Clear Time (g_c+I1), s | | 8.9 | | 12.9 | | 9.9 | 6.3 | 37.5 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 8.5 | | 9.0 | 0.1 | 8.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| | | | A 7C | | | | | | | | | |
| | | | 72.4 | | | | | | | | | |

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Smoke Tree Resort 2020 Total PM

4: Smoke Tree Access B & Lincoln Dr

| acitocontai | Int Delay, s/veh | Movement | Lane Configurations | Traffic Vol, veh/h | Future Vol, veh/h | Conflicting Peds, #/hr | Sign Control | RT Channelized | Storage Length | Veh in Median Storage | Grade, % | Peak Hour Factor | Heavy Vehicles, % | WYM FIOW | Major/Minor | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Mar Can 1 Manager | Mov Cap-1 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvm | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile U(ven |
|--------------|------------------|--------------|---------------------|--------------------|-------------------|------------------------|--------------|----------------|----------------|--------------------------|----------|------------------|-------------------|-----------|-------------|----------------------|---------|---------|---------------|----------------------|----------------------|----------------|--------------------|---------|---------|--------------------|--------------------|----------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| l . | | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | NBR | | 34 | 34 | 0 | Stop | ne | | , | | 06 | 2 | × | | 512 | | | 6.94 | | | 3.32 | 507 | | | 507 | /0 | | | | | | 3T | | | | | |
| | | NBL NE | > | | 18 | | Stop St | - None | 0 | 0 | 0 | 06 | 2 5 | 07 | or1 | 1622 5 | 1012 | | | 5.84 | | | | 312 | 202 | 00 | | 202 | 505 | NB | 18.1 | ပ | /BL WBT | 674 |)59 | 10.7 | <u>ه</u> | 0.7 |
| | | WBT N | ‡ | | 953 | | Free Si | one | , | 0 | | 8 | 2 5 | 6601 | Minor1 | 0 16 | | , | - 6 | - 2 | - 5 | . 3 | | | , | | Ι, | | , | | | | EBR WBL | | - 0.059 | | | |
| | | WBL W | | | 36 | 0 | ree F | - None | 25 | ÷ | | 06 | | 40 | or2 | 323 | · | | 4.14 | | | 2.22 | 674 | | | V L 7 | 5/4 | | | WB | 0.4 | | EBT E | ï | | ÷ | | |
| | | EBR M | | 70 | 20 | 0 | ree F | None | , | , | | 8 | 2 | 77 | Major2 | 0 1023 | | , | - | | | - 2 | | | | | | | | | | | NBLn1 E | 333 | 0.174 | 18.1 | ر د | 0.0 |
| | 0.7 | EBT E | ₹ | 901 | 901 | 0 | Free Free | 2 | , | | 0 | 06 | 2 5 | 1001 | Major1 | 0 | | , | | | | | | | | | | | | EB | 0 | | NB | | 0 | ,_ | | |
| | | | | | | | _ | | | orage, # | | _ | | | Ma | II. | | | | - | 2 | | Iver | | à | 9, | inver | nve u | | | ay, s | | r Mvmt | | atio | ay (s) | : | J(ven) |
| 5 | síveh | + | nfiguration | ol, veh/h | ol, veh/h | g Peds, | trol | nelized | ength- | edian St | | ır Facto | ehicles, | > | JOL | g Flow | Stage 1 | Stage 2 | dwy | dwy Stg | dwy Stg | Hdwy | 1 Mane | Stage 1 | Stage 2 | ockea, | - I Mane | Stage 1 | Stage 2 | _ | ntrol Del | S | ne/Majo | (veh/h) | IE V/C F | ntrol Del | e LOS | wille (|
| Inforcoction | Int Delay, s/veh | Movement | Lane Configurations | Traffic Vol, veh/h | Future Vol, veh/h | Conflicting Peds, #/hr | Sign Control | RT Channelized | Storage Length | Veh in Median Storage, # | Grade, % | Peak Hour Factor | Heavy Vehicles, % | MVMT FIOW | Major/Minor | Conflicting Flow All | St | Š | Critical Hdwy | Critical Holwy Stg 1 | Critical Holwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | iñ i | יאל ולי | Platoon blocked, % | Moy Cap-1 Maneuver | WOV CA | žŠ | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(ven) |

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Synchro 10 Report Page 6

Smoke Tree Resort 2020 Total PM

5: Lincoln Medical West & Lincoln Dr $_{\mbox{\scriptsize HCM 6th TWSC}}$

| WBT NBL NBI WBT NBL NBI WBT NBL NBI O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Int Delay, s/veh | 0.7 | | | | | | |
|---|---|-------|----------|--------|------|--------|------|---|
| tions ↑₽ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ | | EBT | | WBL | WBT | NBL | NBR | ~ |
| h 928 7 21 959 30 h 728 7 21 959 30 h 728 7 21 959 30 l 70 0 0 0 0 0 0 0 l | Lane Configurations | \$ | | r | ‡ | 2- | | |
| h 928 7 21 959 30 Free Free Free Stop 0 0 0 0 None | Traffic Vol, veh/h | 928 | 7 | 71 | 626 | 30 | 26 | |
| None | Future Vol, veh/h | 928 | 7 | 21 | 626 | 30 | 26 | |
| Free Free Free Free Stop | eds, #/hr | 0 | | 0 | 0 | 0 | 0 | |
| Storage, # 0 | | 99 | | Free | Free | Stop | Stop | 0 |
| blorage, # 0 | RT Channelized | • | None | • | None | • | None | |
| Storage,# 0 | Storage Length | ٠ | • | 22 | • | 0 | | |
| 0 | Veh in Median Storage, | | | | 0 | 0 | , | |
| 190 90 90 90 90 90 90 90 90 90 90 90 90 9 | Grade, % | 0 | | ' | 0 | 0 | ľ | |
| 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 06 | 06 | 8 | 06 | 8 | 8 | |
| 1031 8 23 1066 33 2 | Heavy Vehicles, % | 7 | 2 | 7 | 2 | 7 | 2 | 2 |
| | | 1031 | ∞ | 23 | 1066 | 33 | 29 | 6 |
| Minori M | | | | | | | | |
| 0 0 1039 0 1614 52 1035 4.14 - 6.84 6.9 4.14 - 6.84 6.9 4.14 - 6.84 6.9 2.22 - 5.84 2.22 - 3.52 3.3 665 - 95 50 665 - 95 50 665 - 92 50 665 - 92 50 665 - 92 50 5.24 6.52 - 92 5.24 2.22 5.24 2.22 2.22 5.24 2.22 2.22 2.22 2.22 5.24 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 | | ajor1 | 2 | 1ajor2 | 2 | linor1 | | |
| 1035 1035 4.14 - 6.54 6.9 4.14 - 6.58 6.9 2.22 - 3.52 3.3 6.65 - 92 5.0 6.65 - 92 5.0 6.65 - 92 5.0 6.65 - 92 5.0 6.65 - 92 5.0 6.65 - 92 5.0 6.65 - 92 5.0 2.07 5.24 2.07 2.07 2.07 2.07 2.07 2.07 2.07 2.07 2.07 | Conflicting Flow All | 0 | | 1039 | 0 | 1614 | 520 | |
| 4.14 - 6.84 6.9 4.14 - 6.84 6.9 2.22 - 3.52 3.3 6.65 - 95 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 5.24 5.24 5.24 2.22 2.22 2.22 2.22 2.22 2.22 2.22 2.22 | Stage 1 | | | | | 1035 | | |
| 4.14 - 6.84 6.9 2.22 - 5.84 2.22 - 3.52 3.3 6.65 - 95 50 6.65 - 95 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 50 6.65 - 92 6.65 - 92 6.65 - 92 6.65 - 92 6.65 - 92 6.65 - 92 6.65 - 92 6.65 - 92 6.65 - 6.65 6.65 6.65 6.65 | Stage 2 | | ' | ' | ' | 579 | ľ | |
| 1.00 1.00 1.00 | Critical Hdwy | | | 4.14 | | 6.84 | 6.94 | 7 |
| 5.84 5.84 | Critical Hdwy Sta 1 | | | ' | | 5.84 | ľ | |
| EB WE WE WE WE WE WE WE CASES 1.75 2.33 3.34 3.34 3.34 3.34 3.34 3.34 3.34 | Critical Hdwy Stg 2 | | | | | 5 84 | ľ | |
| 1 | Follow-IID Howy | | | 2 22 | | 3.52 | 3 32 | |
| EB WB NBM NBM NBM NBM NBM NBM NBM NBM NBM NB | Dot Cap 1 Mapouner | | | 445 | | 9 | 501 | |
| EB WB NB | ru cap-i maneuver | | | 000 | | 000 | 200 | |
| EB WB NB | Stage I | ٠ | ١ | ١ | ١ | 303 | | |
| EB WB NB NBIA1 EBT EBR WBL WB NBIA1 EBT EBR WBL WB 285 - 665 0.218 - 1065 21.1 - 1065 | Stage 2 | | • | • | • | 524 | , | |
| 10 10 10 10 10 10 10 10 | Platoon blocked, % | ٠ | ٠ | | ٠ | | | |
| EB WB NB WB WB NB | Mov Cap-1 Maneuver | | 1 | 999 | 1 | 92 | 501 | |
| EB WB NB O 0.2 21.1 NBLN1 EBT EBR WBL WB 23.18 - 0.035 21.1 - 10.65 C - 0.035 21.1 - 10.65 | Mov Cap-2 Maneuver | ٠ | • | • | • | 207 | | |
| EB WB NB | Stage 1 | | | | • | 292 | ľ | |
| EB WB NB 0 0.2 21.1 C C NBLn1 EBT EBR WBL WB 285 - 665 0.278 - 0.035 21.1 - 10.6 C C | Stage 2 | | | | ' | 524 | ľ | |
| EB WB NB | • | | | | | | | |
| 0 0.2 21.1 C C C C C C C C C C C C C C C C C C | Approach | EB | | WB | | NB | | |
| NBLAT EBT EBR WBL WB 285 - 665 0.218 - 0.035 21.1 - 106 | HCM Control Delay, s | 0 | | 0.2 | | 21.1 | | |
| NBLn1 EBT EBR WBL WB 285 665 665 603 | HCM LOS | | | | | ပ | | |
| NBIn1 EBT EBR WBL WB 285 - 665 0.218 - 0.035 21.1 - 10.6 C - B | | | | | | | | |
| 285 - 665 0.218 - 0.035 21.1 - 10.6 C - B | Minor Lane/Major Mvmt | 2 | BLn1 | EBT | EBR | WBL | WBT | |
| 0.218 - 0.035 21.1 - 10.6 C - B | Capacity (veh/h) | | 285 | | | 999 | ľ | |
| 21.1 10.6 C B | HCM Lane V/C Ratio | | 0.218 | | | 0.035 | ľ | |
| B | HCM Control Delay (s) | | 21.1 | | | 10.6 | | |
| , do (40.)C | HCM Lane LOS | | U | 1 | ' | В | ľ | |
| · · | () () () () () () () () () () | | 0 | | | | | |

Smoke Tree Resort 6: Lincoln Medical East & Lincoln Dr 2020 Total PM

| Intersection | | | | | | | |
|------------------------|--------|---------|--------|------|--------|------|--|
| Int Delay, s/veh | 0.2 | | | | | | |
| Movement | EBT | EBR WBL | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | | * | | * | |
| Traffic Vol, veh/h | 950 | 4 | 0 | 616 | 2 | 90 | |
| Future Vol, veh/h | 950 | 4 | 0 | 616 | 7 | 8 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | 1 | None | 1 | None | | None | |
| Storage Length | | | | | | 0 | |
| Veh in Median Storage, | # | • | | 0 | 0 | ٠ | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | |
| Heavy Vehicles, % | 7 | 7 | 2 | 2 | 7 | 7 | |
| Mvmt Flow | 1056 | 4 | 0 | 1088 | 2 | 33 | |
| | | | | | | | |
| Major/Minor N | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | | ٠ | 1602 | 230 | |
| Stage 1 | 1 | 1 | 1 | 1 | 1058 | 1 | |
| Stage 2 | • | • | • | 1 | 244 | ٠ | |
| Critical Hdwy | 1 | 1 | 1 | 1 | 6.84 | 6.94 | |
| Critical Holwy Stg 1 | • | • | • | • | 5.84 | ٠ | |
| Critical Hdwy Stg 2 | • | | 1 | • | 5.84 | • | |
| Follow-up Hdwy | • | ٠ | | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 0 | • | 96 | 493 | |
| Stage 1 | • | ٠ | 0 | • | 295 | ٠ | |
| Stage 2 | • | • | 0 | • | 246 | • | |
| Platoon blocked, % | 1 | 1 | | • | | | |
| Mov Cap-1 Maneuver | • | • | • | 1 | 96 | 493 | |
| Mov Cap-2 Maneuver | • | ٠ | • | ٠ | 214 | ٠ | |
| Stage 1 | 1 | • | • | • | 295 | • | |
| Stage 2 | • | • | • | • | 246 | ٠ | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 12.8 | | |
| HCM LOS | | | | | В | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBT | | |
| Capacity (veh/h) | | 493 | | | • | | |
| HCM Lane V/C Ratio | | 890:0 | | ٠ | • | | |
| HCM Control Delay (s) | | 12.8 | • | • | • | | |
| HCM Lane LOS | | ω ; | 1 | • | • | | |
| HCM 95th %tile Q(veh) | | 0.2 | • | • | • | | |
| | | | | | | | |

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02/11/2019 CivTech BR

Smoke Tree Resort 2020 Total PM

7: Apartment Drwy & Lincoln Dr

| Movement EBI Lane Configurations Traffic Vol, veh/h | | | | | | | | | | | | |
|---|--------|--------|--------|--------------|------|--------|-------|-----------------|----------|------|------|--|
| ane Contigurations raffic Vol, veh/h | ٠, | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| ffic Vol, veh/h | ₹ + | | | * | | | 4 | | - | | r_ | |
| | 7 918 | | | 883 | 6 | 89 | က | 46 | _ | 0 | 32 | |
| uture Vol, veh/h | 7 918 | | | 883 883 | 6 | 89 | က | 46 | 7 | 0 | 32 | |
| eds, #/hr | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control Free | e Free | Eree | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | |
| | į. | - None | | 1 | None | 1 | 1 | None | 1 | 1 | None | |
| | 25 | | 25 | • | • | • | • | • | 0 | • | 0 | |
| Veh in Median Storage, # | - | - 0 | • | 0 | • | • | 0 | • | ٠ | 0 | | |
| Grade, % | , | 0 | | 0 | | | 0 | | | 0 | | |
| Peak Hour Factor 9 | 06 06 | 06 (| 06 | 8 | 8 | 06 | 8 | 06 | 8 | 06 | 06 | |
| 0 | | 2 2 | 2 | 2 | 2 | 2 | 2 | 7 | 7 | 7 | 2 | |
| Wvmt Flow | 8 1020 | 47 | 7 | 981 | 9 | 16 | က | 24 | ∞ | 0 | 36 | |
| | | | | | | | | | | | | |
| Major/Minor Major1 | _ | | Major2 | | _ | Minor1 | | 2 | Minor2 | | | |
| Conflicting Flow All 991 | | 0 0 | 1067 | 0 | 0 | 1565 | 2065 | 534 | 1528 | | 496 | |
| Stage 1 | į. | | • | | • | 1060 | 1060 | • | 1000 | • | | |
| Stage 2 | , | | | | • | 202 | 1005 | ٠ | 528 | ٠ | | |
| Critical Hdwy 4.14 | 4 | | 4.14 | 1 | 1 | 7.54 | 6.54 | 6.94 | 7.54 | 1 | 6.94 | |
| Critical Hdwy Stg 1 | | | ľ | | | 6.54 | 5.54 | ٠ | 6.54 | ٠ | | |
| Critical Hdwy Stg 2 | ļ, | Ì | • | 1 | • | 6.54 | 5.54 | 1 | 6.54 | 1 | | |
| Follow-up Hdwy 2.22 | 2 | | 2.22 | | | 3.52 | 4.02 | 3.32 | 3.52 | • | 3.32 | |
| Pot Cap-1 Maneuver 693 | 3 | | 649 | | | ~ 75 | 24 | 491 | 8 | 0 | 519 | |
| Stage 1 | , | ľ | ' | | ' | 239 | 299 | | 261 | 0 | | |
| Stage 2 | | | 1 | | • | 518 | 317 | 1 | 205 | 0 | | |
| Platoon blocked, % | | | | 1 | | | | | | | | |
| Mov Cap-1 Maneuver 693 | 23 | 1 | 649 | • | 1 | ~ 68 | 23 | 491 | 19 | 1 | 519 | |
| Mov Cap-2 Maneuver | , | | • | | • | ~ 68 | 23 | • | 19 | • | | |
| Stage 1 | ì | | 1 | 1 | • | 236 | 295 | 1 | 258 | 1 | ì | |
| Stage 2 | , | | ' | ' | 1 | 474 | 314 | • | 436 | • | | |
| Approach | EB | | WB | | | 8 | | | SB | | | |
| rol Delay, s | _ | ı | 0.1 | | | 258 | | | 21.4 | | | |
| | | | ; | | | - | | | C | | | |
| | | | | | | | | | , | | | |
| Vinor Lane/Major Mvmt | NBLn1 | I EBL | EBT | EBR | WBL | WBT | WBR S | WBR SBLn1 SBLn2 | BLn2 | | | |
| Capacity (veh/h) | 104 | 1 693 | 1 | | 649 | | | 19 | 519 | | | |
| HCM Lane V/C Ratio | 1.282 | 0.011 | ľ | | 0.01 | | • | 0.116 | 0.075 | | | |
| HCM Control Delay (s) | 258 | 3 10.3 | | 1 | 10.6 | 1 | • | 65.7 | 12.5 | | | |
| HCM Lane LOS | | B | ľ | ľ | В | ľ | • | ш | В | | | |
| HCM 95th %tile Q(veh) | 9.1 | | | | 0 | | • | 0.4 | 0.2 | | | |
| Notes | | | | | | | | | | | | |

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Smoke Tree Resort 2020 Total PM

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|---------------------|------|--------------|------|----------|------|------|--|
| Int Delay, síveh | 2.5 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | EBR WBL WBT WBR NBL | | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | F | ╬ | | F | ₽ | | | 4 | | <u>r</u> | | ¥C | |
| Traffic Vol, veh/h | = | 912 | 22 | 63 | 881 | ∞ | 14 | - | 92 | 4 | 0 | 7 | |
| Future Vol, veh/h | Ξ | 912 | 22 | 63 | 88 | ∞ | 14 | - | 92 | 4 | 0 | 7 | |
| 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 | | 1 | None | 1 | • | None | | 1 | None | | 1 | None | |
| Storage Length | 25 | | ٠ | 22 | | ٠ | ٠ | ٠ | ٠ | 0 | | 0 | |
| Veh in Median Storage, # | * | 0 | • | | 0 | • | | 0 | 1 | | 0 | ì | |
| Grade, % | | 0 | • | • | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | ٠ | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 06 | 06 | 8 | 06 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 7 | 2 | 2 | 7 | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 12 | 1013 | 61 | 2 | 616 | 6 | 16 | _ | 102 | 4 | 0 | ∞ | |
| | | | | | | | | | | | | | |

| | - 494 | | | - 6.94 | | | - 3.32 | 0 521 | - 0 | - 0 | | - 521 | | | | | | | | | | | | |
|-------------|----------------------|-----------|----------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| Minor2 | 1655 | 1124 | 531 | 7.54 | 6.54 | 6.54 | 3.52 | | 219 (| 200 | | 45 | 45 | 215 | 387 | SB | 41.7 | ш | BLn2 | 521 | 0.015 | 12 | В | 0 |
| 2 | 5 537 | ٠ | | 1 6.94 | , | , | 2 3.32 | 1 488 | ٠. | | | 3 488 | | • | | | | | S SBLn1S | - 45 | - 0.099 0.015 | - 93.6 | ш. | - 0.3 |
| Minor1 | 1698 2196 | 1068 1068 | 630 1128 | 7.54 6.54 | 6.54 5.54 | 6.54 5.54 | 3.52 4.02 | | 237 296 | 436 278 | | 54 39 | 54 39 | 233 291 | 383 248 | NB | 37.3 | ш | WBT WBR SBLn1 SBLn2 | | | ì | | |
| M | 0 | , | | ì | , | , | ٠ | | | ÷ | | i | | | | | | | WBL | 645 | - 0.109 | 11.3 | В | 0.4 |
| or2 | 1074 0 | • | | 4.14 | | | 2.22 | 645 - | | | | 645 - | | | | WB | 0.7 | | EBT EBR | | | • | | • |
| Major2 | 0 10 | ÷ | | - 4 | | | - 2 | - | | ì | | , | | | | | | | EBL E | 969 | 0.018 | 10.3 | В | 0.1 |
| _ | 0 8 | 1 | | 4 - | | | | اگ | | 1 | | - 969 | | | | EB | - | | NBLn1 | 226 | 0.526 0.018 | 37.3 | ш | 2.8 |
| Major1 | ₩ 988 | | | 4.14 | _ | 2 | 2.22 | ver 695 | | | % | | nver | | | ш | 17, S 0.1 | | Mvmt | | atio | 1y (s) | | (veh) |
| Major/Minor | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

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Smoke Tree Resort 2020 Total PM

9: Scottsdale Rd & Lincoln Dr Timings

| • | SBR | * | 202 | 202 | hm+ov | 4 | 9 | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 84.5 | 0.65 | 0.53 | 11.8 | 0.0 | 11.8 | В | | | | | | | | | | | | |
|-------------|------------|---|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| → | SBT | 444 | 1569 | 1569 | NA | 9 | | 9 | | 10.0 | 16.0 | 57.0 | 43.8% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | C-Max | 54.3 | 0.42 | 0.82 | 38.0 | 0.0 | 38.0 | ۵ | 33.2 | ပ | | | | | | | | | | |
| ۶ | SBL | <u>, , , , , , , , , , , , , , , , , , , </u> | 61 | 61 | Prot | | | - | | 2.0 | 11.0 | 14.0 | 10.8% | 3.3 | 2.0 | 0.0 | 5.3 | Lead | | None | 7.9 | 90:0 | 0.64 | 85.4 | 0.0 | 85.4 | ш | | | | | | | | | | | | |
| ← | NBT | 4413 | 1624 | 1624 | ¥ | 2 | | 2 | | 10.0 | 16.7 | 73.0 | 56.2% | 4.7 | 1.0 | 0.0 | 2.7 | Lag | | None | 70.4 | 0.54 | 89.0 | 23.7 | 0.0 | 23.7 | S | 32.3 | O | | | | | | | | | ш | |
| • | NBL | K. | 427 | 427 | Prot | 2 | | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 21.6 | 0.17 | 0.83 | 9.59 | 0.0 | 9.59 | ш | | | | | | | | | | LOS: D | ICU Level of Service E | |
| ţ | WBT | ₩. | 62 | 62 | ¥ | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.9 | | | None | 7.3 | 90:0 | 0.58 | 37.9 | 0.0 | 37.9 | ۵ | 52.2 | D | | | | | | | | Intersection LOS: D | U Level of | |
| > | WBL | je- | 99 | 99 | Spill | ∞ | | ∞ | | 7.0 | 13.0 | 13.0 | 10.0% | 3.6 | 2.0 | 0.0 | 9.6 | | | None | 7.3 | 90:0 | 0.63 | 8.98 | 0.0 | 8.98 | ш | | | | | | _ | | | | ≟ | 2 | |
| <i>></i> | EBR | *- | 446 | 446 | vo+mq | 2 | 4 | 2 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | Lead | | None | 46.1 | 0.35 | 0.82 | 22.9 | 0.0 | 22.9 | O | | | | | | t of Gree | | | | | | |
| † | EBT | 4 | 99 | 99 | NA | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 24.5 | 0.19 | 1.02 | 111.1 | 0.0 | 111.1 | ш | 73.0 | ш | | | | SBT, Star | | | | | | |
| 1 | EBL | * | 272 | 527 | Spill | 4 | | 4 | | 7.0 | 13.0 | 30.0 | 23.1% | 4.0 | 1.5 | 0.0 | 5.5 | | | None | 24.5 | 0.19 | 1.02 | 111.5 | 0.0 | 111.5 | ш | | | | | | to phase 6: | | rdinated | | 1.0 | tion 83.0% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | FOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 1.02 | Intersection Signal Delay: 41.0 | Intersection Capacity Utilization 83.0% | Analysis Period (min) 15 |

Spilts and Phases: 9: Scottsdale Rd & Lincoln Dr

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Smoke Tree Resort 2020 Total PM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | 1 | † | <u> </u> | / | ļ | 4 | • | — | • | ٠ | → | • |
|---------------------------------------|-------------|----------|----------|----------|-------|------|------|----------|-------------|------|----------------------------|-------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | je- | 4 | ¥. | <u>r</u> | ₩ | | K. | 4413 | | je- | 444 | ¥. |
| Traffic Volume (veh/h) | 527 | 99 | 446 | 99 | 62 | 72 | 427 | 1624 | 45 | 61 | 1569 | 505 |
| Future Volume (veh/h) | 527 | 26 | 446 | 26 | 62 | 72 | 427 | 1624 | 45 | 61 | 1569 | 202 |
| Initial Q (Qb), veh | 0 6 | 0 | 0 6 | 0 6 | 0 | 0 6 | 0 6 | 0 | 0 0 | 0 0 | 0 | 0 0 |
| Ped-bike Auj(A_pur) Darking Birs Adi | 8.6 | 100 | 8.6 | 8.6 | 100 | 8.6 | 8.6 | 0 | 00.1 | 00.1 | 100 | 1.00 |
| Work Zone On Approach | 3 | 8 8 | 8. | 8. | 8 8 | 8: | 3. | 8 8 | 90:1 | 0.1 | 0 0 0 0 0 0 | 00:1 |
| Adj Sat Flow, veh/h/In | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 630 | 0 | 496 | 62 | 69 | 80 | 474 | 1804 | 20 | 89 | 1743 | 561 |
| Peak Hour Factor | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 0.00 | 0.00 | 0.00 | 06.0 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 671 | 0 | 543 | 101 | 101 | 06 | 532 | 2561 | 71 | 87 | 2015 | 924 |
| Arrive On Green | 90:0 | 0.00 | 90:0 | 90:0 | 90:0 | 90.0 | 0.15 | 0.50 | 0.50 | 0.02 | 0.39 | 0.39 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5107 | 141 | 1781 | 2106 | 1585 |
| Grp Volume(v), veh/h | 630 | 0 | 496 | 62 | 69 | 8 | 474 | 1202 | 652 | 89 | 1743 | 261 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1845 | 1781 | 1702 | 1585 |
| Q Serve(g_s), s | 22.9 | 0.0 | 24.5 | 4.4 | 2.0 | 6.5 | 17.5 | 35.4 | 35.4 | 4.9 | 40.8 | 29.7 |
| Cycle Q Clear(g_c), s | 22.9 | 0.0 | 24.5 | 4.4 | 2.0 | 6.5 | 17.5 | 35.4 | 35.4 | 4.9 | 40.8 | 29.7 |
| Prop In Lane | 1.00 | | 1:00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 671 | 0 | 543 | 101 | 101 | 06 | 532 | 1707 | 925 | 87 | 2015 | 924 |
| V/C Ratio(X) | 0.94 | 0.00 | 0.91 | 0.61 | 0.68 | 0.89 | 0.89 | 0.70 | 0.70 | 0.78 | 0.87 | 0.61 |
| Avail Cap(c_a), veh/h | 671 | 0 | 543 | 101 | 101 | 06 | 651 | 1762 | 955 | 119 | 2015 | 924 |
| HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1:00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1:00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 60.2 | 0.0 | 46.0 | 6.65 | 60.1 | 6.09 | 53.9 | 25.0 | 25.0 | 61.2 | 36.2 | 17.5 |
| Incr Delay (d2), s/veh | 20.7 | 0.0 | 19.7 | 7.6 | 14.4 | 57.9 | 11.3 | 1.0 | 1.9 | 13.9 | 5.3 | 3.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.9 | 0.0 | 17.6 | 2.2 | 2.6 | 4.1 | 8.4 | 14.3 | 15.7 | 5.6 | 17.7 | 17.2 |
| Unsig. Movement Delay, siven | 000 | C | L 37 | 3 2 7 | 7 1/2 | 1100 | C 37 | 0.70 | 0.70 | 1 17 | N 1 N | N 0C |
| Lingip Delay(u), 3/veii Lingin LOS | 00.7 H | 0:0 A | . H | | O. T. | 0.01 | 2. Z | 0.02 | , 20.3 C | т. | <u>†</u> | F.0.5 |
| Approach Vol. veh/h | | 1126 | ı | | 211 | | | 2328 | | | 2372 | |
| Approach Delay, s/veh | | 74.2 | | | 89.3 | | | 34.2 | | | 37.4 | |
| Approach LOS | | ш | | | ш | | | ပ | | | D | |
| Timer - Assigned Phs | | 2 | | 4 | 2 | 9 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.6 | 70.9 | | 30.0 | 25.5 | 57.0 | | 13.0 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.9 | | | | |
| Max Green Setting (Gmax), s | * 8.7 | 67.3 | | 24.5 | 24.5 | 51.3 | | 7.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.9 | 37.4 | | 26.5 | 19.5 | 42.8 | | 8.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.9 | | 0.0 | 0.5 | 2.5 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 44.9 | | | | | | | | | |
| HCM 6th LOS | | | Ω | | | | | | | | | |
| | | | | | | | | | | | | |

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Smoke Tree Resort 2020 Total PM

10: Quail Run Rd & Access A

| Movement | MBI | WBD | MRT | MRD | S | CRT | |
|--------------------------|------------|--------------|----------|-------|--------|------|-----|
| novement | 104 | 104 | • | 101 | 200 | 2 | * |
| Lane Configurations | <u>}</u> - | | 4 | | | * | ·** |
| Traffic Vol, veh/h | 0 | - | 0 | 0 | _ | | 0 |
| Future Vol, veh/h | 0 | | 0 | 0 | _ | | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free | 90 |
| RT Channelized | 1 | None | 1 | None | • | None | Đ. |
| Storage Length | 0 | • | • | | | | |
| Veh in Median Storage, # | 0 #'6 | • | 0 | ٠ | • | | 0 |
| Grade, % | 0 | ٠ | 0 | | | - | 0 |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 06 | 6 | 06 |
| Heavy Vehicles, % | 2 | 2 | 7 | 2 | 2 | | 2 |
| Mvmt Flow | 0 | - | 0 | 0 | _ | | 0 |
| | | | | | | | |
| | Minor1 | 2 | Major1 | 2 | Major2 | | |
| Conflicting Flow All | 2 | 0 | 0 | 0 | 0 | | 0 |
| Stage 1 | 0 | • | | | | | |
| Stage 2 | 2 | , | , | • | | | |
| 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 | ٠ | • | 2.218 | | |
| Pot Cap-1 Maneuver | 1021 | 1 | 1 | | | | |
| Stage 1 | , | , | , | • | | | |
| Stage 2 | 1021 | • | | | | | |
| Platoon blocked, % | | | ٠ | ٠ | | | |
| Mov Cap-1 Maneuver | 1021 | • | • | | 1 | | |
| Mov Cap-2 Maneuver | 1021 | ٠ | ٠ | ٠ | • | | |
| Stage 1 | • | • | • | | 1 | | |
| Stage 2 | 1021 | • | • | • | 1 | | |
| | | | | | | | |
| Approach | WB | | NB | | SB | | |
| HCM Control Delay, s | | | 0 | | | | |
| HCM LOS | | | | | | | |
| Minor Lane/Major Mvmt | †L | NBT | NBRWBLn1 | 'BLn1 | SBL | SBT | 37 |
| Capacity (veh/h) | | | | | | | |
| HCM Lane V/C Ratio | | ٠ | ٠ | | | | |
| HCM Control Delay (s) | | • | • | • | | | |
| HCM Lane LOS | | • | , | • | 1 | | |
| | | | | | | | |

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Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement

"HCM oth computational engine requires equal clearance times for the phases crossing the barrier.

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Smoke Tree Resort 2020 Total PM Mitigated

1: Mockingbird Ln & Lincoln Drive

¥ 8 4 § ¥ 7.0 33.5 53.0 10.8% 4.0 2.5 0.0 6.5 Lag Yes None 21.0 0.16 0.59 24.8 3.5 8.0 19.0 14.6% 3.0 1.0 0.0 4.0 1.0 4.0 1.0 0.0 25.5 0.28 43.4 43.4 65 65 pm+pt Intersection LOS: B ICU Level of Service C 7.0 33.8% 44.0 4.0 2.5 0.0 6.5 Lag Yes None 11.2 0.09 0.05 61.1 E 59.2 5.0 9.5 10.0 7.7% 3.5 1.0 0.0 0.0 4.5 4.5 17.6 0.14 0.01 38.1 0.0 0.0 38.1 Cycle Length: 130
Actuard Cycle Length: 130
Offiset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90 949 949 NA 25 25 Perm 15.0 27.0 40.0 30.8% 4.5 1.5 0.0 6.0 1.8 7 kes C-Max 7.2 0.76 0.16 0.16 8.5 8.5 C-Max 94.5 0.73 0.40 8.4 8.4 8.4 15.0 27.0 67.0 51.5% 4.5 1.5 0.0 \$88 888 NA Intersection Signal Delay: 16.4 Intersection Capacity Utilization 67.8% Analysis Period (min) 15 3.5 8.0 27.0 20.8% 3.0 1.0 0.0 4.0 1.0 4.0 1.0 0.0 9.6.5 0.74 17.6 17.6 246 246 pm+pt Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.65 Lane Configurations Traffic Volume (vph) Future Volume (vph) Switch Phase
Minimum Initial (s)
Minimum Initial (s)
Minimum Spit (s)
Toda Spit (%)
Yellow Time (s)
All-Red Time (s)
Lost Time Adjust (s)
Toda Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio v/c Ratio Intersection Summary Protected Phases Permitted Phases Approach Delay Approach LOS Detector Phase Control Delay Queue Delay Total Delay LOS Turn Type

₩ 604 ě 1: Mockingbird Ln & Lincoln Drive **★** Ø2 (R) Splits and Phases: ğ

- DE (R)

√ Ø7 **√** Ø8

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Smoke Tree Resort 2020 Total PM Mitigated

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | 4 | † | <i>></i> | > | ţ | ✓ | • | • | • | ٠ | → | • |
|---|------|------|-------------|-------------|------|------|------|------|------|------|----------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | ₩. | | r | ₩ | | r | £, | | * | £, | |
| Traffic Volume (veh/h) | 246 | 888 | 29 | 25 | 646 | 99 | 7 | 62 | 20 | 99 | 48 | 156 |
| Future Volume (veh/h) | 246 | 888 | 29 | 22 | 949 | 99 | 7 | 62 | 20 | 99 | 48 | 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 | | 2 | | | 2 | | | 2 | | | 2 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 273 | 987 | 32 | 28 | 1054 | 73 | ∞ | 69 | 22 | 72 | 23 | 173 |
| Peak Hour Factor | 0.90 | 06:0 | 0.00 | 06:0 | 0.00 | 0.00 | 06:0 | 0.00 | 06:0 | 06:0 | 0.00 | 0.00 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 368 | 2456 | 80 | 377 | 1992 | 138 | 103 | 173 | 22 | 244 | 62 | 202 |
| Arrive On Green | 0.08 | 0.70 | 0.70 | 0.59 | 0.59 | 0.59 | 0.01 | 0.13 | 0.13 | 0.05 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1781 | 3513 | 114 | 553 | 3372 | 233 | 1781 | 1359 | 433 | 1781 | 386 | 1258 |
| Grp Volume(v), veh/h | 273 | 499 | 520 | 28 | 555 | 572 | 8 | 0 | 91 | 72 | 0 | 226 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1850 | 553 | 1777 | 1828 | 1781 | 0 | 1792 | 1781 | 0 | 1644 |
| Q Serve(g_s), s | 7.4 | 15.3 | 15.3 | 5.9 | 24.2 | 24.2 | 0.5 | 0.0 | 6.1 | 4.4 | 0.0 | 17.4 |
| Cycle Q Clear(g_c), s | 7.4 | 15.3 | 15.3 | 4.1 | 24.2 | 24.2 | 0.5 | 0.0 | 6.1 | 4.4 | 0.0 | 17.4 |
| Prop In Lane | 1.00 | | 90:0 | 1.00 | | 0.13 | 1.00 | | 0.24 | 1.00 | | 0.77 |
| Lane Grp Cap(c), veh/h | 396 | 1242 | 1293 | 377 | 1050 | 1080 | 103 | 0 | 228 | 244 | 0 | 264 |
| V/C Ratio(X) | 69.0 | 0.40 | 0.40 | 0.07 | 0.53 | 0.53 | 0.08 | 0.00 | 0.40 | 0.30 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 573 | 1242 | 1293 | 377 | 1050 | 1080 | 161 | 0 | 217 | 366 | 0 | 588 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.54 | 0.54 | 0.54 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 13.5 | 8.2 | 8.2 | 12.0 | 15.8 | 15.8 | 49.3 | 0.0 | 52.1 | 44.8 | 0.0 | 53.1 |
| Incr Delay (d2), s/veh | 2.1 | 1.0 | 6.0 | 0.2 | 1.0 | 1.0 | 0.3 | 0.0 | 1.1 | 0.7 | 0.0 | 7.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 5.9 | 6.1 | 0.4 | 6.6 | 10.2 | 0.2 | 0.0 | 2.8 | 2.0 | 0.0 | 7.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | ! | | |
| LnGrp Delay(d),s/veh | 15.6 | 9.1 | 9.1 | 12.2 | 16.9 | 16.9 | 49.6 | 0.0 | 53.3 | 45.5 | 0.0 | 61.0 |
| LnGrp LOS | m | V S | ⋖ | m | m | 2 | ۵ | V S | ۵ | ۵ | V S | الد |
| Approach Dolay, chick | | 10.5 | | | 16.7 | | | 650 | | | 2,48 | |
| Approach LOS | | 2.0 | | | 20.0 | | | 0.00 | | | C./C | |
| 0 | | | | | 1 | | | 1 | | | | |
| Timer - Assigned Phs | _ | 2 | 3 | 4 | | 9 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.1 | 87.8 | 10.0 | 23.1 | | 6.96 | 2.8 | 27.3 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | 4.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 34.0 | 15.0 | 37.5 | | 61.0 | 5.5 | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.4 | 26.2 | 6.4 | 8.1 | | 17.3 | 2.5 | 19.4 | | | | |
| Green Ext Time (p_c), s | 0.7 | 4.4 | 0.1 | 0.5 | | 8.4 | 0.0 | 1.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 19.4 | | | | | | | | | |
| HCM 6th LOS | | | В | | | | | | | | | |
| | | | | | | | | | | | | |

User approved pedestrian interval to be less than phase max green

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9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2020 Total PM Mitigated

| | ŀ | | | | | | | ١. | ŀ | | |
|---|-----------|----------|------------|---|---------------------|-----------------------|----------|-------|----------|-------|--|
| | 1 | † | <u> </u> | \ | ļ | • | ← | ۶ | → | • | |
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | * | 4 | *- | <u>, , , , , , , , , , , , , , , , , , , </u> | ₩. | F | 4413 | * | 444 | * | |
| Traffic Volume (vph) | 527 | 26 | 446 | 299 | 62 | 427 | 1624 | 61 | 1569 | 202 | |
| Future Volume (vph) | 527 | 26 | 446 | 26 | 62 | 427 | 1624 | 61 | 1569 | 202 | |
| Turn Type | Split | Ν | vo+mq | Split | NA | Prot | NA | Prot | NA | hm+ov | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | - | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | 2 | 00 | ∞ | വ | 2 | - | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 32.0 | 32.0 | 27.0 | 21.0 | 21.0 | 27.0 | 54.0 | 23.0 | 20.0 | 32.0 | |
| Total Split (%) | 24.6% | 24.6% | 20.8% | 16.2% | 16.2% | 20.8% | 41.5% | 17.7% | 38.5% | 24.6% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Lost Time Adjust (s) | 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 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Act Effct Green (s) | 26.4 | 26.4 | 48.4 | 9.3 | 9.3 | 22.0 | 0.59 | 9.4 | 20.0 | 82.1 | |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.37 | 0.07 | 0.07 | 0.17 | 0.50 | 0.07 | 0.38 | 0.63 | |
| v/c Ratio | 0.95 | 0.95 | 0.73 | 0.49 | 0.49 | 0.82 | 0.73 | 0.54 | 0.89 | 0.51 | |
| Control Delay | 101.2 | 101.1 | 20.1 | 9.07 | 32.6 | 64.0 | 29.2 | 72.5 | 44.8 | 0.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 101.2 | 101.1 | 20.1 | 9.07 | 32.6 | 64.0 | 29.2 | 72.5 | 44.8 | 0.6 | |
| TOS | ш | ഥ | ပ | ш | ပ | ш | ပ | ш | Ω | A | |
| Approach Delay | | 0.99 | | | 43.8 | | 36.3 | | 37.2 | | |
| Approach LOS | | ш | | | D | | Ω | | Q | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Length: 130 | | | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6:3 | SBT, Sta | rt of Gree | _ | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | linated | | | | | | | | | | |
| Maximum v/c Ratio: 0.95 | | | | | | | | | | | |
| Intersection Signal Delay: 42.5 | 2 | | | ī | Intersection LOS: D | LOS: D | | | | | |
| Intersection Capacity Utilization 83.0% | on 83.0% | | | ೨ | U Level o | CU Level of Service E | ш | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | |

? Splits and Phases: 9: Scottsdale Rd & Lincoln Dr Ø6 (R) 02 50 **€**

02/12/2019 CivTech BR

Smoke Tree Resort 2020 Total PM Mitigated

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | • | † | ~ | \ | ţ | 4 | • | • | • | ٠ | → | • |
|------------------------------|-------|------------|------|----------|-------------|------|----------|------|------|------|----------|------|
| Movement | FBI | FRT | FRR | WBI | WRT | WRR | NRI | NRT | NRR | SBI | SRT | SRR |
| Coo Configurations | , L | - | L L | 10 10 | 4 | NO. | NO. | 444 | NON | 700 | 100 | NO. |
| T-66 Velimigurations | - 1 | v : | _ ; | - ز | \$ { | 5 | בּי | 4 t | L | ٠, | TTT | |
| Iranic volume (vervn) | 179 | 20 | 440 | 200 | 70 | 7/ | 174 | 1024 | 42 | - 5 | 1209 | 202 |
| Future Volume (Venin) | 170 | 000 | 440 | 200 | 70 | 7/ | 174 | 1024 | 42 | 0 | 6001 | cnc |
| Initial Q (Qb), veh | 0 5 | 0 | 0 9 | 0 0 | 0 | 0 9 | 0 0 | 0 | 0 ; | 0 9 | 0 | 0 9 |
| 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 | | 9 | | | 8 | | | 9 | | | 8 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 930 | 0 | 496 | 62 | 69 | 80 | 474 | 1804 | 20 | 89 | 1743 | 561 |
| Peak Hour Factor | 06.0 | 06.0 | 06:0 | 06.0 | 06:0 | 06:0 | 06:0 | 06.0 | 06:0 | 06:0 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 726 | 0 | 564 | 120 | 120 | 107 | 526 | 2276 | 63 | 87 | 1740 | 863 |
| Arrive On Green | 0.07 | 0.00 | 0.07 | 0.07 | 0.07 | 0.07 | 0.15 | 0.45 | 0.45 | 0.05 | 0.34 | 0.34 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5107 | 141 | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h | 630 | 0 | 496 | 62 | 69 | 80 | 474 | 1202 | 652 | 89 | 1743 | 561 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1845 | 1781 | 1702 | 1585 |
| Q Serve(q_s), s | 22.8 | 0.0 | 26.5 | 4.4 | 4.9 | 6.4 | 17.5 | 39.3 | 39.4 | 4.9 | 44.3 | 32.4 |
| Cycle Q Clear(q_c), s | 22.8 | 0.0 | 26.5 | 4.4 | 4.9 | 6.4 | 17.5 | 39.3 | 39.4 | 4.9 | 44.3 | 32.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 726 | 0 | 264 | 120 | 120 | 107 | 526 | 1517 | 822 | 87 | 1740 | 863 |
| V/C Ratio(X) | 0.87 | 0.00 | 0.88 | 0.52 | 0.58 | 0.75 | 06:0 | 0.79 | 0.79 | 0.78 | 1.00 | 0.65 |
| Avail Cap(c_a), veh/h | 726 | 0 | 264 | 211 | 210 | 188 | 572 | 1517 | 822 | 243 | 1740 | 863 |
| HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 58.9 | 0.0 | 44.8 | 9.89 | 28.8 | 59.5 | 54.2 | 30.9 | 30.9 | 61.1 | 42.9 | 20.9 |
| Incr Delay (d2), s/veh | 10.4 | 0.0 | 14.3 | 1.3 | 1.6 | 3.9 | 15.9 | 2.7 | 4.9 | 9.6 | 22.0 | 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 | 12.0 | 0.0 | 16.8 | 2.0 | 2.3 | 2.7 | <u>∞</u> | 16.5 | 18.4 | 2.4 | 21.9 | 19.1 |
| Unsig. Movement Delay, s/veh | | d | 0 | c c | | | 0 | | L | 1 | | |
| LnGrp Delay(d),s/veh | 69.3 | 0.0 | 59.1 | 29.8 | 60.4 | 63.4 | 0.0/ | 33.6 | 35.9 | /99 | 64.8 | 24.6 |
| LIIGIPLOS | ш | A 7,77 | ال | ال | 1 F | ш | ال | ٥ | ۵ | ال | 7 02.00 | اد |
| Approach Vol. Ven/n | | 9711 | | | 7 17 | | | 717 | | | 2312 | |
| Approach LOS | | 0. 1. | | | † L | | | | | | + L | |
| | | | | | | | | , | | | | |
| Timer - Assigned Phs | - | 2 | | 4 | 2 | 9 | | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 11.7 | 9.89 | | 32.0 | 25.3 | 20.0 | | 14.4 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 2.7 | | 9.6 | | | | |
| Max Green Setting (Gmax), s | * 18 | 48.3 | | 26.5 | 21.5 | 44.3 | | 15.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.9 | 41.4 | | 28.5 | 19.5 | 46.3 | | 8.4 | | | | |
| Green Ext Time (p_c) , s | 0.0 | 2.2 | | 0.0 | 0.3 | 0.0 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Cirl Delay | | | 52.1 | | | | | | | | | |
| HCM 6th LOS | | | | | | | | | | | | |
| Notes | | | | | | | | | | | | |

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Q2/12/2019

CV/Tech BR

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APPENDIX H

2025 PEAK HOUR ANALYSIS



1: Mockingbird Ln & Lincoln Drive

Smoke Tree Resort 2025 Background AM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------------|--|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | _ | | 96 | 2 | ď | 8 | | 8 | | 0 | 2 | 0 | 9 | 0 | 2 | 0 | 2 | | | ۵ | 6 | 2 | 5 | 9 | 0 | 9 | D | 2 | D | | | | | | | | | | |
| → | SBI | ľ | 8 | 8 | NA | | | | | 7.0 | 33.5 | 53.0 | 40.8% | 4.0 | 2.5 | 0.0 | 6.5 | | | None | 28.9 | 0.22 | 0.85 | 9.09 | 0.0 | 90.6 | | 48.5 | | | | | | | | | | | |
| ۶ | SBL | * | 83 | 83 | pm+pt | 3 | 00 | co | | 3.5 | 8.0 | 0.6 | %6.9 | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 31.4 | 0.24 | 0.30 | 39.7 | 0.0 | 39.7 | D | | | | | | | | | | | Ω | |
| ← | NBT | 2 | 37 | 37 | NA | 4 | | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 19.6 | 0.15 | 0.23 | 30.9 | 0.0 | 30.9 | ပ | 32.1 | O | | | | | | | | LOS: C | ICU Level of Service D | |
| • | NBL | r | 9 | 9 | Perm | | 4 | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 19.6 | 0.15 | 0.09 | 44.3 | 0.0 | 44.3 | ٥ | | | | | | Green | | | | Intersection LOS: C | U Level o | |
| ţ | WBT | ₩. | 696 | 696 | Ϋ́ | 2 | | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | С-Мах | 65.5 | 0.50 | 0.63 | 30.5 | 0.0 | 30.5 | ပ | 30.3 | O | | | | ., Start of | | | | 드 | 2 | |
| > | WBL | <u>, </u> | 24 | 24 | Perm | | 2 | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 65.5 | 0.50 | 0.12 | 22.8 | 0.0 | 22.8 | ပ | | | | | | d 6:EBTL | | | | | | |
| † | EBT | ₩. | 1045 | 1045 | Ϋ́ | 9 | | 9 | | 15.0 | 27.0 | 77.0 | 59.2% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 9.88 | 0.68 | 0.50 | 12.0 | 0.0 | 12.0 | В | 13.7 | В | | | | WBTL an | | | | | | |
| 1 | EBL | * | 242 | 242 | pm+pt | - | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 9.06 | 0.70 | 99.0 | 21.5 | 0.0 | 21.5 | S | | | | | | phase 2: | | dinated | | 4 | on 78.5% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | TOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.85 | Intersection Signal Delay: 25.4 | Intersection Capacity Utilization 78.5% | Analysis Period (min) 15 |

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| | 4 | † | <i>></i> | > | ţ | 4 | • | ← | • | ۶ | → | • |
|------------------------------|------|------|-------------|-------------|----------|------|------|----------|------|--|----------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | jr. | ₩ | | je- | ₩ | | je- | ¢\$ | | <u>, </u> | ¢\$ | |
| Traffic Volume (veh/h) | 242 | 1045 | 33 | 24 | 963 | 46 | 9 | 37 | 23 | 83 | 96 | 253 |
| Future Volume (veh/h) | 242 | 1045 | 33 | 24 | 963 | 46 | 9 | 37 | 23 | 83 | 96 | 253 |
| 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 | | | 9 | | | 9 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 569 | 1161 | 37 | 27 | 1070 | 21 | 7 | 41 | 26 | 92 | 107 | 281 |
| Peak Hour Factor | 0.00 | 06:0 | 0.00 | 0.00 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 0.00 | 0.00 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 347 | 2265 | 72 | 274 | 1821 | 87 | 88 | 204 | 129 | 332 | 118 | 311 |
| Arrive On Green | 0.09 | 0.64 | 0.64 | 0.35 | 0.35 | 0.35 | 0.19 | 0.19 | 0.19 | 0.04 | 0.26 | 0.26 |
| Sat Flow, veh/h | 1781 | 3515 | 112 | 467 | 3453 | 165 | 966 | 1070 | 879 | 1781 | 456 | 1198 |
| Grp Volume(v), veh/h | 569 | 287 | 611 | 27 | 220 | 571 | 7 | 0 | 19 | 92 | 0 | 388 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1850 | 467 | 1777 | 1841 | 966 | 0 | 1748 | 1781 | 0 | 1655 |
| Q Serve(g_s), s | 9.8 | 22.8 | 22.8 | 5.4 | 32.9 | 32.9 | 6.0 | 0.0 | 4.2 | 2.0 | 0.0 | 29.5 |
| Cycle Q Clear(g_c), s | 9.8 | 22.8 | 22.8 | 13.0 | 32.9 | 32.9 | 21.4 | 0.0 | 4.2 | 2.0 | 0.0 | 29.5 |
| Prop In Lane | 1.00 | | 90:0 | 1.00 | | 60:0 | 1.00 | | 0.39 | 1.00 | | 0.72 |
| Lane Grp Cap(c), veh/h | 347 | 1145 | 1192 | 274 | 937 | 971 | 88 | 0 | 333 | 335 | 0 | 429 |
| V/C Ratio(X) | 0.78 | 0.51 | 0.51 | 0.10 | 0.59 | 0.59 | 0.08 | 0.00 | 0.20 | 0.27 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 208 | 1145 | 1192 | 274 | 937 | 971 | 186 | 0 | 504 | 335 | 0 | 592 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 19.0 | 19.0 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 20.5 | 12.3 | 12.3 | 26.8 | 30.5 | 30.5 | 61.3 | 0.0 | 44.3 | 39.7 | 0.0 | 46.6 |
| Incr Delay (d2), s/veh | 4.5 | 1.6 | 1.6 | 0.4 | 1.5 | 1.4 | 0.4 | 0.0 | 0.3 | 0.4 | 0.0 | 13.7 |
| Initial O Delay(d3),s/veh | 0:0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.4 | 9.2 | 9.6 | 0.7 | 15.3 | 15.8 | 0.2 | 0.0 | 1.9 | 2.4 | 0.0 | 13.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 25.0 | 13.9 | 13.9 | 27.2 | 32.0 | 31.9 | 9.19 | 0.0 | 44.6 | 40.1 | 0.0 | 60.3 |
| LnGrp LOS | ပ | В | В | ပ | ပ | ပ | Ш | A | О | О | A | Ш |
| Approach Vol, veh/h | | 1467 | | | 1148 | | | 74 | | | 480 | |
| Approach Delay, s/veh | | 15.9 | | | 31.8 | | | 46.2 | | | 56.4 | |
| Approach LOS | | В | | | O | | | Ω | | | ш | |
| Timer - Assigned Phs | - | 2 | 3 | 4 | | 9 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.2 | 74.6 | 0.6 | 31.2 | | 8.68 | | 40.2 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.01 | 34.9 | 7.0 | 23.4 | | 24.8 | | 31.5 | | | | |
| Green Ext Time (p_c), s | 9.0 | 2.0 | 0.0 | 0.2 | | 10.9 | | 2.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 28.5 | | | | | | | | | |
| HCM 6th LOS | | | O | | | | | | | | | |
| | | | | | | | | | | | | |

02/11/2019 CivTech BR

Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2025 Background AM

| | • | † | > | ţ | - | ۶ | → | |
|---|-----------|----------------|-------------|----------|-----------------------|-----------|----------|--|
| Lane Group | EBL | EBT | WBL | WBT | NBT | SBL | SBT | |
| Lane Configurations | r | ₩ | F | ₩ | 4 | F | 45 | |
| Traffic Volume (vph) | 115 | 1104 | 2 | 927 | 0 | 26 | 0 | |
| Future Volume (vph) | 115 | 1104 | 2 | 927 | 0 | 26 | 0 | |
| Turn Type | pm+pt | NA | Perm | NA | N A | Perm | NA | |
| Protected Phases | 7 | 4 | | ∞ | 2 | | 9 | |
| Permitted Phases | 4 | | 8 | | | 9 | | |
| Detector Phase | 7 | 4 | ∞ | ∞ | 2 | 9 | 9 | |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 3.5 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | |
| Minimum Split (s) | 8.0 | 28.0 | 28.0 | 28.0 | 33.0 | 33.0 | 33.0 | |
| Total Split (s) | 20.0 | 94.0 | 74.0 | 74.0 | 36.0 | 36.0 | 36.0 | |
| Total Split (%) | 15.4% | 72.3% | 26.9% | 26.9% | 27.7% | 27.7% | 27.7% | |
| Yellow Time (s) | 3.0 | 4.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | |
| All-Red Time (s) | 1.0 | 2.5 | 2.5 | 2.5 | 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) | 4.0 | 6.5 | 6.5 | 6.5 | 0.9 | 0.9 | 0.9 | |
| Lead/Lag | Lead | | Lag | Lag | | | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | |
| Act Effct Green (s) | 67.4 | 64.9 | 20.0 | 20.0 | 52.6 | 52.6 | 52.6 | |
| Actuated g/C Ratio | 0.52 | 0.50 | 0.38 | 0.38 | 0.40 | 0.40 | 0.40 | |
| v/c Ratio | 0.54 | 0.70 | 0.05 | 0.77 | 0.01 | 0.02 | 0.00 | |
| Control Delay | 28.5 | 35.5 | 21.5 | 38.6 | 0.0 | 28.2 | 0.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 28.5 | 35.5 | 21.5 | 38.6 | 0.0 | 28.2 | 0.2 | |
| FOS | O | ۵ | S | | ⋖ | S | A | |
| Approach Delay | | 34.9 | | 38.6 | | | 8.2 | |
| Approach LOS | | O | | D | | | A | |
| Intersection Summary | | | | | | | | |
| Cycle Lenath: 130 | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | phase 2:1 | VBTL an | 16:SBTL | Start of | Green | | | |
| Natural Cycle: 70 | | | | | | | | |
| Control Type: Actuated-Coordinated | linated | | | | | | | |
| Maximum v/c Ratio: 0.77 | | | | | | | | |
| Intersection Signal Delay: 35.2 | 2 | | | = | Intersection LOS: D | n LOS: D | | |
| Intersection Capacity Utilization 67.1% | on 67.1% | | | ≚ | CU Level of Service C | of Servic | e C | |
| Analysis Period (min) 15 | | | | | | | | |

Splits and Phases: 2: Ouali Run Rd & Lincoln Drive

1 02 (R)

1 048

1 058

1 058

02/11/2019 CivTech BR

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Smoke Tree Resort 2025 Background AM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| | | ì | - | • | | , | _ | - | _ | | • | , |
|------------------------------|------|----------|------|-------|-------------|-------|------|-------------|--------|------|------|-------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | ₩ | | r | ₩ | | | 4 | | F | 2, | |
| Traffic Volume (veh/h) | 115 | 1104 | က | 2 | 927 | 12 | 0 | 0 | ∞ | 26 | 0 | 99 |
| Future Volume (veh/h) | 115 | 1104 | 3 | 2 | 927 | 12 | 0 | 0 | ∞ | 26 | 0 | 99 |
| 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 | 0701 | No | 0701 | 0707 | NO OF OF | 0701 | 0701 | NO OF OF | 0701 | 0701 | No | 07.01 |
| Adj Sat Flow, verynin | 130 | 1337 | 0/81 | 0/81 | 1020 | 13 | 0/81 | 0/81 | 0/81 | 0/81 | 0/81 | 18/0 |
| Adj Flow Kale, venin | 871 | 1771 | 200 | 7 000 | 1030 | 5 00 | | | 600 | 67 | | 2/ 00 |
| Percent Heavy Veh % | 0.70 | 0.40 | 0.00 | 0.70 | 0.00 | 0.00 | 0.50 | 0.50 | 0.00 | 0.50 | 0.70 | 2.70 |
| Cap, veh/h | 208 | 1582 | 4 | 191 | 1231 | 16 | 0 | 0 | 743 | 710 | 0 | 743 |
| Arrive On Green | 0.12 | 0.87 | 0.87 | 0.34 | 0.34 | 0.34 | 0.00 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h | 1781 | 3637 | 6 | 453 | 3594 | 45 | 0 | 0 | 1585 | 1406 | 0 | 1585 |
| Grp Volume(v), veh/h | 128 | 266 | 631 | 2 | 209 | 534 | 0 | 0 | 6 | 29 | 0 | 73 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1869 | 453 | 1777 | 1862 | 0 | 0 | 1585 | 1406 | 0 | 1585 |
| Q Serve(g_s), s | 5.9 | 17.6 | 17.6 | 0.4 | 34.3 | 34.3 | 0.0 | 0.0 | 0.4 | 1.5 | 0.0 | 3.3 |
| Cycle Q Clear(g_c), s | 5.9 | 17.6 | 17.6 | 6.9 | 34.3 | 34.3 | 0.0 | 0.0 | 0.4 | 1.9 | 0.0 | 3.3 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.02 | 0.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 208 | 773 | 813 | 191 | 609 | 638 | 0 | 0 | 743 | 710 | 0 | 743 |
| V/C Ratio(X) | 0.62 | 0.78 | 0.78 | 0.01 | 0.84 | 0.84 | 0.00 | 0.00 | 0.01 | 0.04 | 0.00 | 0.10 |
| Avail Cap(c_a), veh/h | 317 | 1196 | 1258 | 271 | 923 | 796 | 0 9 | 0 9 | 743 | 710 | 0 ; | 743 |
| HCM Platoon Ratio | 5.00 | 2.00 | 5.00 | 00.1 | 00.1 | 00.1 | 00.1 | 00.1 | 00:1 | 8.1 | 9.1 | 90.1 |
| Upstream Filter(I) | 0.87 | 0.87 | 0.87 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.1 |
| Uniform Delay (d), siven | 78.7 | 5.9 | 5.9 | 32.0 | 39.4 | 39.4 | 0.0 | 0.0 | 18.4 | 18.9 | 0.0 | 19.2 |
| Incr Delay (d2), s/ven | 5.6 | ე. | 1.4 | 0.0 | 4.3 | 4.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOrQ(50%),veh/ln | 2.5 | 5.9 | 3.1 | 0.0 | 15.6 | 16.3 | 0:0 | 0:0 | 0.5 | 0.5 | 0:0 | 1.3 |
| Unsig. Movement Delay, s/veh | | - | - | c | 1 0 | L C 7 | ć | ć | , L | 6 | c | 5 |
| LnGrp Delay(u),s/ven | 20°. | 4. < | 4. < | 32.0 | 43.7 | 43.5 | 0.0 | 0.0 | 0.0 | 0.61 | 0.0 | 19.5 |
| American Vol. 10km | ر | 7 010,1 | τ | ر | 1045 | ٥ | τ | ξ (| ٥ | ٥ | 2 5 | ٥ |
| Apploach vol. verm | | 1338 | | | 1043 | | | 7 0, | | | 107 | |
| Approach Delay, swen | | 0.6 | | | 43.0 | | | 0.0 | | | 4.4 | |
| Approach LOS | | ¥ | | | a | | | 22 | | | 22 | |
| Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 0.79 | | 63.0 | | 0.79 | 12.0 | 51.0 | | | | |
| Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 6.78 | | 30.0 | 16.0 | 67.9 | | | | |
| Max Q Clear Time (g_c+II), s | | 4.7 | | 19.6 | | 5.3 | 6.7 | 36.3 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 6.11 | | 0.4 | 0.7 | 8.7 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 24.1 | | | | | | | | | |
| | | | | | | | | | | | | |

02/11/2019 CivTech BR

3: Smoke Tree West & Lincoln Dr

Smoke Tree Resort 2025 Background AM

4: Smoke Tree East & Lincoln Dr HCM 6th TWSC

| | NBR | | 0 | 0 | 0 | Stop | None | | | | 06 | 2 | 0 | | 632 | | | 6.94 | | | 3.32 | 423 | | | | 423 | | | | | | | WBT | | | |
|------------------|----------|---------------------|--------------------|-------------------|------------------------|--------------|----------------|----------------|--------------------------|----------|------------------|-------------------|-----------|-------------|---------|---------|---------|---------------|----------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|----------|----------|----------------------|---------|-----------------------|------------------|--------------------|--------------------|
| | NBL | > | .0 | 0 | | Stop | | 0 | 0 | 0 | 06 | 7 | 0 | Minor1 | 1783 | | 521 | 6.84 | 5.84 | 5.84 | 3.52 | 73 | | 261 | 1 | 73 | 1/5 | | | R | | ⋖ | WBL | 546 | | < |
| | WBT | ‡ | 937 | 937 | | | None | ' | 0 | 0 | 8 | 2 | 1041 | | C | | ľ | | ľ | | | 1 | 1 | 1 | | • | 1 | | ' | | | | EBR | ' | | |
| | WBL | - | 0 | 0 | | Free | | 25 | | | 06 | 7 | 0 | Maior | 1263 | | ľ | 4.14 | ľ | | 2.22 | 246 | 1 | 1 | i | 246 | | | ' | WB | | | EBT | ' | ľ | |
| | EBR | | 2 | 2 | 0 | Free | None | • | • | | 8 | 7 | .7 | | c | | ľ | | 1 | • | | 1 | 1 | 1 | | 1 | 1 | | ' | | | | NBLn1 | | | • |
| 0 | EBT | ₹ | 1135 | 1135 | 0 | Free | 1 | | | 0 | 06 | 2 | 1261 | Maior1 | С | | ľ | 1 | , | • | • | • | ' | 1 | | • | 1 | | | H | | | | | | |
| Int Delay, s/veh | Movement | Lane Configurations | Traffic Vol, veh/h | Future Vol, veh/h | Conflicting Peds, #/hr | Sign Control | RT Channelized | Storage Length | Veh in Median Storage, # | Grade, % | Peak Hour Factor | Heavy Vehicles, % | Mvmt Flow | Major/Minor | low All | Stage 1 | Stage 2 | Critical Hdwy | Critical Holwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | z afge z | Annroach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | (a) real Dates (b) |

| Movement | | | | | | | |
|-------------------------------|--------------|----------|--------|--------|--------|------|--|
| MOVELLICITE | FRT | FRD | MPI | WRT | aN | dan | |
| | EDI | EDR | WDL | MDI | NDL | VDR | |
| Lane Configurations | * | | r | ŧ | > | | |
| Traffic Vol, veh/h | 1137 | 0 | _ | 934 | 9 | 2 | |
| Future Vol, veh/h | 1137 | 0 | - | 934 | 9 | 2 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | • | None | | - None | | None | |
| Storage Length | | ٠ | 22 | ٠ | 0 | | |
| Veh in Median Storage, # | 0 # ' | 1 | 1 | 0 | 0 | | |
| Grade, % | 0 | • | • | 0 | 0 | | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 7 | 2 | 2 | 7 | 2 | |
| Mvmt Flow | 1263 | 0 | | 1038 | 7 | 2 | |
| Major/Minor N | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 0 1263 | 0 | 0 1784 | 632 | |
| Stage 1 | | • | | | 1263 | | |
| Stage 2 | , | , | | ' | 521 | | |
| Critical Hdwy | • | ٠ | 4.14 | • | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | | | | | 5.84 | | |
| Critical Hdwy Stg 2 | 1 | 1 | 1 | 1 | 5.84 | | |
| Follow-up Hdwy | | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | 1 | 1 | 546 | 1 | 73 | 423 | |
| Stage 1 | | • | , | • | 230 | | |
| Stage 2 | • | • | • | ٠ | 261 | | |
| Platoon blocked, % | ٠ | ٠ | | ٠ | | | |
| Mov Cap-1 Maneuver | 1 | 1 | 246 | • | 73 | 423 | |
| Mov Cap-2 Maneuver | ٠ | | ٠ | ٠ | 175 | | |
| Stage 1 | 1 | 1 | 1 | • | 230 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 261 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 23.4 | | |
| HCM LOS | | | | | O | | |
| Minor Long/Major Mam | | NDI 21 | FDT | LDD | Id/W | ±d/v | |
| MILIOI Laiteriviajoi iviviii. | | I DELIII | EDI | EDK | WDL | VBI | |
| Capacity (vervn) | | 202 | | | 240 | | |
| HCM Lane V/C Ratio | | 0.043 | ١ | ١ | 0.002 | | |
| HCM Control Delay (s) | | 23.4 | • | • | 11.6 | | |
| HCM Lane LOS | | | | | | | |

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Synchro 10 Report Page 5

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ZC SC

| ш | Y |
|------------------|------------|
| West & Lincoln [| JCM 6th TW |
| ∞ಶ | _ |
| West | |
| Medical | |
| Lincoln | |
| 5: - | |
| | |

| mersection | | | | | | | |
|--------------------------|--------|-----------|--------|------|--------|------|--|
| int Delay, síveh | 0.4 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | F | ‡ | > | | |
| | 1122 | 18 | 42 | 928 | 9 | 6 | |
| | 1122 | 18 | 42 | 928 | 9 | 6 | |
| eds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free Free | Free | Free | Stop | Stop | |
| RT Channelized | • | None | | None | • | None | |
| Storage Length | • | • | 25 | • | 0 | , | |
| Veh in Median Storage, # | 0 # | 1 | 1 | 0 | 0 | ì | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | |
| cles, % | 7 | 2 | | 2 | 2 | 7 | |
| Wwmt Flow | 1247 | 2 | 47 | 1031 | 7 | 10 | |
| | | • | - | • | , | | |
| | MajorT | - | Major2 | - | MinorT | | |
| Conflicting Flow All | 0 | 0 | 0 1267 | 0 | 1867 | 634 | |
| Stage 1 | 1 | • | 1 | • | 1257 | | |
| Stage 2 | ٠ | ' | • | ' | 910 | | |
| Critical Hdwy | 1 | 1 | 4.14 | 1 | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | • | | • | 5.84 | | |
| Critical Hdwy Stg 2 | 1 | • | 1 | • | 5.84 | | |
| ollow-up Hdwy | ٠ | | 2.22 | | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 544 | • | 64 | 422 | |
| Stage 1 | • | 1 | | 1 | 231 | | |
| Stage 2 | • | • | | • | 202 | | |
| Platoon blocked, % | • | ١ | | ١ | | | |
| Mov Cap-1 Maneuver | 1 | • | 544 | • | 28 | 422 | |
| Mov Cap-2 Maneuver | ٠ | | | | 154 | | |
| Stage 1 | • | • | | • | 211 | | |
| Stage 2 | 1 | • | 1 | • | 202 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.5 | | 20.5 | | |
| HCM LOS | | | | | S | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | _ | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 249 | 1 | • | 544 | | |
| HCM Lane V/C Ratio | | 0.067 | | | 980.0 | | |
| HCM Control Delay (s) | | 20.5 | | | 12.2 | | |
| HCM Lane LOS | | O | • | • | В | | |
| HCM 95th %tile Q(veh) | | 0.2 | 1 | • | 0.3 | ٠ | |
| | | | | | | | |

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Smoke Tree Resort 2025 Background AM

6: Lincoln Medical East & Lincoln Dr

| Movement Lane Configurations Traffic Vol. veh/h | - | | | | | | |
|---|----------|-------|--------|------|--------|------|--|
| | EBT | EBR | WBL | WBT | NBL | NBR | |
| | ₽ | | F | \$ | 2 | | |
| | 1118 | = | 9 | 026 | 0 | 6 | |
| Future Vol, veh/h 1 | 1118 | Ξ | 9 | 970 | 0 | 6 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | | 0 | |
| | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | 1 | None | 1 | None | 1 | None | |
| Storage Length | • | • | 25 | • | 0 | | |
| Veh in Median Storage, # | 0 | 1 | • | 0 | 0 | | |
| Grade, % | 0 | ٠ | ٠ | 0 | 0 | | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 06 | |
| cles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow 1; | 1242 | 12 | 7 | 1078 | 0 | 10 | |
| | | | | | | | |
| | Major1 | Σ | Major2 | Σ | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 0 1254 | 0 | 1801 | 627 | |
| Stage 1 | ٠ | ٠ | ٠ | ٠ | 1248 | | |
| Stage 2 | | | | , | 223 | | |
| Critical Hdwy | ٠ | ٠ | 4.14 | ٠ | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | ٠ | ٠ | ٠ | 5.84 | | |
| Critical Hdwy Stg 2 | 1 | • | 1 | ٠ | 5.84 | | |
| Follow-up Hdwy | ٠ | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | ٠ | • | 221 | ٠ | 71 | 426 | |
| Stage 1 | • | ٠ | • | ٠ | 234 | | |
| Stage 2 | • | • | • | • | 240 | | |
| Platoon blocked, % | ٠ | ٠ | | ٠ | | | |
| Mov Cap-1 Maneuver | 1 | • | 221 | • | 2 | 426 | |
| Mov Cap-2 Maneuver | ٠ | 1 | • | ٠ | 173 | | |
| Stage 1 | • | 1 | • | 1 | 231 | | |
| Stage 2 | ٠ | ٠ | • | ٠ | 240 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.1 | | 13.7 | | |
| HCM LOS | | | | | В | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 426 | | | 551 | | |
| HCM Lane V/C Ratio | ľ | 0.023 | | • | 0.012 | | |
| HCM Control Delay (s) | | 13.7 | | ٠ | 11.6 | | |
| HCM Lane LOS | | В | | ٠ | В | | |
| HCM 95th %tile O(veh) | | 0 1 | ٠ | ٠ | C | | |

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Smoke Tree Resort

7: Apartment Drwy & Lincoln Dr

Smoke Tree Resort 2025 Background AM

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

Stop

Stop

Stop 0

Stop 46 46 0

Stop

Free

Free

Free

None

25

Traffic Vol, veh/h 3 1
Future Vol, veh/h 3 1
Conflicting Peds,#/hr 0
Sign Control Free 1
Sign Control 2
Storage Length 25
Grade, % 6
Grade, % 7
Heavy Vehicles, % 2
Mwnt Fow 3 1

4000

918 918 0 Free

48 48 0 Free

990

1040

1.3

nt Delay, s/veh

8 2

9 2 9

0 0

06 51

0 0 8 0 0

06

8 70

06

1020 0 8

53

2

3 1156

6.94

6.94

- 4.14

4.14

Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2

Minor2 1715 1715 584 7.54 6.54 6.54

2360 11131 1229 6.54 5.54 5.54 4.02 35 277 248

2332 11196 11136 6.54 5.54 5.54 4.02 36 258 275

11196 617 7.54 6.54 6.54 3.52 49 198

3.32

3.32

2.22

2.22 670

Follow-up Hdwy Pot Cap-1 Maneuver

Stage 1

3.52 58 217 465

505

47 47 216 409

436

43 43 197 388

999

Mov Cap-2 Maneuver Stage 1 Stage 2

32 32 251 247

32 32 257 249

SB 33.2 D

NB 30.7

WB 0.6

EB

Approach HCM Control Delay, s

HCM LOS

515

612

Major2 1223

0

0

Major1 1030

Major/Minor Conflicting Flow All Stage 1

| ntersection | | | | | | | | | | | | | |
|------------------------|--------|----------|--------|--------|------|-------|----------|------|-----------------|--------|------|------|--|
| nt Delay, síveh | 16.7 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| -ane Configurations | F | ₩. | | * | 4₽ | | | 4 | | * | | ĸ. | |
| raffic Vol, veh/h | 29 | 1062 | 38 | 70 | 905 | = | 29 | 0 | 33 | 9 | 0 | 14 | |
| Future Vol, veh/h | 59 | 1062 | 38 | 70 | 902 | Ξ | 26 | 0 | 33 | 9 | 0 | 14 | |
| 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 | 1 | 1 | None | 1 | 1 | None | 1 | 1 | None | ì | 1 | None | |
| Storage Length | 25 | | | 22 | | • | ٠ | ٠ | ٠ | 0 | ٠ | 0 | |
| Veh in Median Storage, | - # | 0 | | | 0 | | • | 0 | • | • | 0 | | |
| Grade, % | ٠ | 0 | • | • | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 7 | 2 | |
| Mvmt Flow | 32 | 1180 | 42 | 22 | 1006 | 12 | 62 | 0 | 37 | 7 | 0 | 16 | |
| | | | | | | | | | | | | | |
| Major/Minor M | Major1 | | _ | Major2 | | 2 | Minor1 | | 2 | Minor2 | | | |
| low All | 1018 | 0 | 0 | 1222 | 0 | 0 | 1812 | 2327 | 611 | 1710 | ١. | 509 | |
| Stage 1 | ٠ | ٠ | | | | 1 | 1265 | 1265 | 1 | 1056 | | | |
| Stage 2 | | | ľ | ľ | ľ | | 547 | 1062 | ٠ | 654 | | | |
| Critical Hdwy | 4.14 | 1 | 1 | 4.14 | 1 | 1 | 7.54 | 6.54 | 6.94 | 7.54 | 1 | 6.94 | |
| Critical Hdwy Stg 1 | | | | | | ٠ | 6.54 | 5.54 | | 6.54 | 1 | | |
| Critical Hdwy Stg 2 | • | • | | | | ٠ | 6.54 | 5.54 | ٠ | 6.54 | • | | |
| Follow-up Hdwy | 2.22 | | | 2.22 | | ٠ | 3.52 | 4.02 | 3.32 | 3.52 | ٠ | 3.32 | |
| Pot Cap-1 Maneuver | 119 | • | • | 299 | • | • | ~ 49 | 37 | 437 | 26 | 0 | 206 | |
| Stage 1 | ٠ | • | • | • | • | • | 179 | 239 | ٠ | 241 | 0 | | |
| Stage 2 | • | 1 | 1 | 1 | 1 | 1 | 489 | 298 | 1 | 422 | 0 | | |
| Platoon blocked, % | | • | • | | • | • | | | | | | | |
| Mov Cap-1 Maneuver | 119 | 1 | | 200 | | • | ~ 44 | 34 | 437 | 21 | 1 | 206 | |
| Mov Cap-2 Maneuver | • | • | • | • | • | 1 | ~ 44 | 34 | 1 | 21 | • | | |
| Stage 1 | 1 | • | 1 | 1 | 1 | • | 171 | 228 | • | 230 | 1 | | |
| Stage 2 | • | 1 | • | • | • | 1 | 456 | 286 | • | 368 | • | | |
| | | | | | | | | | | | | | |
| Approach | EB | | | WB | | | B | | | SB | | | |
| HCM Control Delay, s | 0.3 | | | 0.2 | | ↔ | \$ 393.8 | | | 34.4 | | | |
| HCM LOS | | | | | | | ш | | | ٥ | | | |
| | | į | i | i | | | | | | i | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBL | EBI | EBR | WBL | WBT | WBRS | WBR SBLn1 SBLn2 | BLn2 | | | |
| Capacity (veh/h) | | 99 | 119 | • | • | 299 | 1 | 1 | 21 | 200 | | | |
| HCM Lane V/C Ratio | | | \sim | • | • | 0.039 | | • | | 0.031 | | | |
| HCM Control Delay (s) | €> | \$ 393.8 | 10.6 | • | • | 11.6 | • | 1 | 85.9 | 12.3 | | | |
| HCM Lane LOS | | | ď | | | 0 | | | | | | | |
| | | | د | | | В | • | • | _ | В | | | |

*: All major volume ir

+: Computation Not Defined

\$: Delay exceeds 300s

Volume exceeds capacity

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- 47 505 - 0.118 0.031 - 91.6 12.4 - F B - 0.4 0.1

- 566 - 0.094 - 12 - B - 0.3

198 670 0.297 0.005 30.7 10.4

0 B

1.2

HCM Lane V/C Ratio HCM Control Delay (s) HCM Lane LOS HCM 95th %tile Q(veh)

WBR SBLn1 SBLn2

WBT

WBL

EBR

EBT

EBL NBLn1

Synchro 10 Report Page 10 CivTech BR

9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2025 Background AM

| | 4 | † | <i>></i> | \ | ţ | • | • | ۶ | → | • | |
|---|----------|----------|-------------|----------|---------------------|-----------------------|-------|-------|----------|-------|--|
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | * | 4 | ×. | | * | 1 | 4413 | * | 444 | æ | |
| Traffic Volume (vph) | 489 | 42 | 499 | 41 | 36 | 319 | 1429 | 22 | 1814 | 652 | |
| Future Volume (vph) | 489 | 42 | 466 | | 36 | 319 | 1429 | 22 | 1814 | 652 | |
| Turn Type | Split | NA | vo+mq | Split | Ν | Prot | NA | Prot | A | vo+mq | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | - | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | വ | ∞ | 00 | 2 | 2 | - | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 30.0 | 30.0 | 30.0 | 13.0 | 13.0 | 30.0 | 73.0 | 14.0 | 57.0 | 30.0 | |
| Total Split (%) | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Lost Time Adjust (s) | 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 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Act Effct Green (s) | 24.3 | 24.3 | 44.8 | 7.2 | 7.2 | 20.5 | 7.07 | 7.7 | 929 | 92.9 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.34 | 90.0 | 90:0 | 0.16 | 0.54 | 90:0 | 0.43 | 99.0 | |
| v/c Ratio | 0.94 | 0.94 | 0.94 | 0.47 | 0.43 | 0.65 | 0.59 | 0.59 | 0.93 | 99.0 | |
| Control Delay | 88.8 | 88.7 | 50.9 | 75.4 | 33.9 | 26.8 | 21.7 | 81.5 | 44.4 | 13.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 88.8 | 88.7 | 20.9 | 75.4 | 33.9 | 26.8 | 21.7 | 81.5 | 44.4 | 13.7 | |
| TOS | ı | ш. | Ω | ш | ပ | ш | S | ш | Ω | В | |
| Approach Delay | | 70.4 | | | 46.9 | | 27.9 | | 37.3 | | |
| Approach LOS | | ш | | | Q | | O | | Q | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Length: 130 | | | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6: | SBT, Sta | rt of Gree | _ | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | dinated | | | | | | | | | | |
| Maximum v/c Ratio: 0.94 | | | | | | | | | | | |
| Intersection Signal Delay: 40.7 | 7 | | | ⊒ | Intersection LOS: D | LOS: D | | | | | |
| Intersection Capacity Utilization 85.8% | on 85.8% | | | 2 | U Level o | CU Level of Service E | ш | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | |

₹ Splits and Phases: 9: Scottsdale Rd & Lincoln Dr ▼ Ø6 (R) \$Ø **₹**

02/11/2019 CivTech BR

Smoke Tree Resort 2025 Background AM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| Movement EB1 EB1 WB1 | | | | | | | | | | D | | | |
|--|------------------------------|-------|-------|----------|----------|----------|-------|-------|----------|------|------|----------|------|
| FBL FBF FBF WBL WBF WBL WBF NBL WBF | | • | † | <u> </u> | / | ļ | 4 | • | ← | • | ۶ | → | • |
| 100 | Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 489 42 499 41 39 52 319 1429 43 55 1814 489 42 499 41 39 52 319 1429 43 55 1814 100 1.00 0 0 0 0 0 0 0 0 0 0 0 0 1.00 1.00 | Lane Configurations | * | 4 | ¥. | r | ₩ | | K | 4413 | | F | 444 | ×. |
| 489 42 499 41 39 52 319 1429 43 55 1814 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 277 0 554 46 43 58 354 1588 48 61 2016 2 | Traffic Volume (veh/h) | 489 | 42 | 466 | 41 | 39 | 52 | 319 | 1429 | 43 | 55 | 1814 | 652 |
| 100 | Future Volume (veh/h) | 489 | 42 | 466 | 41 | 39 | 52 | 319 | 1429 | 43 | 22 | 1814 | 652 |
| 100 | Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| No | Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 | Work Zone On Approach | | 8 | | | 8 | | | 8 | | | 8 | |
| 577 0 554 46 43 58 384 1588 48 61 2016 0.90 | Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| 0.09 0.90 0.90 0.90 0.90 0.90 0.90 0.90 | Adj Flow Rate, veh/h | 277 | 0 | 224 | 46 | 43 | 28 | 354 | 1588 | 48 | 61 | 2016 | 724 |
| 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 | 0.90 |
| 671 0 489 95 95 85 414 2404 73 78 2015 606 000 006 005 005 0012 047 047 047 039 8563 0 1885 1781 1777 1885 3456 5093 154 1781 5106 577 0 554 46 43 58 354 1061 575 61 2016 7181 0 1885 1781 1777 1885 1728 1702 1843 1781 1702 209 0.0 245 3.3 3.1 4.7 13.1 31.1 31.1 4.4 51.3 209 0.0 245 3.3 3.1 4.7 13.1 31.1 31.1 4.4 51.3 209 0.0 245 8.3 3.1 4.7 13.1 31.1 31.1 4.4 51.3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0.06 0.00 0.06 0.05 0.05 0.05 0.12 0.47 0.47 0.09 0.39 0.356 0.10 0.47 0.04 0.39 0.356 0.10 0.1855 1781 1777 1585 3456 5093 154 1781 1702 0.185 1781 1777 1585 1728 1702 1843 1781 1702 0.20 0.0 24.5 3.3 3.1 4.7 13.1 31.1 31.1 4.4 51.3 2.0 0.0 24.5 3.3 3.1 4.7 13.1 31.1 31.1 4.4 51.3 0.0 0.0 0.24.5 3.3 3.1 4.7 13.1 31.1 31.1 4.4 51.3 0.0 0.0 0.0 1.00 0.0 0.0 0.0 0.0 0.0 0. | Cap, veh/h | 671 | 0 | 489 | 96 | 96 | 82 | 414 | 2404 | 73 | 78 | 2015 | 924 |
| 3563 0 1885 1781 1777 1885 3456 5093 154 1781 5106 7170 1885 1781 1772 1885 1781 1702 1843 1781 1702 1843 1781 1702 1843 1781 1702 1843 1702 1844 51:3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | Arrive On Green | 90:0 | 0.00 | 90:0 | 0.02 | 0.05 | 0.05 | 0.12 | 0.47 | 0.47 | 0.04 | 0.39 | 0.39 |
| 1781 277 0 554 46 43 58 384 1061 575 61 2016 1781 1782 1702 1843 1781 1702 1702 1843 1702 1843 1702 1843 1702 1843 1702 1843 1702 1843 1703 1702 1843 1703 1 | Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5093 | 154 | 1781 | 5106 | 1585 |
| 1781 | Grp Volume(v), veh/h | 217 | 0 | 554 | 46 | 43 | 28 | 354 | 1061 | 575 | 19 | 2016 | 724 |
| 209 0.0 245 3.3 3.1 4.7 13.1 31.1 44 513 209 0.0 246 3.3 3.1 4.7 13.1 31.1 44 513 1.00 6.71 0 489 95 95 85 414 1607 870 78 2015 0.86 0.00 1.13 0.48 0.45 0.68 0.66 0.66 0.66 0.76 0.73 0.3 0.3 1.00 1.00 1.00 1.00 1.00 1.00 | Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| 100 | Q Serve(g_s), s | 20.9 | 0.0 | 24.5 | 3.3 | 3.1 | 4.7 | 13.1 | 31.1 | 31.1 | 4.4 | 51.3 | 45.6 |
| 100 100 100 100 100 100 100 100 100 100 | Cycle Q Clear(g_c), s | 50.9 | 0.0 | 24.5 | 3.3 | 3.1 | 4.7 | 13.1 | 31.1 | 31.1 | 4.4 | 51.3 | 45.6 |
| 671 0 489 95 95 88 444 1607 870 78 2015 0.86 0.00 1.13 0.48 0.45 0.68 0.66 0.66 0.66 0.78 1.00 0.33 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| 086 0.00 113 0.48 0.45 0.68 0.86 0.66 0.66 0.78 1.00 0.33 0.33 0.33 0.33 0.33 0.33 0.30 0.30 | Lane Grp Cap(c), veh/h | 671 | 0 | 489 | 95 | 95 | 82 | 414 | 1607 | 870 | 78 | 2015 | 924 |
| 671 0 489 101 101 90 661 1762 954 119 2015 0.33 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | V/C Ratio(X) | 98.0 | 0.00 | 1.13 | 0.48 | 0.45 | 89.0 | 98.0 | 99.0 | 99.0 | 0.78 | 1.00 | 0.78 |
| 0.33 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | Avail Cap(c_a), veh/h | 671 | 0 | 489 | 101 | 101 | 06 | 651 | 1762 | 954 | 119 | 2015 | 924 |
| 1,00 0,00 1,00 1,00 1,00 1,00 1,00 1,00 | HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 593 0.0 508 598 597 604 561 263 263 615 393 104 0.0 830 1.4 1.2 142 39 0.6 1.1 7.7 202 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 104 0.0 83.0 1.4 1.2 14.2 3.9 0.6 1.1 77 20.2 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0. | Uniform Delay (d), s/veh | 59.3 | 0.0 | 20.8 | 29.8 | 29.7 | 60.4 | 56.1 | 26.3 | 26.3 | 61.5 | 39.3 | 20.8 |
| 00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Incr Delay (d2), s/veh | 10.4 | 0.0 | 83.0 | 1.4 | 1.2 | 14.2 | 3.9 | 9.0 | 1.1 | 7.7 | 20.2 | 9.9 |
| 110 0.0 26.4 1.5 1.4 2.2 5.9 126 138 2.2 248 weh 69.7 0.0 133.7 61.2 60.9 74.7 60.0 26.9 27.4 69.2 59.5 E A F E E E C C E F F 1131 147 1990 2801 101.0 66.4 32.9 27.9 2801 11.0 67.1 30.0 21.1 57.0 12.6 11.0 67.1 30.0 21.1 57.0 12.6 12.5 3.5 5.5 5.7 5.6 12.6 3.3 24.5 51.3 7.4 12.7 5.6 5.7 5.6 13.8 24.5 51.3 6.7 14.9 0 0.5 0.0 0.0 15.0 0.5 0.0 0.0 16.0 0.5 0.0 0.0 17.0 0.0 0.0 0.0 18.0 0.0 0.0 0.0 18.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 697 0.0 1337 61.2 60.9 74.7 60.0 26.9 27.4 69.2 59.5 F A F E E C C E F 101.0 66.4 32.9 51.4 51.4 51.4 51.4 1 E E C C E F D 11.0 67.1 30.0 21.1 57.0 12.6 D D *5.3 5.7 5.5 5.5 5.7 5.6 7 A A 5.6 A A A A A A A A A A B A B B A B A B A B B A B <td< td=""><td>%ile BackOfQ(50%),veh/ln</td><td>11.0</td><td>0.0</td><td>26.4</td><td>1.5</td><td>1.4</td><td>2.2</td><td>5.9</td><td>12.6</td><td>13.8</td><td>2.2</td><td>24.8</td><td>25.7</td></td<> | %ile BackOfQ(50%),veh/ln | 11.0 | 0.0 | 26.4 | 1.5 | 1.4 | 2.2 | 5.9 | 12.6 | 13.8 | 2.2 | 24.8 | 25.7 |
| No. 1 No. 1 No. 1 No. 1 No. 2 No. | Unsig. Movement Delay, s/veh | , | ć | 1 22 7 | | 0 | L 7 L | | 2 | | 0 | L C | 100 |
| 1131 147 1990 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Lifeip Delay(u),s/veri | 09.7 | 0.0 | 133.7 | 2.10 | 600.9 | 74.7 | 00.00 | 70.9 | 4.12 | 2.40 | 0.4.0 | 4.12 |
| 10.0 66.4 32.9 F E C C 1.1 2 4 5 6 8 11.0 67.1 30.0 21.1 57.0 12.6 6.4 33.1 24.5 24.5 51.3 7.4 6.4 33.1 26.5 15.1 53.3 6.7 55.0 0.0 0.5 0.0 0.0 D | Annroach Vol. veh/h | 1 | 1131 | - | ı | 147 | ı | ı | 1000 | | ı | 2801 | |
| 1 2 4 5 6 8 11.0 67.1 30.0 21.1 57.0 12.6 • 5.3 5.7 25.5 5.5 5.7 5.6 6.4 33.1 26.5 15.1 53.3 6.7 0.0 2.5 0.0 0.5 0.0 0.0 | Approach Delay, skeh | | 101.0 | | | 66.4 | | | 32.9 | | | 51.4 | |
| 11.0 67.1 30.0 21.1 57.0 7.5.3 5.7 5.5 5.5 5.5 5.7 6.7 8.7 64.3 3.1 26.5 15.1 53.3 0.0 2.5 0.0 0.5 0.0 5.5 0.0 | Approach LOS | | ш | | | ш | | | ပ | | | Ω | |
| 11.0 67.1 30.0 21.1 57.0 5.3 5.7 5.5 5.5 5.7 5.7 67.3 24.5 51.3 6.0 2.5 0.0 0.5 0.0 5.5 0. | Timer - Assigned Phs | • | 2 | | 4 | rc. | 9 | | œ | | | | |
| *5.3 5.7 5.5 5.5 5.7 *8.7 67.3 24.5 24.5 51.3 6.4 33.1 26.5 15.1 53.3 0.0 2.5 0.0 0.5 0.0 55.0 D | Phs Duration (G+Y+Rc), s | 11.0 | 67.1 | | 30.0 | 21.1 | 57.0 | | 12.6 | | | | |
| *8.7 67.3 24.5 24.5 51.3 6.4 33.1 26.5 15.1 53.3 0.0 2.5 0.0 0.5 0.0 55.0 | Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.9 | | | | |
| 6.4 33.1 26.5 15.1 53.3 0.0 2.5 0.0 0.5 0.0 55.0 D | Max Green Setting (Gmax), s | * 8.7 | 67.3 | | 24.5 | 24.5 | 51.3 | | 7.4 | | | | |
| c), s 0.0 2.5 0.0 0.5 0.0 iry 55.0 D | Max Q Clear Time (g_c+I1), s | 6.4 | 33.1 | | 26.5 | 15.1 | 53.3 | | 6.7 | | | | |
| ıry | Green Ext Time (p_c), s | 0.0 | 2.5 | | 0.0 | 0.5 | 0.0 | | 0.0 | | | | |
| | Intersection Summary | | | | | | | | | | | | |
| | HCM 6th Ctrl Delay | | | 55.0 | | | | | | | | | |
| Notes | HCM 6th LOS | | | D | | | | | | | | | |
| | | | | | | | | | | | | | |

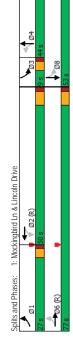
Synchro 10 Report Page 11

Synchro 10 Report Page 12 Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement.
*HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

02/11/2019
CVTech BR

1: Mockingbird Ln & Lincoln Drive

| → | SBT | 43 | 25 | 25 | NA | ∞ | | œ | | 7.0 | 33.5 | 53.0 | 40.8% | 4.0 | 2.5 | 0.0 | 6.5 | | | None | 18.9 | 0.15 | 69.0 | 31.4 | 0.0 | 31.4 | ပ | 36.1 | O | | | | | | | | | | |
|-------------|------------|--|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| ۶ | SBL | * | 19 | 19 | pm+pt | e | ∞ | co | | 3.5 | 8.0 | 0.6 | %6.9 | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 21.4 | 0.16 | 0.40 | 51.7 | 0.0 | 51.7 | ۵ | | | | | | | | | | | U | |
| ← | NBT | \$ | 89 | 89 | NA | 4 | | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 11.7 | 0.09 | 0.57 | 62.3 | 0.0 | 62.3 | ш | 61.7 | ш | | | | | | | | LOS: B | CU Level of Service C | |
| • | NBL | <u>, </u> | ∞ | ∞ | Perm | | 4 | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 11.7 | 0.09 | 0.12 | 55.8 | 0.0 | 22.8 | ш | | | | | | Green | | | | Intersection LOS: B | :U Level | |
| ţ | WBT | ₩ | 1011 | 1011 | NA | 2 | | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | С-Мах | 73.6 | 0.57 | 09.0 | 22.4 | 0.0 | 22.4 | S | 22.1 | ပ | | | | ., Start of | | | | 드 | ⊇ | |
| > | WBL | * | 25 | 22 | Perm | | 2 | 2 | | 15.0 | 27.0 | 20.0 | 38.5% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 73.6 | 0.57 | 0.10 | 12.1 | 0.0 | 12.1 | В | | | | | | nd 6:EBTI | | | | | | |
| † | EBT | * | 945 | 945 | NA | 9 | | 9 | | 15.0 | 27.0 | 77.0 | 59.2% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 98.6 | 0.76 | 0.41 | 9.9 | 0.0 | 9.9 | A | 9.2 | A | | | | WBTL ar | | | | | | |
| 1 | EBL | <i>K</i> | 267 | 267 | pm+pt | - | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 100.6 | 0.77 | 99.0 | 18.8 | 0.0 | 18.8 | В | | | | | | phase 2: | | dinated | | - - | on 71.8% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | LOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.69 | Intersection Signal Delay: 19.1 | Intersection Capacity Utilization 71.8% | Analysis Period (min) 15 |



02/11/2019 CivTech BR

Synchro 10 Report Page 1

Smoke Tree Resort 2025 Background PM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | 4 | † | <i>></i> | > | ţ | 4 | • | ← | • | ۶ | → | • |
|--|--------------|----------|-------------|-------------|------------|-------|------|----------|------|------|----------|------|
| Movement | EBF | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | ₽ | | r | ₽ ₽ | | r | £\$ | | r | 2 | |
| Traffic Volume (veh/h) | 267 | 945 | 32 | 25 | 1011 | 89 | - ∞ | 89 | 19 | 19 | 25 | 169 |
| Future Volume (veh/h) | 267 | 945 | 32 | 25 | 1011 | 89 | ∞ | 89 | 19 | 29 | 25 | 169 |
| 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 | 010 | No | 0101 | 0101 | No | 0101 | 0101 | No | 0101 | 0101 | No | 0101 |
| Adj sat Flow, verynyn | 18/0 | 1070 | 0/81 | 0/81 | 1400 | 0/81 | 0/81 | 18/0 | 18/0 | 18/0 | 0/81 | 100 |
| Adj Flow Kale, Venin Boat Lour Eactor | 167 | 000 | 30 | 87 | 000 | 0/0 | 600 | 0/0 | 17 | 44 | 200 | 88 6 |
| Percent Heavy Veh % | 0.70 | 0.40 | 0.70 | 0.40 | 0.70 | 0.70 | 0.90 | 0.70 | 0.70 | 0.70 | 0.70 | 0.30 |
| Cap, veh/h | 397 | 2562 | 88 | 375 | 2101 | 142 | 87 | 146 | 40 | 192 | 2 | 217 |
| Arrive On Green | 0.08 | 0.73 | 0.73 | 0.62 | 0.62 | 0.62 | 0.10 | 0.10 | 0.10 | 0.04 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1781 | 3505 | 120 | 519 | 3378 | 228 | 1134 | 1410 | 390 | 1781 | 388 | 1257 |
| Grp Volume(v), veh/h | 297 | 532 | 554 | 28 | 260 | 609 | 6 | 0 | 16 | 74 | 0 | 246 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1849 | 519 | 1777 | 1829 | 1134 | 0 | 1800 | 1781 | 0 | 1644 |
| Q Serve(g_s), s | 7.4 | 15.0 | 15.0 | 2.8 | 24.5 | 24.5 | 1.0 | 0.0 | 9.9 | 4.7 | 0.0 | 18.9 |
| Cycle Q Clear(g_c), s | 7.4 | 15.0 | 15.0 | 3.7 | 24.5 | 24.5 | 10.9 | 0.0 | 9.9 | 4.7 | 0.0 | 18.9 |
| Prop In Lane | 1.00 | | 0.07 | 1.00 | | 0.12 | 1.00 | | 0.22 | 1.00 | | 0.76 |
| Lane Grp Cap(c), veh/h | 397 | 1299 | 1351 | 375 | 1105 | 1138 | 87 | 0 | 187 | 192 | 0 | 284 |
| V/C Ratio(X) | 0.75 | 0.41 | 0.41 | 0.07 | 0.53 | 0.53 | 0.10 | 0.00 | 0.52 | 0.38 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 573 | 1299 | 1351 | 375 | 1105 | 1138 | 296 | 0 | 519 | 192 | 0 | 588 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.54 | 0.54 | 0.54 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 13.7 | 6.7 | 6.7 | 10.1 | 13.9 | 13.9 | 62.0 | 0.0 | 55.2 | 48.4 | 0:0 | 52.3 |
| Incr Delay (d2), s/veh | 3.2 | 1.0 | 6.0 | 0.2 | 1.0 | 1.0 | 0.5 | 0.0 | 2.2 | 1.3 | 0.0 | 7.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0:0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.0 | 5.5 | 2.7 | 0.3 | 9.8 | 10.1 | 0.3 | 0.0 | 3.1 | 2.2 | 0.0 | 8.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 17.0 | 7.7 | 7.6 | 10.4 | 14.9 | 14.9 | 62.5 | 0.0 | 57.4 | 49.7 | 0.0 | 0.09 |
| LnGrp LOS | В | A | ⋖ | m | m | В | ш | V | ш | ۵ | A | Ш |
| Approach Vol, veh/h | | 1383 | | | 1227 | | | 106 | | | 320 | |
| Approach Delay, s/veh | | 6.7 | | | 14.8 | | | 57.8 | | | 97.6 | |
| Approach LOS | | A | | | В | | | ш | | | ш | |
| Timer - Assigned Phs | - | 2 | က | 4 | | 9 | | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 14.1 | 86.9 | 0.6 | 20.0 | | 101.0 | | 29.0 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 44.0 | 2.0 | 37.5 | | 71.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.4 | 26.5 | 6.7 | 12.9 | | 17.0 | | 20.9 | | | | |
| Green Ext Time (p_c), s | 0.7 | 8.1 | 0.0 | 0.5 | | 9.5 | | 1.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 18.5 | | | | | | | | | |
| HCM 6th LOS | | | В | | | | | | | | | |

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Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2025 Background PM

| → | SBT | ¢\$ | .0 | 0 | NA | 9 | | 9 | | 7.0 | 33.0 | 36.0 | 27.7% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 49.0 | 0.38 | 0.14 | 0.4 | 0.0 | 0.4 | А | 4.5 | A | | | | | | | 4 | ntersection LOS: C CUT evel of Service B | |
|----------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|--|-------------------|------------------------------------|-------------------------|---|--------------------------|
| ٠ | SBL | r | 14 | 14 | Perm | | 9 | 9 | | 7.0 | 33.0 | 36.0 | 27.7% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 49.0 | 0.38 | 0.03 | 30.9 | 0.0 | 30.9 | S | | | | | | Green | | | | Intersection LOS: C | |
| ← | NBT | 4 | 0 | 0 | NA | 2 | | 2 | | 7.0 | 33.0 | 36.0 | 27.7% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 49.0 | 0.38 | 0.00 | 0.0 | 0.0 | 0.0 | V | | | | | | , Start of | | | | ⊆ ⊆ | 2 |
| ¥ | WBT | ₩ | 1008 | 1008 | Ν | 00 | | 00 | | 15.0 | 28.0 | 74.0 | 26.9% | 4.0 | 2.5 | 0.0 | 9.9 | Lag | Yes | None | 54.4 | 0.42 | 0.78 | 36.1 | 0.0 | 36.1 | O | 36.1 | | | | | d 6:SBTL | | | | | |
| † | EBT | ₩ | 696 | 696 | Ν | 4 | | 4 | | 15.0 | 28.0 | 94.0 | 72.3% | 4.0 | 2.5 | 0.0 | 9.9 | | | None | 68.5 | 0.53 | 0.57 | 34.6 | 0.0 | 34.6 | S | 34.2 | O | | | | :NBTL an | | | | | |
| 1 | EBL | * | 82 | 82 | pm+pt | 7 | 4 | 7 | | 3.5 | 8.0 | 20.0 | 15.4% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 71.0 | 0.55 | 0.43 | 28.9 | 0.0 | 28.9 | S | | | | | | o phase 2 | | rdinated | | 3.6 Ilon 62.4% | 7.77 |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | SOT | Approach Delay | Approach LOS | Intersection Summary | Cycle Lenath: 130 | Actuated Cycle Length: 130 | Offset 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | Natural Cycle: 70 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.78 | Intersection Signal Delay: 33.6 Intersection Capacity Utilization 62.4% | Analysis Period (min) 15 |

Spills and Phases: 2: Oual Run Rd & Uncoin Drive

02/11/2019 Synchro 10 Report CivTech BR Page 3

Smoke Tree Resort 2025 Background PM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| | \ | Ť | - | • | , | / | 1 | - | _ | ٠ | + | • |
|------------------------------|------|--------------|-------------|------|--------------|------|------|------|------|------|------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | + | | r | + | | | 4 | | F | 23 | |
| Traffic Volume (veh/h) | 82 | 963 | | 0 | 1008 | 25 | 0 | 0 | 2 | 14 | 0 | 93 |
| Future Volume (veh/h) | 82 | 963 | τ- | 0 | 1008 | 25 | 0 | 0 | 2 | 14 | 0 | 93 |
| nitial 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 | | | 9N | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 94 | 1070 | - | 0 | 1120 | 28 | 0 | 0 | 2 | 16 | 0 | 103 |
| Peak Hour Factor | 0.00 | 0.00 | 06:0 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 180 | 1645 | 2 | 22 | 1326 | 33 | 0 | 0 | 717 | 969 | 0 | 717 |
| Arrive On Green | 0.09 | 0.00 | 06:0 | 0.00 | 0.37 | 0.37 | 0.00 | 0.00 | 0.45 | 0.45 | 0.00 | 0.45 |
| Sat Flow, veh/h | 1781 | 3643 | 3 | 527 | 3543 | 86 | 0 | 0 | 1585 | 1415 | 0 | 1585 |
| Grp Volume(v), veh/h | 94 | 522 | 549 | 0 | 295 | 286 | 0 | 0 | 2 | 16 | 0 | 103 |
| 3rp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1870 | 527 | 1777 | 1854 | 0 | 0 | 1585 | 1415 | 0 | 1585 |
| ے Serve(g_s), s | 4.1 | 0.6 | 0.6 | 0.0 | 37.6 | 37.6 | 0.0 | 0.0 | 0.1 | 0.8 | 0.0 | 4.9 |
| Cycle Q Clear(g_c), s | 4.1 | 0.6 | 0.6 | 0.0 | 37.6 | 37.6 | 0.0 | 0.0 | 0.1 | 6.0 | 0.0 | 4.9 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.05 | 0.00 | | 1.00 | 1.00 | | 1.00 |
| ane Grp Cap(c), veh/h | 180 | 802 | 844 | 22 | 999 | 694 | 0 | 0 | 717 | 969 | 0 | 717 |
| //C Ratio(X) | 0.52 | 0.65 | 0.65 | 0.00 | 0.84 | 0.84 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.14 |
| 4vail Cap(c_a), veh/h | 316 | 1196 | 1258 | 132 | 923 | 963 | 0 | 0 | 717 | 969 | 0 | 717 |
| 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 |
| Jpstream Filter(I) | 0.92 | 0.92 | 0.92 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Jniform Delay (d), s/veh | 27.8 | 3.9 | 3.9 | 0.0 | 37.2 | 37.2 | 0.0 | 0.0 | 19.5 | 19.8 | 0.0 | 20.8 |
| ncr Delay (d2), s/veh | 2.2 | 8.0 | 0.8 | 0.0 | 5.3 | 5.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.4 |
| nitial Q Delay(d3),s/veh | 0:0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.7 | 1.8 | 1.9 | 0.0 | 17.2 | 17.9 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 1.9 |
| Jnsig. Movement Delay, s/veh | | | | | | | | | | | | |
| _nGrp Delay(d),s/veh | 30.0 | 4.7 | 4.7 | 0.0 | 42.5 | 42.3 | 0.0 | 0.0 | 19.5 | 19.8 | 0.0 | 21.3 |
| nGrp LOS | ပ | Α | A | A | ۵ | Ω | Α | Α | В | В | A | 0 |
| Approach Vol, veh/h | | 1165 | | | 1148 | | | 2 | | | 119 | |
| Approach Delay, síveh | | 6.7 | | | 45.4 | | | 19.5 | | | 21.1 | |
| Approach LOS | | A | | | Ω | | | В | | | O | |
| Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | | 64.8 | | 65.2 | | 64.8 | 10.0 | 55.2 | | | | |
| Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.1 | | 11.0 | | 6.9 | 6.1 | 39.6 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 9.4 | | 9.0 | 0.1 | 0.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 24.3 | | | | | | | | | |
| Company of the Company | | | 2.1.7 | | | | | | | | | |

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3: Smoke Tree West & Lincoln Dr

Smoke Tree Resort 2025 Background PM

4: Smoke Tree East & Lincoln Dr $_{\mbox{\scriptsize HCM}}$ 6th TWSC

| 2025 Background PM | PN PN | _ | | | | | HCM 6th TWSC |
|------------------------|----------|-------------|--------|------|--------|------|--------------|
| | | | | | | | |
| Information | | | | | | | |
| Intersection | ١ | | | | | | |
| Int Delay, s/ven | 0 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | r | \$ | > | | |
| Traffic Vol, veh/h | 616 | | 0 | 1032 | 0 | 0 | |
| Future Vol, veh/h | 616 | - | 0 | 1032 | 0 | 0 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | • | None | 1 | None | | None | |
| Storage Length | | 1 | 25 | | | ľ | |
| Veh in Median Storage, | # | 1 | 1 | 0 | 0 | 1 | |
| Grade, % | 0 | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1088 | | 0 | 1147 | 0 | 0 | |
| | | | | | | | |
| Major/Minor N | Major1 | _ | Major2 | _ | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1089 | 0 | 1663 | 545 | |
| Stage 1 | • | 1 | 1 | • | 1089 | 1 | |
| Stage 2 | , | • | | • | 574 | | |
| Critical Hdwy | • | 1 | 4.14 | 1 | 6.84 | 6.94 | |
| Critical Holwy Stg 1 | • | • | • | • | 5.84 | | |
| Critical Hdwy Stg 2 | • | 1 | • | • | 5.84 | 1 | |
| Follow-up Hdwy | ٠ | • | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 636 | • | 88 | 482 | |
| Stage 1 | • | • | • | • | 284 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 527 | 1 | |
| Platoon blocked, % | ٠ | • | | ٠ | | | |
| Mov Cap-1 Maneuver | • | • | 636 | • | 88 | 482 | |
| Mov Cap-2 Maneuver | • | 1 | 1 | 1 | 204 | 1 | |
| Stage 1 | • | 1 | 1 | 1 | 284 | 1 | |
| Stage 2 | • | • | • | • | 527 | ' | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 0 | | |
| HCM LOS | | | | | ⋖ | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 1 | 1 | • | 636 | 1 | |
| HCM Lane V/C Ratio | | • | | | • | | |
| HCM Control Delay (s) | | 0 | | • | 0 | | |
| HCM Lane LOS | | A | | • | V | | |
| HCM 95th %tile Q(veh) | | 1 | 1 | 1 | 0 | 1 | |
| | | | | | | | |

| Int Delay, s/veh | 0 | | | | | | |
|--------------------------|--------------|-------------|--------|------|---------|-------|--|
| Mouomont | FDT | CDD | MDI | MDT | IDI | MBB | |
| Moverment | EBI | EBK | WBL | WBI | NBL | NDK | |
| Lane Configurations | * | | F | ‡ | > | | |
| Traffic Vol, veh/h | 978 | _ | 2 | 1032 | 2 | 2 | |
| Future Vol, veh/h | 978 | - | 2 | 1032 | 2 | 2 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | | None | | None | | None | |
| Storage Length | | | 22 | | 0 | | |
| Veh in Median Storage, # | 0 #/ | • | • | 0 | 0 | , | |
| Grade, % | 0 | • | | 0 | 0 | | |
| Peak Hour Factor | 8 | 06 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1087 | | 2 | 1147 | 2 | 2 | |
| Major/Minor N | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1088 | 0 | 1666 | 544 | |
| Stage 1 | | 1 | | • | 1088 | | |
| Stage 2 | | , | | ' | 578 | | |
| Critical Hdwy | | 1 | 4.14 | 1 | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | | | | | 5.84 | | |
| Critical Hdwy Stg 2 | | • | | 1 | 5.84 | | |
| Follow-up Hdwy | | | 2.22 | | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | | | 637 | • | 87 | 483 | |
| Stage 1 | 1 | • | , | • | 284 | | |
| Stage 2 | 1 | 1 | 1 | 1 | 524 | | |
| Platoon blocked, % | 1 | 1 | | 1 | | | |
| Mov Cap-1 Maneuver | 1 | • | 637 | • | 87 | 483 | |
| Mov Cap-2 Maneuver | | ٠ | ٠ | | 203 | | |
| Stage 1 | | • | • | • | 283 | | |
| Stage 2 | 1 | 1 | • | 1 | 524 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 17.8 | | |
| HCM LOS | | | | | O | | |
| | | | i | 0 | | ab 01 | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 286 | | 1 | 637 | | |
| HCM Lane V/C Ratio | | 0.016 | • | | - 0.003 | • | |
| HCM Control Delay (s) | | 17.8 | | 1 | 10.7 | | |
| HCM Lane LOS | | C | | | α | | |
| | |) | | | 2 | | |

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Synchro 10 Report Page 5

02/11/2019 CivTech BR

5: Lincoln Medical West & Lincoln Dr

| Intersection | | | | | | | |
|--------------------------|------|-----------|-----|---------------------|-----------|------|--|
| Int Delay, sheh | 0.7 | | | | | | |
| Movement | EBT | EBR | WBL | EBR WBL WBT NBL NBR | NBL | NBR | |
| Lane Configurations | ₹ | | ۳ | ‡ | > | | |
| Traffic Vol, veh/h | 973 | 7 | 21 | 1004 | 30 | 56 | |
| Future Vol, veh/h | 973 | 7 | 21 | 1004 | 30 | 56 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free Free | Ē | Free Free | Stop Stop | Stop | |
| RT Channelized | | None | | - None | | None | |
| Storage Length | ٠ | • | 25 | ٠ | 0 | ٠ | |
| Veh in Median Storage, # | 0 # | 1 | 1 | 0 | 0 | 1 | |
| Grade, % | 0 | • | • | 0 | 0 | ٠ | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1081 | 00 | 23 | 1116 | 33 | 53 | |

| | 545 | | | 6.94 | | | 3.32 | 482 | | | | 482 | | | | | | | |
|-------------|----------------------|---------|---------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|--|
| Minor1 | 0 1689 | - 1085 | - 604 | - 6.84 | - 5.84 | - 5.84 | - 3.52 | - 84 | - 285 | - 508 | | - 81 | - 194 | - 275 | - 508 | NB | 22.4 | ပ | |
| Major2 | 0 1089 | | | - 4.14 | | | - 2.22 | - 636 | | | | - 636 | | | | WB | 0.2 | | |
| Major1 | All 0 | 1 | | 1 | | | | nver | | 1 | - % | | | 1 | | EB | lay, s 0 | | |
| Major/Minor | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | |

| WBT | | ٠ | ٠ | ٠ | • | |
|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|--|
| WBL | 989 | 0.037 | 10.9 | В | 0.1 | |
| EBR | | | • | | | |
| EBT | | • | • | | | |
| NBLn1 EBT EBR WBL WBT | 268 | 0.232 | 22.4 | S | 0.0 | |
| Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) | |

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Smoke Tree Resort 2025 Background PM

6: Lincoln Medical East & Lincoln Dr HCM 6th TWSC

| Int Delay, s/veh | 0.2 | | | | | | |
|--------------------------|--------|-------|--------|------|----------|------|--|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | r | ‡ | > | | |
| Traffic Vol, veh/h | 995 | 4 | 0 | 1024 | 7 | 30 | |
| Future Vol. Veryn | 342 | 4 0 | > < | 1024 | 7 0 | 30 | |
| Sign Control | Free | Free | Fig. | Free | Stop | Stop | |
| RT Channelized | , | None | | None | | None | |
| Storage Length | ľ | | 22 | | 0 | | |
| Veh in Median Storage, # | 0 #' | | | 0 | 0 | | |
| Grade, % | | | | 0 | 0 | | |
| Peak Hour Factor | 06 | 06 | 8 | 06 | 06 | 06 | |
| Heavy Vehicles, % | 7 | 7 | 7 | 7 | 7 | 2 | |
| Mvmt Flow | 1106 | 4 | 0 | 1138 | 2 | 33 | |
| Major/Minor N | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1110 | 0 | 1677 | 555 | |
| Stage 1 | | 1 | 1 | ٠ | 1108 | | |
| Stage 2 | , | | | • | 269 | | |
| Critical Hdwy | • | ٠ | 4.14 | ٠ | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | | | | 5.84 | | |
| Critical Hdwy Stg 2 | • | 1 | 1 | 1 | 5.84 | , | |
| Follow-up Hdwy | ٠ | | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | | • | 625 | • | 98 | 475 | |
| Stage 1 | • | • | • | ٠ | 278 | | |
| Stage 2 | • | | | ٠ | 230 | | |
| Platoon blocked, % | • | 1 | | • | | | |
| Mov Cap-1 Maneuver | • | 1 | 625 | 1 | 98 | 475 | |
| Mov Cap-2 Maneuver | ٠ | • | | ٠ | 201 | | |
| Stage 1 | • | | 1 | | 278 | | |
| Stage 2 | • | | • | | 230 | | |
| Annroach | FB | | WB | | NR | | |
| HCM Control Delay s | 9 0 | | | | 130 | | |
| HCM LOS | > | | > | | <u>.</u> | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 438 | | • | 625 | | |
| HCM Lane V/C Ratio | | 0.081 | | | ٠ | | |
| HCM Control Delay (s) | | 13.9 | • | • | 0 | | |
| HCM Lane LOS | | В | • | • | ⋖ | | |
| | | | | | (| | |

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7: Apartment Drwy & Lincoln Dr

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

Lincoln Dr Smoke Tree Resort
HCM 6th TWSC 2025 Background PM

| nt Delay, s/veh | 24 | | | | | | | | | | | |
|------------------------|--------|----------|-------|--------|------------|----------|--------|-----------------|--------|----------|------|------------|
| | | | | | | | | | | | | |
| | EBL | EBT | EBR \ | WBL \ | WBT W | WBR r | NBL P | NBT N | NBR S | SBL S | SBT | SBR |
| -ane Configurations | F | \$ | | je- | ₽ ₽ | | | 4 | | j. | | X _ |
| raffic Vol, veh/h | 8 | 826 | 46 | 7 | 920 | 10 | 74 | 3 | 53 | ∞ | 0 | 38 |
| uture Vol, veh/h | ∞ | 928 | 46 | _ | 920 | 9 | 74 | m | 23 | ∞ | 0 | 38 |
| eds, #/hr | 0 | 0 | 0 | 0 | 0 | | | | | | | 0 |
| | Free | Free | | Free | Free Fi | | Stop | Stop | | Stop | Stop | Stop |
| RT Channelized | | _ | None | | Š. | None | í | ĕ | None | í | Ż | None |
| Storage Length | 25 | | | 22 | , | | | | | 0 | | 0 |
| /eh in Median Storage, | - # | 0 | | | 0 | | | 0 | | | 0 | |
| | | 0 | | | 0 | | | 0 | | | 0 | |
| Peak Hour Factor | 06 | 06 | 06 | 8 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |
| Heavy Vehicles, % | | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 9 1 | 1064 | 21 | 00 | 1022 | = | 82 | 3 | 26 | 6 | 0 | 42 |
| | | | | | | | | | | | | |
| fajor/Minor Ma | Major1 | | M | Major2 | | Minor1 | or1 | | Minor2 | or2 | | |
| Conflicting Flow All | 1033 | 0 | 0 | 1115 | 0 | 0 | 1635 2 | 2157 5 | 558 15 | 1596 | | 517 |
| Stage 1 | | | | | · | , | | 1108 | | 1044 | ÷ | |
| Stage 2 | , | , | , | , | , | | | 1049 | , | 552 | | |
| Critical Hdwy | 4.14 | ÷ | | 4.14 | · | , | | | 6.94 7 | 7.54 | , | 6.94 |
| Critical Hdwy Stg 1 | ٠ | , | | | | , | | 5.54 | 9 - | 6.54 | | |
| Critical Hdwy Stg 2 | | ř | | | í | , | 6.54 | 5.54 | - 6 | 6.54 | ï | , |
| -ollow-up Hdwy | 2.22 | | | 2.22 | | ' | | | | 3.52 | , | 3.32 |
| of Cap-1 Maneuver | 899 | | | 622 | í | , | | | 473 | 71 | | 503 |
| Stage 1 | ٠ | | | | | | | 284 | , | 245 | 0 | |
| Stage 2 | | · | ÷ | | · | ř | 205 | 303 | - | 486 | 0 | |
| Platoon blocked, % | | ٠ | ٠ | | | , | | | 1 | | | |
| Mov Cap-1 Maneuver | 899 | · | | 622 | | | ~ 09 | | 473 | 28 | | 503 |
| Nov Cap-2 Maneuver | ٠ | ٠ | ٠ | ٠ | | | | 46 | | 28 | | |
| Stage 1 | · | ř | · | · | · | ÷ | | 280 | | 242 | | |
| Stage 2 | | | | | | | 424 | 299 | - | 415 | | |
| | £ | | | 9 | | | 9 | | | 9 | | |
| | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.1 | | | 0.1 | | \$ 382.4 | 2.4 | | 2 | 24.1 | | |
| | | | | | | | ш | | | ပ | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBL | EBT | EBR W | WBL V | WBT W | WBR SBLn1 SBLn2 | .n1SBL | rı2 | | |
| Capacity (veh/h) | | | 899 | | - | 622 | | | | 503 | | |
| HCM Lane V/C Ratio | | | 0.013 | ÷ | - 0.013 | 113 | | - 0.153 | | 0.084 | | |
| HCM Control Delay (s) | \$3 | \$ 382.4 | 10.5 | | - | 10.9 | ÷ | ÷ | 78 1 | 12.8 | | |
| HCM Lane LOS | | ட | В | | , | В | , | | | В | | |
| HCM 95th %tile Q(veh) | | 11.3 | C | | | 0 | | • | 0.5 | 0.3 | | |

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|-------------------|------------|
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| (c) | 3.6 | | | | | | | | | | |
|--------|-------|------|--------|------|-------|--------|--------------|-----------------|--------|------|------|
| EBL | EBT. | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 15 | 4₽ | | F | ₹ | | | 4 | | K. | | ¥C |
| 12 | 951 | | 69 | 918 | 6 | 16 | — | 100 | 2 | 0 | . ∞ |
| 12 | 951 | 99 | 69 | 918 | 6 | 16 | - | 100 | 2 | 0 | 00 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| - 1 | • | None | 1 | 1 | None | 1 | • | None | 1 | • | None |
| 25 | | • | 25 | ٠ | ٠ | ٠ | ٠ | ٠ | 0 | ٠ | 0 |
| | 0 | • | • | 0 | • | • | 0 | 1 | • | 0 | · |
| ٠. | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | |
| 8 | 06 | 0, | 06 | 8 | 8 | 06 | 8 | 06 | 8 | 06 | 8 |
| 7 | 2 | | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 7 | 2 |
| 3 | 1057 | 19 | 77 | 1020 | 10 | 18 | - | 111 | 9 | 0 | 6 |
| | | | | | | | | | | | |
| Major1 | | 2 | Major2 | | 2 | Minor1 | | 2 | Minor2 | | |
| 1030 | 0 | 0 | 1124 | 0 | 0 | 1781 | 2301 | 295 | 1734 | | 515 |
| | • | | | | | 1117 | 1117 | | 1179 | | ì |
| ٠. | | | ٠ | ٠ | ٠ | 664 | 1184 | , | 555 | | |
| 4.14 | | • | 4.14 | 1 | | 7.54 | 6.54 | 6.94 | 7.54 | 1 | 6.94 |
| | | • | ٠ | ٠ | ٠ | 6.54 | 5.54 | • | 6.54 | | |
| | , | • | • | | | 6.54 | 5.54 | • | 6.54 | | ٠ |
| 2.22 | | ٠ | 2.22 | ٠ | ٠ | 3.52 | 4.02 | 3.32 | 3.52 | | 3.32 |
| 920 | | • | 617 | ٠ | | 25 | 88 | 470 | 29 | 0 | 202 |
| | ľ | • | ٠ | ٠ | ٠ | 221 | 281 | • | 202 | 0 | |
| | | • | • | • | • | 416 | 261 | • | 484 | 0 | |
| | | • | | • | • | | | | | | |
| 670 | _ | • | 617 | • | • | 46 | 33 | 470 | 37 | | 202 |
| | | ٠ | ٠ | ٠ | ٠ | 46 | 33 | • | 37 | | |
| | | • | • | • | • | 217 | 276 | • | 198 | • | |
| | | • | ٠ | • | • | 358 | 228 | 1 | 361 | 1 | |
| | | | | | | | | | | | |
| | EB | | WB | | | 8 | | | SB | | |
| 0.1 | | | 0.8 | | | 52.4 | | | 53.3 | | |
| | | | | | | ш | | | ш | | |
| | | | | | | | | | | | |
| | NBLn1 | EBI | EBT | EBR | WBL | WBT | WBR S | WBR SBLn1 SBLn2 | 3BLn2 | | |
| | 198 | 0/9 | 1 | | 617 | | | 37 | 202 | | |
| | 0.657 | 0.02 | ٠ | , | 0.124 | ٠ | ٠ | 0.15 | 0.018 | | |
| | 52.4 | 10 | | | 11.7 | • | | 118.8 | 12.3 | | |
| | ш | В | ٠ | ٠ | В | ٠ | ٠ | ш | В | | |
| | 3.9 | 0.1 | ٠ | | 0.4 | | ٠ | 0.5 | 0.1 | | |
| | | | | | | | | | | | |

9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2025 Background PM

| Color Colo | | ۸ | † | ~ | > | ţ | • | • | ۶ | → | `* | |
|--|--|-----------|----------|------------|-------------|------------|------------|-------|-------------|----------|-------|--|
| 1 | Sroup | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| 6.5BT, Start of Green 1. 61 466 61 68 445 1762 66 1702 2. 61 466 61 68 445 1762 66 1702 3. 62 416 61 88 445 1762 66 1702 4. 4 5 8 8 5 2 1 6 4. 4 5 8 8 5 2 1 6 5. 2 10 0 50 100 5. 23.1% 23.1% 130 130 130 167 5. 23.1% 23.1% 10.0% 10.0% 23.1% 56.2% 10.8% 43.8% 23.1% 5. 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | Configurations | <i>y-</i> | ₩ | ¥C | <i>y-</i> | ₹ | F | 444 | je- | ₩ | ¥C_ | |
| Name | Volume (vph) | 225 | 61 | 466 | 61 | 89 | 445 | 1762 | 99 | 1702 | 527 | |
| I | Volume (vph) | 552 | 61 | 466 | 19 | 89 | 445 | 1762 | 99 | 1702 | 527 | |
| 4 4 5 8 8 5 2 1 6 4 4 5 8 8 5 2 1 6 7 0 70 70 70 70 100 50 100 130 130 130 130 130 130 140 570 130 300 300 130 130 130 140 570 140 40 36 36 36 40 47 33 47 15 15 20 00 00 00 00 00 00 00 00 0 00 00 00 00 | lype | Split | NA | vo+mq | Split | NA | Prot | NA | Prot | NA | hm+ov | |
| 7.0 7.0 7.0 7.0 7.0 10.0 5.0 10.0 2.0 10.0 3.0 3.0 3.0 3.0 13.0 13.0 13.0 1 | sted Phases | 4 | 4 | 2 | 00 | 00 | 2 | 2 | _ | 9 | 4 | |
| 130 7.0 7.0 7.0 7.0 10.0 5.0 10.0 13.0 13.0 13.0 13.0 13.0 14.0 5.0 10.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 10.0 13.0 13.0 13.0 13.0 13.0 13.0 13 | tted Phases | | | 4 | | | | | | | 9 | |
| 130 130 130 130 140 160 160 130 130 130 130 130 130 130 130 140 140 150 130 130 130 130 130 147 110 160 130 130 130 130 130 140 140 57.0 130 130 130 130 130 140 140 57.0 130 130 130 130 130 140 140 57.0 130 130 130 130 130 130 130 130 130 13 | tor Phase | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | | 9 | 4 | |
| 7.0 7.0 7.0 7.0 10.0 5.0 10.0 10.0 10.0 13.0 13.0 13.0 13.0 13 | n Phase | | | | | | | | | | | |
| 130 130 130 140 160 160 160 130 130 300 130 140 57.0 130 300 130 130 300 130 140 57. | um Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 5.0 | 10.0 | 7.0 | |
| 8 21% Start of Green 8 2178, 2178, 10.0% 13.0 37.0 14.0 57.0 8 2178, 2178, 10.0% 10.0% 21.0% 56.2% 10.8% 43.8% 2 9 1.5 1.5 2.0 2.0 1.5 1.0 2.0 1.0 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1 1.5 1.5 5.6 5.6 5.6 5.7 5.3 5.7 1 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 9 0.19 0.36 0.06 0.07 0.05 0.0 1 1.2 1.1 37.3 92.9 99.0 66.0 25.4 88.3 43.0 1 1.2 1.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1 1.2 1.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1 84.3 | um Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| 6 231% 23.1% 10.0% 10.0% 23.1% 56.2% 10.8% 43.8% 23 14.0 40 3.6 3.6 40 4.7 3.3 4.7 15.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 15.5 5.5 5.6 5.6 5.5 5.7 5.3 5.7 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 11.1 137.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 39.0 60.0 25.4 88.3 43.0 1.1 11.1 37.3 92.0 | Split (s) | 30.0 | 30.0 | 30.0 | 13.0 | 13.0 | 30.0 | 73.0 | 14.0 | 57.0 | 30.0 | |
| 15. 15. 15. 10. 20 15. 10. 20 11.0 16. 55 5.5 5.6 5.6 5.5 5.7 5.3 5.7 17. 107 00.0 00.0 00.0 00.0 00.0 18. 15. 15. 5.6 5.6 5.5 5.7 5.3 5.7 18. 15. 15. 5.6 5.6 5.5 5.7 5.3 5.7 18. 15. 15. 5.6 5.6 5.5 5.7 5.3 5.7 18. 15. 15. 5.6 5.6 5.6 5.7 5.3 5.7 18. 10. 00.0 00.0 00.0 00.0 00.0 00.0 19. 10. 00.0 00.0 00.0 00.0 00.0 00.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 11.0 19. 00.0 00.0 00.0 00.0 00.0 00.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 11.0 19. 10.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 11.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 10. 00.0 00.0 00.0 00.0 00.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 11.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 121.1 37.3 92.9 39.0 66.0 25.4 88.3 37.3 11.0 19. 121.1 37.3 92.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 2 | Split (%) | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% | |
| 115 115 2.0 2.0 115 110 2.0 110 20 0.0 0.0 0.0 0.0 0.0 0.0 21 0.0 0.0 0.0 0.0 0.0 0.0 0.0 21 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 22 15.5 5.6 5.6 5.5 5.7 5.3 5.7 5.3 5.7 24.5 46.7 7.3 7.3 22.2 70.3 80 53.7 8 24.5 46.7 7.3 7.3 22.2 70.3 80 53.7 8 24.5 46.7 7.3 7.3 22.2 70.5 80 6.4 1 0.0 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 21 12.1.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1 21.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1 21.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1 21.1 37.3 92.9 39.0 6.0 20.0 0.0 25.8 43.3 73.3 F 26.9 2.4 88.3 43.0 1 26.8 84.3 5.4 9 27 28 33.4 37.3 P 28 43 5.4 9 28 43 5.4 9 28 43 6.4 9 28 43 6.4 9 28 49 6.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0 | w Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| 5 55 56 56 56 57 57 53 57 1 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | ed Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| 5 5.5 5.5 5.6 5.6 5.5 5.7 5.3 5.7 Lead Lead Lag | Fime Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lead | Lost Time (s) | 5.5 | 5.5 | 5.5 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| 8 Vorne None None None None None C-Max I 245 46.7 3 7.3 22.2 70.3 80 53.7 2.0.19 0.36 0.06 0.06 0.17 0.54 0.06 0.41 17.11 37.3 92.9 39.0 66.0 25.4 88.3 43.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| None None None None None None C-Max None None None None C-Max None None None None C-Max None | Lag Optimize? | | | | | | | | | | | |
| 5 245 467 73 73 222 703 80 53.7 0.19 0.36 0.06 0.01 0.74 0.06 0.41 1 121.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1 121.1 37.3 92.9 39.0 66.0 25.4 88.3 43.0 1 121.1 37.3 92.9 92.0 66.0 25.4 88.3 43.0 1 121.1 37.3 92.9 92.0 66.0 25.4 88.3 43.0 1 121.1 37.3 92.9 92.0 92.0 92.0 92.0 92.0 92.0 92.0 | Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| 9 019 036 006 017 054 006 041 1 121.1 37.3 929 99 062 084 074 067 090 090 01 1 121.1 37.3 929 99.0 660 25.4 883 43.0 090 00 00 00 00 00 00 00 00 00 00 00 0 | fct Green (s) | 24.5 | 24.5 | 46.7 | 7.3 | 7.3 | 22.2 | 70.3 | 8.0 | 53.7 | 83.9 | |
| 7 1.07 0.85 0.69 0.62 0.84 0.74 0.67 0.90 1 17.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.60 25.4 88.3 43.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1 12.11 37.3 92.9 39.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 | ted g/C Ratio | 0.19 | 0.19 | 0.36 | 90.0 | 90:0 | 0.17 | 0.54 | 90.0 | 0.41 | 0.65 | |
| 1 121.1 37.3 92.9 39.0 66.0 25.4 883 43.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | offe | 1.07 | 1.07 | 0.85 | 69.0 | 0.62 | 0.84 | 0.74 | 0.67 | 0.00 | 0.55 | |
| 6:SBT, Start of Green 11.13 | ol Delay | 119.1 | 121.1 | 37.3 | 92.9 | 39.0 | 0.99 | 25.4 | 88.3 | 43.0 | 12.6 | |
| 6.SBT, Slart of Green | e Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 6:SB1, Slart of Green Intersection LOS: D ICL Level of Service E | Delay | 119.1 | 121.1 | 37.3 | 92.9 | 39.0 | 0.99 | 25.4 | 88.3 | 43.0 | 12.6 | |
| 84.3 54.9 33.4 F D C C C C C C C C C C C C C C C C C C | | ı | ш | ٥ | Œ. | ٥ | ш | S | ш. | ٥ | В | |
| 6.SBT, Start of Green Intersection LOS: D Intersection LOS: D ICU Level of Service E | ach Delay | | 84.3 | | | 54.9 | | 33.4 | | 37.3 | | |
| 6:SBT, Start of Green | ach LOS | | ш. | | | | | ပ | | Ω | | |
| 6:SBT, Start of Green | ection Summary | | | | | | | | | | | |
| 6:SBT, Slart of Green 6:SBT, Slart of Green 7% | Length: 130 | | | | | | | | | | | |
| 6:5B1, Start of Green 7% | ited Cycle Length: 130 | - | i | | | | | | | | | |
| % | t: 0 (0%), Referenced to | phase 6:3 | SBT, Sta | rt of Gree | _ | | | | | | | |
| | al Cycle: 100 of Type: Actuated Coord | dinotod | | | | | | | | | | |
| 45.1 Ization 86.9% | or rype. Actualeu-Court | miateu | | | | | | | | | | |
| | ection Signal Delay: 45 | - | | | ū | prepertion | U.SO I | | | | | |
| | ection Capacity Utilization | %6.9% uo | | | 0 | U Level o | of Service | E C | | | | |
| | sis Period (min) 15 | | | | | | | | | | | |

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Splits and Phases: 9: Scottsdale Rd & Lincoln Dr

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9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| Febr Febr Febr Welt Welt Welt Welt Net Net Net Net Set | | | t | • | • | | , | _ | - | _ | | • | , |
|--|------------------------------|-------|----------|------|------|----------|-------|------|------|------|------|------|------|
| Secondary Color Secondary | Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 552 61 466 61 68 78 445 1762 50 66 1702 552 61 466 61 68 78 445 1762 50 66 1702 100 <t< td=""><td>Lane Configurations</td><td>æ</td><td>4</td><td>×</td><td>k</td><td>¥.</td><td></td><td>K</td><td>AAT</td><td></td><td>×</td><td>WWW</td><td>K</td></t<> | Lane Configurations | æ | 4 | × | k | ¥. | | K | AAT | | × | WWW | K |
| 552 61 466 61 68 78 445 1762 50 66 1702 100 10 | Traffic Volume (veh/h) | 225 | 61 | 466 | - 61 | 89 | 78 | 445 | 1762 | 20 | 99 | 1702 | 527 |
| 1.00 | Future Volume (veh/h) | 552 | 19 | 466 | 61 | 89 | 78 | 445 | 1762 | 20 | 99 | 1702 | 527 |
| 1,00 | Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.00 | Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| No | Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 | Work Zone On Approach | | No No | | | No No | | | No | | | No | |
| 662 0 518 68 76 87 494 1958 56 73 1891 690 0.90 0.90 0.90 0.90 0.90 0.90 0.90 | Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| 090 090 090 090 090 090 090 090 090 090 | Adj Flow Rate, veh/h | 662 | 0 | 518 | 89 | 76 | 87 | 464 | 1958 | 26 | 73 | 1891 | 286 |
| 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 0.00 | 06:0 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 06.0 | 06:0 | 06:0 | 0.00 | 0.90 |
| 671 0 551 101 101 90 551 2669 73 93 2015 662 00 0.06 0.06 0.06 0.16 0.50 0.50 0.50 0.39 8563 0 1885 1781 1777 1885 3456 5102 146 1781 5106 642 0 518 68 76 87 494 1305 709 73 1891 741 0.0 24.5 4.9 5.5 7.1 18.2 40.1 40.3 5.3 46.3 741 0.0 24.5 4.9 5.5 7.1 18.2 40.1 40.3 5.3 46.3 740 0.0 24.5 4.9 5.5 7.1 18.2 40.1 40.3 5.3 46.3 741 0.0 24.5 4.9 0.5 7.0 1.00 1.00 1.00 1.00 671 0.0 551 101 101 90 551 1784 299 93 2015 671 0.0 551 101 101 90 551 1782 995 119 673 0.33 0.33 0.33 1.00 1.00 1.00 1.00 1.0 | Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0.06 0.00 0.06 0.06 0.06 0.06 0.16 0.50 0.50 0.09 0.38 0.38 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.0 | Cap, veh/h | 671 | 0 | 221 | 101 | 101 | 06 | 221 | 2569 | 73 | 93 | 2015 | 924 |
| 3863 0 1885 1781 1777 1885 3456 5102 146 1781 5106 662 0 518 68 76 87 44 1302 709 73 1897 1788 1788 1789 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1849 1702 1849 1702 1849 1702 1849 1702 1849 1702 1849 1702 1849 1702 1849 1702 1949 1702 1 | Arrive On Green | 90:0 | 0.00 | 90:0 | 90:0 | 90:0 | 90.0 | 0.16 | 0.50 | 0.50 | 0.05 | 0.39 | 0.39 |
| 662 0 518 68 76 817 494 1305 709 73 1891 1781 0 1885 1781 1772 1885 1782 1702 1844 1702 | Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5102 | 146 | 1781 | 2106 | 1585 |
| 1781 0 1885 1781 1777 1385 1728 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1844 1781 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 1702 1841 184 | Grp Volume(v), veh/h | 662 | 0 | 518 | 89 | 9/ | 87 | 464 | 1305 | 407 | 73 | 1891 | 586 |
| 241 0.0 24.5 4.9 5.5 7.1 18.2 40.1 40.3 5.3 46.3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1. | Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1844 | 1781 | 1702 | 1585 |
| 24.1 0.0 24.5 4.9 5.5 7.1 182 40.1 40.3 5.3 46.3 1.00 1.00 1.00 1.00 1.00 0.08 1.00 0.08 1.00 0.09 1.00 1.00 1.00 1.00 0.08 1.00 0.09 0.00 0.94 0.67 0.75 0.96 0.90 0.76 0.76 0.79 0.94 0.67 0.07 0.09 0.00 0.94 0.67 0.75 0.96 0.90 0.76 0.76 0.79 0.94 0.67 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | Q Serve(g_s), s | 24.1 | 0.0 | 24.5 | 4.9 | 5.5 | 7.1 | 18.2 | 40.1 | 40.3 | 5.3 | 46.3 | 31.8 |
| 1100 1100 1100 1100 1100 1000 1000 100 | Cycle Q Clear(g_c), s | 24.1 | 0.0 | 24.5 | 4.9 | 5.5 | 7.1 | 18.2 | 40.1 | 40.3 | 5.3 | 46.3 | 31.8 |
| 10 671 0 551 101 101 90 551 1714 929 93 2015 10 10 101 101 90 551 1714 929 93 2015 10 10 10 100 100 100 100 100 100 100 10 10 | Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| 0.099 0.000 0.094 0.67 0.75 0.96 0.090 0.76 0.76 0.79 0.94 0.671 0 551 101 101 90 651 1762 955 119 2015 0.033 0.33 0.33 0.33 0.100 1.00 1.00 1. | Lane Grp Cap(c), veh/h | 671 | 0 | 551 | 101 | 101 | 06 | 221 | 1714 | 676 | 93 | 2015 | 924 |
| 671 0 551 101 101 90 651 1762 955 119 2015 10.33 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | V/C Ratio(X) | 0.99 | 0.00 | 0.94 | 0.67 | 0.75 | 96.0 | 06:0 | 97.0 | 0.76 | 0.79 | 0.94 | 0.63 |
| 0.33 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | Avail Cap(c_a), veh/h | 671 | 0 | 551 | 101 | 101 | 06 | 651 | 1762 | 955 | 119 | 2015 | 924 |
| 1,000 0.000 1,000 | HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| h 608 0.0 46.1 60.1 60.4 61.2 536 260 260 609 378 310 0.0 240 13.1 240 822 125 1.7 3.2 176 100 hh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 | Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 310 000 240 13.1 24.0 822 12.5 17 3.2 77.6 10.0 h/ln 455 0.0 8.9 2.6 3.1 4.9 8.9 16.3 81 2.8 20.8 y.s/weh 91.8 0.0 70.0 13.2 84.4 143.4 66.1 27.7 29.2 78.5 47.8 E F F E C C E D E F F E C C E D E F F E C C E D E D E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E E F F E C C E D E D E D E E F F E C C E D E D E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E C C E E D E E F F E E C C E E D E E F F E E C C E E D E E F F E E C C E E D E E F F E E C C E E D E E E E E E E E E D E E E E | Uniform Delay (d), s/veh | 8.09 | 0.0 | 46.1 | 60.1 | 60.4 | 61.2 | 53.6 | 26.0 | 26.0 | 6.09 | 37.8 | 17.9 |
| hylin 145 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0. | Incr Delay (d2), s/veh | 31.0 | 0.0 | 24.0 | 13.1 | 24.0 | 82.2 | 12.5 | 1.7 | 3.2 | 17.6 | 10.0 | 3.3 |
| hin 145 0.0 18.9 2.6 3.1 4.9 8.9 16.3 18.1 2.8 20.8 y, s/eh | Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.8 | %ile BackOfQ(50%),veh/ln | | 0.0 | 18.9 | 5.6 | 3.1 | 4.9 | 8.9 | 16.3 | 18.1 | 2.8 | 20.8 | 18.5 |
| 918 0.0 70.0 73.2 84.4 143.4 66.1 27.7 29.2 78.5 47.8 F A E E F F E C C E D 231 2568 25.50 82.3 103.3 35.7 42.6 P F F D D D D D D D D D D D D D D D D D | Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| F A E E F F E C C E | LnGrp Delay(d),s/veh | 91.8 | 0.0 | 70.0 | 73.2 | 84.4 | 143.4 | 1.99 | 27.7 | 29.5 | 78.5 | 47.8 | 21.2 |
| 1180 231 2508 82.3 103.3 2508 82.3 103.3 25.7 F | LnGrp LOS | ш | A | ш | Ш | ш | ш | Ш | ပ | ပ | ш | ۵ | |
| 1 2 4 5 6 8 8 35.7 103.3 35.7 103.3 103.3 103.3 103.3 103.3 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5 | Approach Vol, veh/h | | 1180 | | | 231 | | | 2508 | | | 2550 | |
| 1 | Approach Delay, s/veh | | 82.3 | | | 103.3 | | | 35.7 | | | 42.6 | |
| 12.1 71.2 3.0 2.6.2 57.0 17.2 8.5 5.5 5.5 5.7 8.7 47.3 67.3 24.5 24.5 51.3 6.0 3.3 0.0 0.5 1.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6 | Approach LOS | | Œ. | | | ш | | | ٥ | | | ٥ | |
| 12.1 71.2 30.0 26.2 57.0 1 5.3 5.7 5.5 5.5 5.7 5.7 1 7.3 42.3 24.5 24.5 51.3 24.5 24.5 24.5 24.5 24.3 24.5 24.3 24.5 24.3 24.5 24.3 24.5 24.3 24.3 26.5 20.2 48.3 26.5 20.2 48.3 26.5 20.3 49.3 26.5 20.5 1.5 20.3 26.5 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20 | Timer - Assigned Phs | _ | 2 | | 4 | 2 | 9 | | 8 | | | | |
| *5.3 5.7 5.5 5.5 5.7 *8.7 67.3 24.5 24.5 51.3 7.3 42.3 26.5 20.2 48.3 0.0 3.3 0.0 0.5 1.5 P. D. D. | Phs Duration (G+Y+Rc), s | 12.1 | 71.2 | | 30.0 | 26.2 | 57.0 | | 13.0 | | | | |
| *87 6/3 24.5 24.5 51.3 7.3 42.3 26.5 20.2 48.3 0.0 3.3 0.0 0.5 1.5 49.3 D | Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.9 | | | | |
| 7.3 42.3 26.5 20.2 48.3 0.0 3.3 0.0 0.5 1.5 49.3 49.3 D.0 D.0 0.5 1.5 D.0 | Max Green Setting (Gmax), s | * 8.7 | 67.3 | | 24.5 | 24.5 | 51.3 | | 7.4 | | | | |
| s 0.0 3.3 0.0 0.5 1.5 49.3 D | Max Q Clear Time (g_c+I1), s | 7.3 | 42.3 | | 26.5 | 20.2 | 48.3 | | 9.1 | | | | |
| ıry | Green Ext Time (p_c), s | 0.0 | 3.3 | | 0.0 | 0.5 | 1.5 | | 0.0 | | | | |
| | Intersection Summary | | | | | | | | | | | | |
| | HCM 6th Ctrl Delay | | | 49.3 | | | | | | | | | |
| | HCM 6th LOS | | | ۵ | | | | | | | | | |

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

02/11/2019

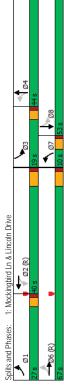
CivTech BR

Smoke Tree Resort 2025 Total AM

1: Mockingbird Ln & Lincoln Drive Timings

| - | SBT | 2 | % | 96 | NA | 8 | | ∞ | | 7.0 | 33.5 | 53.0 | 40.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 28.9 | 0.22 | 0.85 | 9.09 | 0.0 | 9.09 | ٥ | 47.9 | Ω | | | | | | | | | |
|-------------|------------|--|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---|--------------------------|
| ۶ | SBL | * | 82 | 82 | pm+pt | 3 | 8 | m | | 3.5 | 8.0 | 19.0 | 14.6% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 33.4 | 0.26 | 0.27 | 36.6 | 0.0 | 36.6 | ٥ | | | | | | | | | | | 1 |
| ← | NBT | 2 | 37 | 37 | N A | 4 | | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 16.2 | 0.12 | 0.29 | 33.0 | 0.0 | 33.0 | ပ | 32.8 | O | | | | | | | 2 | CU Level of Service D | |
| • | NBL | <u>, </u> | 9 | 9 | pm+pt | 7 | 4 | 7 | | 2.0 | 9.5 | 10.0 | 7.7% | 3.5 | 1.0 | 0.0 | 4.5 | Lead | Yes | None | 21.9 | 0.17 | 0.02 | 30.3 | 0.0 | 30.3 | O | | | | | | Green | | | | ICU Level of Service | |
| ţ | WBT | ₩. | 971 | 971 | NA | 2 | | 2 | | 15.0 | 27.0 | 40.0 | 30.8% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 64.1 | 0.49 | 0.65 | 23.8 | 0.0 | 23.8 | O | 23.7 | O | | | | Start of | | | 3 | ≣ ⊆ | 2 |
| > | WBL | r | 22 | 22 | Perm | | 2 | 2 | | 15.0 | 27.0 | 40.0 | 30.8% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 64.1 | 0.49 | 0.13 | 19.5 | 0.0 | 19.5 | В | | | | | | d 6:EBTL | | | | | |
| † | EBT | ₩. | 1055 | 1055 | NA | 9 | | 9 | | 15.0 | 27.0 | 67.0 | 51.5% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 9.98 | 0.67 | 0.52 | 13.9 | 0.0 | 13.9 | В | 16.5 | В | | | | WBTL and | | | | | |
| 4 | EBL | <u>, </u> | 242 | 242 | pm+pt | <u></u> | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 9.88 | 99.0 | 0.72 | 28.3 | 0.0 | 28.3 | O | | | | | | o phase 2:\ | | dinated | c | ion 78.7% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | ros | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.85 | Intersection Capacity Utilization 78.7% | Analysis Period (min) 15 |

1: Mockingbird Ln & Lincoln Drive



02/12/2019 CivTech BR

Synchro 10 Report Page 1

Smoke Tree Resort 2025 Total AM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| | 4 | † | <i>></i> | > | ţ | 4 | • | ← | • | ٠ | → | • |
|------------------------------------|------------|----------|-------------|-------------|----------|------|------|----------|---------------|------|----------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | - | ₩ | | r | ₩ | | r | 2, | | F | 2 | |
| Traffic Volume (veh/h) | 242 | 1055 | 33 | 25 | 97.1 | 48 | 9 | 37 | 25 | 82 | % | 253 |
| Future Volume (veh/h) | 242 | 1055 | 33 | 25 | 971 | 48 | 9 | 37 | 25 | 82 | % | 253 |
| 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 | | | 9 | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 569 | 1172 | 37 | 28 | 1079 | 53 | 7 | 41 | 28 | 94 | 107 | 281 |
| Peak Hour Factor | 06:0 | 06:0 | 0.00 | 0.00 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 0.00 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 325 | 2114 | 19 | 241 | 1643 | 81 | 103 | 226 | 154 | 366 | 118 | 311 |
| Arrive On Green | 0.09 | 09:0 | 09:0 | 0.32 | 0.32 | 0.32 | 0.01 | 0.22 | 0.22 | 0.05 | 0.26 | 0.26 |
| Sat Flow, veh/h | 1781 | 3516 | 111 | 462 | 3447 | 169 | 1781 | 1036 | 707 | 1781 | 456 | 1198 |
| Grp Volume(v), veh/h | 569 | 592 | 617 | 28 | 929 | 976 | 7 | 0 | 69 | 94 | 0 | 388 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1850 | 462 | 1777 | 1840 | 1781 | 0 | 1743 | 1781 | 0 | 1655 |
| Q Serve(g_s), s | 9.6 | 25.9 | 25.9 | 0.9 | 35.0 | 35.1 | 0.4 | 0.0 | 4.2 | 5.2 | 0.0 | 29.5 |
| Cycle Q Clear(g_c), s | 9.6 | 25.9 | 25.9 | 15.8 | 35.0 | 35.1 | 0.4 | 0.0 | 4.2 | 5.2 | 0.0 | 29.5 |
| Prop In Lane | 1.00 | | 90.0 | 1.00 | | 60:0 | 1.00 | | 0.41 | 1.00 | | 0.72 |
| Lane Grp Cap(c), veh/h | 325 | 1068 | 1112 | 241 | 847 | 877 | 103 | 0 | 380 | 366 | 0 | 429 |
| V/C Ratio(X) | 0.83 | 0.55 | 0.55 | 0.12 | 99.0 | 99.0 | 0.07 | 0.00 | 0.18 | 0.24 | 0.00 | 0.90 |
| Avail Cap(c_a), veh/h | 474 | 1068 | 1112 | 241 | 847 | 877 | 163 | 0 | 503 | 208 | 0 | 592 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 19.0 | 19.0 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.7 | 15.5 | 15.5 | 32.2 | 35.1 | 35.1 | 41.3 | 0.0 | 41.4 | 35.0 | 0.0 | 46.6 |
| Incr Delay (d2), s/veh | 7.8 | 2.1 | 2.0 | 0.5 | 2.2 | 2.1 | 0.3 | 0.0 | 0.2 | 0.3 | 0.0 | 13.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.7 | 10.8 | 11.3 | 0.8 | 16.5 | 17.0 | 0.5 | 0.0 | <u>~</u> ∞ | 2.3 | 0.0 | 13.7 |
| Unsig. Movement Delay, s/ven | | , | | c | 0 | 0 | | c | , ,, | L | d | |
| LnGrp Delay(d),srven | د. ای د | 0.7 | 0.7 | 37.8 | 5/.5 | 31.2 | 0.14 | 0.0 | 0.14 | 33.3 | 0.0 | 00.3 |
| LITGID LOS | اد | Q 0777 | ۵ | اد | 71,0 | ۵ | ٥ | X F | | ۵ | ¥ 60 | الا |
| Approach Vol. verifit | | 20.1 | | | 27.1 | | | 41.6 | | | 462 | |
| Approach Delay, Swell Approach LOS | | Z0.1 | | | . C | | | 4.0 | | | + icc | |
| | | , | | |) | | | | | | 1 | |
| Timer - Assigned Phs | _ | 2 | 3 | 4 | | 9 | 7 | ∞ | | | | |
| Phs Duration (G+Y+Rc), s | 16.2 | 0.89 | 11.0 | 34.8 | | 84.2 | 9.9 | 40.2 | | | | |
| Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | 4.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.0 | 34.0 | 15.0 | 37.5 | | 61.0 | 2.5 | 46.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 11.6 | 37.1 | 7.2 | 6.2 | | 27.9 | 2.4 | 31.5 | | | | |
| Green Ext Time (p_c), s | 9.0 | 0.0 | 0.1 | 0.3 | | 10.3 | 0.0 | 2.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 32.1 | | | | | | | | | |
| HCM 6th LOS | | | S | | | | | | | | | |
| Notes | | | | | | | | | | | | |

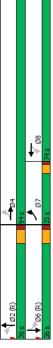
Notes
User approved pedestrian interval to be less than phase max green.

02/12/2019 CivTech BR

Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2025 Total AM

| | 4 | † | • | ţ | • | — | ۶ | → | |
|---|-----------|---------|---------|----------|--------------|-----------------------|-------|----------|--|
| -ane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | |
| Lane Configurations | * | ₩. | je- | ₩\$ | | 4 | * | æ | |
| raffic Volume (vph) | 115 | 1117 | 2 | 937 | - | 0 | 26 | 0 | |
| Future Volume (vph) | 115 | 1117 | 2 | 937 | - | 0 | 26 | 0 | |
| Turn Type | pm+pt | NA | Perm | Ν | Perm | NA | Perm | NA | |
| Protected Phases | 7 | 4 | | 80 | | 2 | | 9 | |
| Permitted Phases | 4 | | 8 | | 2 | | 9 | | |
| Detector Phase | 7 | 4 | ∞ | 80 | 2 | 2 | 9 | 9 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 3.5 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | 7.0 | |
| Minimum Split (s) | 8.0 | 28.0 | 28.0 | 28.0 | 33.0 | 33.0 | 33.0 | 33.0 | |
| Total Split (s) | 20.0 | 94.0 | 74.0 | 74.0 | 36.0 | 36.0 | 36.0 | 36.0 | |
| Total Split (%) | 15.4% | 72.3% | 26.9% | 26.9% | 27.7% | 27.7% | 27.7% | 27.7% | |
| Yellow Time (s) | 3.0 | 4.0 | 4.0 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 | |
| All-Red Time (s) | 1.0 | 2.5 | 2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| ost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| Fotal Lost Time (s) | 4.0 | 6.5 | 6.5 | 6.5 | | 0.9 | 0.9 | 0.9 | |
| -ead/Lag | Lead | | Lag | Lag | | | | | |
| -ead-Lag Optimize? | Yes | | Yes | Yes | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | |
| Act Effct Green (s) | 1.79 | 65.2 | 50.4 | 50.4 | | 52.3 | 52.3 | 52.3 | |
| Actuated g/C Ratio | 0.52 | 0.50 | 0.39 | 0.39 | | 0.40 | 0.40 | 0.40 | |
| //c Ratio | 0.55 | 0.70 | 0.05 | 0.77 | | 0.01 | 0.02 | 0.09 | |
| Control Delay | 33.2 | 42.4 | 29.0 | 44.3 | | 0.0 | 28.4 | 0.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| Fotal Delay | 33.2 | 42.4 | 29.0 | 44.3 | | 0.0 | 28.4 | 0.2 | |
| SO- | S | ۵ | S | ٥ | | ⋖ | O | ⋖ | |
| Approach Delay | | 41.6 | | 44.2 | | | | 8.2 | |
| Approach LOS | | O | | Ω | | | | ∢ | |
| Intersection Summary | | | | | | | | | |
| Sycle Length: 130 | | | | | | | | | |
| Actuated Cycle Length: 130 | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | phase 2: | NBTL an | 16:SBTL | Start of | Green | | | | |
| Natural Cycle: 70 | | | | | | | | | |
| Control Type: Actuated-Coordinated | dinated | | | | | | | | |
| Maximum v/c Ratio: 0.77 | | | | | | | | | |
| ntersection Signal Delay: 41.2 | .2 | | | _ | tersectio | Intersection LOS: D | | | |
| ntersection Capacity Utilization 67.4% | ion 67.4% | | | 9 | :U Level | CU Level of Service C | o C | | |
| Analysis Period (min) 15 | | | | | | | | | |

Splits and Phases: 2: Quail Run Rd & Lincoln Drive



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Synchro 10 Report Page 3

Smoke Tree Resort 2025 Total AM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| Color Colo | | ŀ | | | | ١, | ١. | | ŀ | | - | - | ٦ |
|--|------------------------------|------|------|------------|----------|------|------|--------------|------|-------|------|----------|------|
| EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL 1 | | ١ | † | > | / | ļ | 1 | • | - | • | ٠ | → | * |
| 1 | Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 115 117 | Lane Configurations | F | ₩ | | ۴ | ₩ | | | 4 | | r | 2 | |
| 115 1117 4 2 937 12 1 0 0 8 26 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Traffic Volume (veh/h) | 115 | 1117 | 4 | 2 | 937 | 12 | | 0 | 8 | 26 | 0 | 99 |
| 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Future Volume (veh/h) | 115 | 1117 | 4 | 2 | 937 | 12 | - | 0 | ∞ | 26 | 0 | 99 |
| 100 | Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| No 1870 1870 1870 1870 1870 1870 1870 1870 | Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 | Work Zone On Approach | | 9 | | | % | | | 9 | | | No No | |
| 128 1241 4 2 1041 13 1 0 9 29 090 090 090 090 090 090 090 090 090 09 | Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 | Adj Flow Rate, veh/h | 128 | 1241 | 4 | 2 | 1041 | 13 | - | 0 | 6 | 29 | 0 | 73 |
| 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 06.0 | 06:0 | 06.0 | 06.0 | 06.0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.00 | 0.90 |
| 208 1567 5 182 1217 15 83 21 668 721 1718 283 31 2 1 668 721 1718 283 31 2 1 668 721 1718 601 601 601 601 601 601 601 601 601 601 | Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0.12 0.86 0.86 0.45 0.45 0.47 0.00 0.47 0.47 1781 36.33 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1 | Cap, veh/h | 208 | 1567 | 2 | 182 | 1217 | 15 | 83 | 21 | 899 | 721 | 0 | 749 |
| 1781 3633 12 447 3594 45 112 45 1413 1406 1788 607 638 2 515 539 10 0 0 29 1781 3638 2 515 539 10 0 0 0 29 1781 1868 447 1777 1868 500 0 0 0 0 1781 193 19,3 0.4 33.7 33.7 0.0 0.0 0.0 1892 601 19,3 19,3 7.6 33.7 33.7 0.0 0 0 0 1982 19,3 19,3 2.0 0.0 0.0 0.0 1983 1993 19,3 3.3 3.3 0 0 0 0 1993 1993 1993 1993 1993 0 0 0 1994 1995 1995 1995 1995 1995 1995 1995 1995 1995 1995 1995 1996 1997 1996 1996 1996 1996 1997 1997 1996 1996 1996 1997 1997 1996 1996 1996 1998 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1999 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1996 1996 1996 1996 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 1990 | Arrive On Green | 0.12 | 98.0 | 98.0 | 0.45 | 0.45 | 0.45 | 0.47 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| 128 667 638 2 515 539 10 0 29 1781 1777 1868 447 1777 1862 1570 0 0 1046 6.0 19;3 19;3 7.6 33.7 33.7 0.0 0.0 0.0 0.0 6.0 19;3 19;3 7.6 33.7 33.7 0.4 0.0 0.0 0.0 1.00 0.01 1.00 0.02 0.10 0.00 0.0 0.0 0.61 0.79 0.79 0.79 0.79 0.85 0.86 0.86 0.86 0.01 0.0 0.0 0.0 288 0.86 0.86 0.86 1.00 1.00 1.00 1.00 0.00 0.00 0.04 0.86 0.86 0.86 1.00 1.00 1.00 1.00 0.00 0.00 0.0 28.2 6.4 6.4 6.4 6.4 8.0 32.9 32.9 18.2 0.0 0.0 18.4 2.5 1.7 1.6 0.0 5.0 1.00 1.00 0.0 0.0 0.0 0.0 1.84 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.85 0.86 0.86 0.80 0.14.2 14.9 0.2 0.0 0.0 0.0 1.87 0.89 0.89 0.89 0.89 0.99 0.99 1.37 1137 1166 0.99 0.99 0.99 0.99 1.38 0.99 0.99 0.99 0.99 0.99 1.39 0.99 0.99 0.99 0.99 0.99 1.30 0.99 0.99 0.99 0.99 0.99 1.31 0.99 0.99 0.99 0.99 0.99 1.32 0.99 0.99 0.99 0.99 0.99 1.33 0.99 0.99 0.99 0.99 0.99 1.34 0.99 0.99 0.99 0.99 0.99 1.35 0.99 0.99 0.99 0.99 1.35 0.99 0.99 0.99 0.99 1.37 0.99 0.99 0.99 0.99 1.38 0.99 0.99 0.99 0.99 1.39 0.99 0.99 0.99 0.99 1.30 0.99 0.99 0.99 0.99 1.30 0.99 0.99 0.99 1.31 0.99 0.99 0.99 1.32 0.99 0.99 0.99 1.32 0.99 0.99 0.99 1.32 0.99 0.99 0.99 1.35 0.99 0.99 0.99 1.37 0.99 0.99 0.99 1.38 0.99 0.99 0.99 1.39 0.99 0.99 1.39 0.99 0.99 1.39 0.99 0.99 1.39 0.99 0.99 1.39 0.99 0.99 1.30 | Sat Flow, veh/h | 1781 | 3633 | 12 | 447 | 3594 | 45 | 112 | 45 | 1413 | 1406 | 0 | 1585 |
| 1781 1777 1868 447 1777 1862 1570 0 0 1406 6.0 19.3 19.3 0.4 33.7 33.7 0.0 0.0 0.0 0.0 6.0 19.3 19.3 7.6 33.7 33.7 0.4 0.0 0.0 0.0 6.0 19.3 19.3 7.6 33.7 33.7 0.4 0.0 0.0 0.0 700 1.00 0.01 1.00 0.02 0.10 0.00 0.00 0.01 700 1.00 1.00 0.08 0.01 0.00 0.00 0.01 700 2.00 2.00 1.35 2.62 92.3 967 773 0 0 0 721 700 2.00 2.00 1.33 1.33 1.33 1.00 1.00 0.00 700 2.00 2.00 1.33 1.33 1.33 1.00 1.00 0.00 700 2.82 2.4 6.4 2.80 32.9 32.9 18.2 0.0 0.0 700 0.0 0.0 0.0 0.0 0.0 700 0.0 0.0 0.0 0.0 0.0 700 0.0 0.0 0.0 0.0 700 0.0 0.0 0.0 700 0.0 0.0 0.0 700 0.0 0.0 0.0 700 0.0 0.0 700 0.0 0.0 0.0 700 0.0 0.0 | Grp Volume(v), veh/h | 128 | 209 | 638 | 2 | 515 | 539 | 10 | 0 | 0 | 29 | 0 | 73 |
| 6.0 19.3 19.3 0.4 33.7 33.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 | Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1868 | 447 | 1777 | 1862 | 1570 | 0 | 0 | 1406 | 0 | 1585 |
| s 6.0 19.3 19.3 76 33.7 33.7 0.4 0.0 0.0 13 1.00 | Q Serve(g_s), s | 0.9 | 19.3 | 19.3 | 0.4 | 33.7 | 33.7 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | 3.3 |
| 100 | Cycle Q Clear(g_c), s | 0.9 | 19.3 | 19.3 | 9.7 | 33.7 | 33.7 | 0.4 | 0.0 | 0.0 | 1.3 | 0.0 | 3.3 |
| Figh. 208 766 896 182 602 631 773 0 0 721 10.61 0.79 0.79 0.79 0.01 0.86 0.86 0.01 0.00 0.00 0.04 11.02 0.00 2.00 2.00 1.33 1.33 1.33 1.00 1.00 0.00 0.00 10.86 0.86 0.86 1.00 1.00 1.00 0.00 0.00 1.00 10.84 0.86 0.86 1.00 1.00 1.00 0.00 0.00 0.00 10.84 0.86 0.86 1.00 1.00 0.00 0.00 0.00 0.00 10.84 0.80 0.80 0.00 0.00 0.00 0.00 0.00 10.84 0.00 0.00 0.00 0.00 0.00 0.00 10.85 0.00 0.00 0.00 0.00 0.00 10.85 0.00 0.00 0.00 0.00 10.85 0.00 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0.00 0.00 10.85 0 | Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.02 | 0.10 | | 06:0 | 1.00 | | 1.00 |
| 1964 1979 1970 1986 1986 1970 | Lane Grp Cap(c), veh/h | 208 | 99/ | 908 | 182 | 602 | 631 | 773 | 0 | 0 | 721 | 0 | 749 |
| The control of the | V/C Ratio(X) | 0.61 | 0.79 | 0.79 | 0.01 | 0.86 | 0.86 | 0.01 | 0.00 | 0.00 | 0.04 | 0.00 | 0.10 |
| 280 200 200 133 133 133 100 100 100 100 100 100 1 | Avail Cap(c_a), veh/h | 317 | 1196 | 1257 | 262 | 923 | 296 | 773 | 0 | 0 | 721 | 0 | 749 |
| 0.86 0.86 0.86 1.00 1.00 1.00 1.00 0.00 0.00 1.00 0 | HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 282 64 64 28.0 32.9 32.9 182 000 000 184 25 1.7 1.6 0.0 5.0 4.0 0.0 0.0 0.0 25 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.0 25 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.0 25 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.0 25 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 185 2 | Upstream Filter(I) | 0.86 | 0.86 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 00.00 | 1.00 | 0.00 | 1.00 |
| 2.5 1.7 1.6 0.0 5.0 4.8 0.0 0.0 0.0 0.1 2.5 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.0 2.5 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.0 2.5 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.5 2.5 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.5 2.5 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 18.5 2.4 A A C D D B A A B B 18.2 10.2 B B 18.2 11.2 2 4 6.7 12.0 50.5 6.0 6.5 6.0 4.0 6.5 30.0 87.5 30.0 16.0 6.5 2.4 21.3 5.3 8.0 35.7 2.1 22.1 | Uniform Delay (d), s/veh | 28.2 | 6.4 | 6.4 | 28.0 | 32.9 | 32.9 | 18.2 | 0.0 | 0.0 | 18.4 | 0.0 | 19.0 |
| 00 00 00 00 00 00 00 00 00 00 00 00 00 | Incr Delay (d2), s/veh | 2.5 | 1.7 | 1.6 | 0.0 | 2.0 | 4.8 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.3 |
| 2.5 3.2 3.3 0.0 14.2 14.9 0.2 0.0 0.0 0.5 30.7 8.1 8.0 28.0 37.9 37.7 18.2 0.0 0.0 18.5 C A A C D D B A A B 137.3 1066 110 10.2 37.8 18.2 C A 6.2.6 67.4 12.0 50.5 6.0 6.5 6.0 40 6.5 3.0.0 87.5 30.0 16.0 6.5 C.4 21.3 5.3 8.0 35.7 C.5 2.4 C.5 2.1 | Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 8.1 8.0 28.0 37.9 37.7 18.2 0.0 0.0 18.5 1373 1056 10 B A A B A B B A B B A B B 10 | %ile BackOfQ(50%),veh/ln | | 3.2 | 3.3 | 0.0 | 14.2 | 14.9 | 0.2 | 0.0 | 0.0 | 0.5 | 0.0 | 1.3 |
| 9.1.7 8.1 8.10 28.0 3.1.9 37.1 182 0.0 0.0 183. 1.0.2 1373 1056 10 B A A B B 10.2 10.2 10.2 10.2 10.2 10.2 10.2 10.2 | Unsig. Movement Delay, s/veh | | | d | 0 | 0 | | 0 | 0 | d | C | d | 4 |
| 1373 1056 10 B A A B B 1373 1056 10 B B B B B B B B B B B B B B B B B B | LnGrp Delay(d), siven | 30.7 | - × | 0.0 0.0 | 0.82 | 51.9 | 2/./ | 18.2 | 0.0 | 0.0 | 0.0 | 0.0 | 19.2 |
| 1373 1056 10 10.2 37.8 18.2 18.2 18.2 18.2 18.2 18.2 18.2 18 | LNGrp LUS | ر | ₹ | ∢ | ر | | ۵ | 2 | ∢ ! | ∢ | n | ∢ . | ۱۳ |
| 10.2 37.8 18.2 18.2 8.2 4 6 7 8 8 67.4 62.6 67.4 12.0 50.5 6.0 6.5 6.0 4.0 6.5 8.3 30.0 16.0 67.5 8.3 8.0 35.7 0.0 12.1 0.4 0.2 8.3 | Approach Vol, veh/h | | 1373 | | | 1056 | | | 10 | | | 102 | |
| 2 4 6 7 8 67.4 62.6 67.4 120 50.5 6.0 6.5 6.0 4.5 30.0 87.5 30.0 16.0 67.5 2.4 21.3 5.3 80 35.7 0.0 12.1 0.4 0.2 8.3 | Approach Delay, s/veh | | 10.2 | | | 37.8 | | | 18.2 | | | 19.0 | |
| 2 4 6 7 1 2 1 2 1 2 1 3 1 3 1 3 1 3 1 3 1 3 1 3 | Approach LOS | | В | | | O | | | В | | | В | |
| 67.4 62.6 67.4 12.0 6.0 6.5 6.0 4.0 30.0 87.5 30.0 16.0 2.4 21.3 5.3 8.0 0.0 12.1 0.4 0.2 C | Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | ∞ | | | | |
| 6.0 6.5 6.0 4.0 30.0 87.5 30.0 16.0 2.4 21.3 5.3 8.0 0.0 12.1 0.4 0.2 C | Phs Duration (G+Y+Rc), s | | 67.4 | | 62.6 | | 67.4 | 12.0 | 50.5 | | | | |
| 30.0 87.5 30.0 16.0 2.4 21.3 5.3 8.0 0.0 12.1 0.4 0.2 22.1 | Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| 2.4 21.3 5.3 8.0 0.0 12.1 0.4 0.2 22.1 | Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.5 | | | | |
| 22.1 C | Max Q Clear Time (g_c+I1), s | | 2.4 | | 21.3 | | 5.3 | 8.0 | 35.7 | | | | |
| ary | Green Ext Time (p_c), s | | 0.0 | | 12.1 | | 0.4 | 0.7 | 8.3 | | | | |
| | Intersection Summary | | | | | | | | | | | | |
| | HCM 6th Ctrl Delay | | | 22.1 | | | | | | | | | |
| | HCM 6th LOS | | | U | | | | | | | | | |

02/1/2/2019 CWTech BR

Smoke Tree Resort 2025 Total AM

4: Smoke Tree Access B & Lincoln Dr

| + | | |
|-------------------|---------------|--|
| Smoke Tree Resori | 2025 Total AM | |

5: Lincoln Medical West & Lincoln Dr

| Intersection Int Delay, sheh Movement EBT Lane Configurations Figure Vol, vehh 1137 Conflicting Peds, #hr Sign Control Free | | | | | | |
|---|-------|--------|------|---------|------|--|
| | | | | | | |
| | | | | | | |
| | EBR | WBL | WBT | NBL | NBR | |
| | | r | \$ | > | | |
| | 17 | 26 | 934 | 16 | 22 | |
| | 17 | 56 | 934 | 16 | 22 | |
| | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free | Free | Stop | Stop | |
| K1 Channelized - | None | | None | 7 | None | |
| Storage Length - | ٠ | 25 | ٠ | 0 | | |
| Veh in Median Storage, # 0 | ٠ | ٠ | 0 | 0 | · | |
| | ٠ | ٠ | 0 | 0 | | |
| 5 | 8 | 06 | 06 | 06 | 8 | |
| Heavy Vehicles, % 2 | 2 | 7 | 2 | 7 | 2 | |
| Mvmt Flow 1263 | 19 | 29 | 1038 | 18 | 24 | |
| | | | | | | |
| Major/Minor Major1 | Σ | Major2 | ≥ | Minor1 | | |
| Conflicting Flow All 0 | 0 | 1282 | 0 | 1850 | 641 | |
| Stage 1 | ٠ | 1 | ٠ | 1273 | | |
| Stage 2 | ٠ | | ٠ | 217 | | |
| Critical Hdwy - | 1 | 4.14 | ì | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | ٠ | • | ٠ | 5.84 | | |
| Critical Hdwy Stg 2 | • | 1 | ì | 5.84 | ì | |
| Follow-up Hdwy | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver - | 1 | 537 | ŕ | 99 | 417 | |
| Stage 1 | ٠ | ٠ | ٠ | 227 | | |
| Stage 2 | • | 1 | i. | 525 | ì | |
| Platoon blocked, % | ٠ | | ٠ | | | |
| Mov Cap-1 Maneuver - | • | 537 | i. | 62 | 417 | |
| Mov Cap-2 Maneuver - | ٠ | ٠ | ٠ | 160 | | |
| Stage 1 | • | • | ٠ | 215 | | |
| Stage 2 | ٠ | ٠ | ٠ | 525 | | |
| | | | | | | |
| Approach EB | | WB | | NB | | |
| HCM Control Delay, s 0 | | 0.3 | | 22.4 | | |
| HCM LOS | | | | ပ | | |
| | | | | | | |
| Minor Lane/Major Mvmt N | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 249 | 1 | • | 537 | | |
| HCM Lane V/C Ratio | 0.17 | • | • | - 0.054 | | |
| HCM Control Delay (s) | 22.4 | 1 | | 12.1 | | |
| HCM Lane LOS | O | • | | Ф | | |
| HCM 95th %tile Q(veh) | 9.0 | • | ٠ | 0.2 | | |

| Int Dolay choch | 0 | | | | | | |
|--------------------------------|--------|---------|--------|---------|---------|------|--|
| III Delay, s/veri | D.4 | | | | | | |
| Movement | EBT | EBR WBL | WBL | WBT | NBL | NBR | |
| Lane Configurations | 4₽ | | - | # | > | | |
| Traffic Vol, veh/h | 1142 | 18 | 45 | 953 | 9 | 6 | |
| Future Vol, veh/h | 1142 | 18 | 42 | 953 | 9 | 6 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | • | None | ٠ | None | | None | |
| Storage Length | • | ٠ | 22 | ٠ | 0 | | |
| Veh in Median Storage, # | 0 #' | • | • | 0 | 0 | | |
| Grade, % | 0 | ٠ | | 0 | 0 | | |
| Peak Hour Factor | 8 | 06 | 06 | 06 | 8 | 06 | |
| Heavy Vehicles, % Mvmt Flow | 2 1269 | 20 | 2 47 | 1059 | 7 | 2 10 | |
| Maior/Minor | Major1 | 2 | Maior2 | 2 | Minor1 | | |
| low All | 0 | 0 | 0 1289 | 0 | 0 1903 | 645 | |
| Stage 1 | | | | | 1279 | , | |
| Stage 2 | , | ٠ | | | 624 | | |
| Critical Hdwy | | ٠ | 4.14 | | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | | | • | • | 5.84 | | |
| Critical Hdwy Stg 2 | • | • | • | • | 5.84 | | |
| Follow-up Hdwy | • | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 534 | | 61 | 415 | |
| Stage 1 | • | ٠ | ٠ | ٠ | 225 | | |
| Stage 2 | 1 | • | • | • | 496 | | |
| Platoon blocked, % | 1 | ٠ | | 1 | | | |
| Mov Cap-1 Maneuver | 1 | 1 | 534 | • | 26 | 415 | |
| Mov Cap-2 Maneuver | • | ٠ | ٠ | ٠ | 120 | | |
| Stage 1 | | • | | • | 202 | | |
| Stage 2 | 1 | | • | • | 496 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.5 | | 20.9 | | |
| HCM LOS | | | | | O | | |
| Minor I am I Maior I Maria | | 2 | F | 0 | | TOW | |
| MINOR Lane/Major MVML | | NBLNI | EBI | EBK WBL | | WBI | |
| Capacity (veh/h) | | 243 | • | • | 534 | | |
| HCM Lane V/C Ratio | | 690.0 | ٠ | ٠ | - 0.087 | | |
| HCM Control Delay (s) | | 20.9 | • | | 12.4 | | |
| HCM Lane LOS | | O | ٠ | ٠ | ω | | |
| HCM 95th %tile O(veh) | | 0.2 | • | • | 0.3 | | |

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Synchro 10 Report Page 5

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Smoke Tree Resort 6: Lincoln Medical East & Lincoln Dr 2025 Total AM

| Intersection | | | | | | | |
|------------------------|-----------|-------|--------|------|--------|------|--|
| Int Delay, s/veh | 0.1 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | \$ | | | * | | R. | |
| Traffic Vol, veh/h | 1138 | = | 9 | 995 | 0 | 6 | |
| Future Vol, veh/h | 1138 | = | 9 | 995 | 0 | 6 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | • | None | 1 | None | 1 | None | |
| Storage Length | • | • | • | • | • | 0 | |
| dian Storage, | 0 # | 1 | 1 | 0 | 0 | • | |
| Grade, % | 0 | ٠ | | 0 | 0 | ٠ | |
| Peak Hour Factor | 06 | 8 | 06 | 06 | 06 | 8 | |
| Heavy Vehicles, % | 7 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1264 | 12 | 7 | 1106 | 0 | 10 | |
| | | | | | | | |
| Major/Minor M | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1276 | 0 | | 989 | |
| Stage 1 | ٠ | ٠ | | • | • | ٠ | |
| Stage 2 | | | | , | | , | |
| Critical Hdwy | • | 1 | 4.14 | 1 | 1 | 6.94 | |
| Critical Hdwy Stg 1 | • | • | • | ٠ | • | ٠ | |
| Critical Hdwy Stg 2 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Follow-up Hdwy | ٠ | • | 2.22 | • | • | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 240 | • | 0 | 419 | |
| Stage 1 | ١ | • | | • | 0 | • | |
| Stage 2 | 1 | 1 | 1 | 1 | 0 | 1 | |
| Platoon blocked, % | ٠ | ٠ | | ٠ | | | |
| Mov Cap-1 Maneuver | • | 1 | 240 | • | 1 | 419 | |
| Mov Cap-2 Maneuver | ٠ | • | 1 | • | 1 | ٠ | |
| Stage 1 | 1 | 1 | 1 | • | 1 | • | |
| Stage 2 | • | • | • | • | • | ٠ | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.1 | | 13.8 | | |
| HCM LOS | | | | | В | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 419 | 1 | 1 | 540 | • | |
| HCM Lane V/C Ratio | | 0.024 | • | ٠ | 0.012 | ٠ | |
| HCM Control Delay (s) | | 13.8 | | | 11.8 | | |
| HCM Lane LOS | | മ | • | • | മ | ٠ | |
| HCM 95th %tile Q(veh) | | 0.1 | 1 | 1 | 0 | 1 | |
| | | | | | | | |

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Synchro 10 Report Page 8

Smoke Tree Resort 2025 Total AM

7: Apartment Drwy & Lincoln Dr

| Movement EBI EBI EBI Tadii Vol, vehh 29 1082 | CDD | | | | | | | | | | |
|--|--------|--------|------|------|----------|-----------------|-------------|--------|----------|------|--|
| 29 29 29 Free - - - - - - - - - - - - - - - - - - | EDN | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| 29 29 0 Free - 25 1e, # - | | K- | ₩ | | | 4 | | r | | ¥L. | |
| 29 Free - 25 Pe, # - 90 | 38 | 20 | 930 | 1 | 99 | 0 | 33 | 9 | 0 | 14 | |
| 25 Free - 25 e, # - 90 | 38 | 20 | 930 | Ξ | 29 | 0 | 33 | 9 | 0 | 14 | |
| Free - 25 Pe, # - 90 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25 25 Storage,# - or 90 % 2 | | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | |
| storage,# - or 90 | NOIR | 25 | | NO. | | | NOILE. | · c | | | |
| . 90 | ٠ | , | C | ٠ | | C | | ' | C | , , | |
| 90 | ľ | | 0 | | | 0 | | | 0 | | |
| 2 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | |
| 4 | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 2 | 2 | 7 | |
| Wvmt Flow 32 1202 | 42 | 22 | 1033 | 12 | 62 | 0 | 37 | 7 | 0 | 16 | |
| Majori | - | Major2 | | 2 | Minor1 | | 2 | Minor? | | | |
| No All | c | 1244 | c | c | 1848 | 2376 | 669 | 1748 | ľ | 523 | |
| | | | | | 1287 | 1287 | | 1083 | | ' | |
| Stage 2 | ' | | | | 261 | 1089 | • | 999 | | | |
| Critical Hdwy 4.14 - | | 4.14 | | | 7.54 | 6.54 | 6.94 | 7.54 | ٠ | 6.94 | |
| Critical Hdwy Stg 1 | | | | | 6.54 | 5.54 | • | 6.54 | | | |
| Critical Hdwy Stg 2 | • | • | | • | 6.54 | 5.54 | ٠ | 6.54 | • | | |
| Follow-up Hdwy 2.22 - | • | 2.22 | • | • | 3.52 | 4.02 | 3.32 | 3.52 | • | 3.32 | |
| Pot Cap-1 Maneuver 661 | • | 222 | | | ~ 46 | 34 | 430 | 22 | 0 | 466 | |
| Stage 1 | • | , | | , | 174 | 233 | ٠ | 232 | 0 | | |
| Stage 2 | 1 | 1 | 1 | ì | 480 | 290 | 1 | 416 | 0 | ì | |
| Platoon blocked, % | • | | | ٠ | | | | | | | |
| Mov Cap-1 Maneuver 661 - | • | 555 | | 1 | ~ 42 | 31 | 430 | 47 | 1 | 466 | |
| Mov Cap-2 Maneuver | • | • | | ٠ | ~ 42 | 31 | ٠ | 47 | • | | |
| Stage 1 | • | • | | • | 166 | 222 | • | 221 | • | | |
| Stage 2 | • | 1 | 1 | 1 | 447 | 278 | • | 362 | 1 | | |
| | | | | | | | | | | | |
| Approach EB | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s 0.3 | | 0.2 | | ↔ | \$ 428.6 | | | 36.9 | | | |
| HCM LOS | | | | | ш | | | ш | | | |
| П | i | i | 0 | | | | | | | ı | |
| r Mvmt NBL | EBL | EBT | EBR | WBL | WBT | WBR SBLn1 SBLn2 | BLn1S | BLn2 | | | |
| 63 | 199 | • | | 222 | 1 | • | 4/ | 499 | | | |
| 1.57 | \sim | ٠ | ٠ | 0.04 | ٠ | • | 0.142 0.031 | 0.031 | | | |
| HCM Control Delay (s) \$ 428.6 | 10 | • | • | 11.8 | • | • | 93.9 | 12.4 | | | |
| HCM Lane LOS | В | • | 1 | В | 1 | • | ш | В | | | |
| HCM 95th %tile Q(veh) 8.7 | 0.2 | • | • | 0.1 | 1 | 1 | 0.5 | 0.1 | | | |
| Notes | | | | | | | | | | | |

Smoke Tree Resort 2025 Total AM

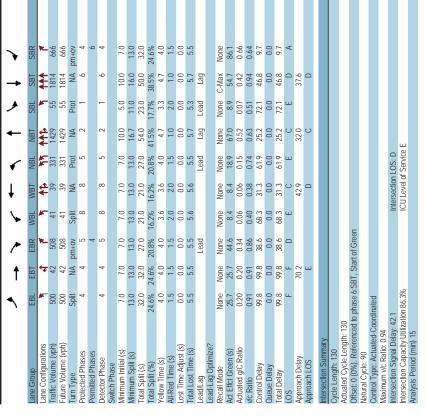
| Smoke Tree Resort 2025 Total AM | sort | | | | | | | | | | ∞ | AJ's Drv | 8: AJ's Drwy & Lincoln Dr HCM 6th TWSC |
|------------------------------------|------|------|---------------------|------|-----------|------|------|-----------|------|------|------|----------|---|
| | | | | | | | | | | | | | |
| Intersection | | | | | | | | | | | | | |
| Int Delay, sheh | 1.4 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR WBL WBT WBR NBL | WBL | WBT | WBR | | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ۴ | ₹ | | - | ₹ | | | 4 | | - | | W_ | |
| Traffic Vol, veh/h | က | 1060 | 09 | 48 | 943 | 6 | 7 | 0 | 46 | 2 | _ | 14 | |
| Future Vol, veh/h | m | 1060 | 09 | 48 | 943 | 6 | 7 | 0 | 46 | 2 | - | 14 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Free Free | Free | Stop | Stop Stop | | Stop | Stop | Stop | |
| RT Channelized | | 1 | None | 1 | 1 | None | 1 | | None | | | None | |
| Storage Length | 25 | , | , | 25 | • | • | • | • | • | 0 | • | 0 | |
| Veh in Median Storage, # | # | 0 | 1 | , | 0 | • | | 0 | 1 | | 0 | | |
| Grade, % | | 0 | • | ٠ | 0 | ٠ | ٠ | 0 | ٠ | ٠ | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 8 | 06 | 8 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 3 | 1178 | 19 | 23 | 1048 | 10 | 00 | 0 | 21 | 9 | - | 16 | |

| | 529 | | | 6.94 | | ı | 3.32 | 464 | | | | 464 | | | | | | | | | | | | |
|-------------|----------------------|---------|---------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|---------------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| | 2410 | 1159 | 1251 | 6.54 | 5.54 | 5.54 | 4.02 | 32 | 268 | 242 | | 53 | 59 | 243 | 241 | | | | | | | | | |
| MILIOIZ | 1754 | 1159 | 262 | 7.54 | 6.54 | 6.54 | 3.52 | 54 | 208 | 458 | | 44 | 44 | 207 | 402 | SB | 35.1 | ш | SBLn2 | 464 | 0.031 | 12.5 | В | 0.1 |
| = | 623 | 1 | • | 6.94 | ٠ | 1 | 3.32 | 429 | • | • | | 429 | | • | • | | | | EBR WBL WBT WBRSBLn1SBLn2 | 44 | 0.126 0.031 | 98.3 | ш | 0.4 |
| | 2382 | 1218 | 1164 | 6.54 | 5.54 | 5.54 | 4.02 | 34 | 251 | 267 | | 31 | 31 | 250 | 242 | | | | WBR 3 | 1 | | 1 | 1 | 1 |
| MILIO | 1849 | 1218 | 631 | 7.54 | 6.54 | 6.54 | 3.52 | 46 | 191 | 436 | | 40 | 40 | 190 | 380 | NB | 32.6 | ۵ | WBT | 1 | | 1 | ' | 1 |
| | 0 | 1 | | | • | 1 | | | • | | | • | | | | | | | WBL | 222 | 960.0 | 12.2 | В | 0.3 |
| | 0 | 1 | | | • | 1 | | | | | | 1 | | | | | | | EBR | , | | Ť | ' | • |
| Majorz | 1245 | 1 | | 4.14 | • | 1 | 2.22 | 222 | • | • | | 222 | | | • | WB | 9.0 | | EBT | | | 1 | ' | 1 |
| | 0 | 1 | | | • | 1 | | | • | | | • | | | | | | | EBL | 654 | 0.313 0.005 | 10.5 | В | 0 |
| | 0 | 1 | ' | • | • | 1 | | • | • | • | | 1 | | • | ' | | | | NBLn1 | 188 | 0.313 | 32.6 | | 1.3 |
| Major I | 1058 | | ľ | 4.14 | | | 2.22 | 654 | | | | 654 | | | | EB | 0 | | ŧ | | | | | _ |
| Major/Minor | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

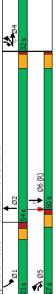
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Smoke Tree Resort 2025 Total AM

9: Scottsdale Rd & Lincoln Dr



9: Scottsdale Rd & Lincoln Dr Splits and Phases:



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02/12/2019 CivTech BR

Smoke Tree Resort 2025 Total AM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| Morement | | 1 | † | <u> </u> | / | ţ | 1 | • | — | • | ٠ | → | • |
|---|------------------------------|-------|----------|----------|---|------|------|------|----------|------|------|----------|------|
| 500 44 7 44 45 44< | Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 500 42 568 41 39 52 331 1429 43 55 1814 500 42 568 41 39 52 331 1429 43 55 1814 100 1 0 | -ane Configurations | je- | ₩ | * | <u>, </u> | ₩ | | K. | 4413 | | × | 444 | ¥. |
| 500 42 508 41 39 52 331 1429 43 55 1814 0 | raffic Volume (veh/h) | 200 | 45 | 208 | 41 | 36 | 25 | 331 | 1429 | 43 | 22 | 1814 | 999 |
| 1,00 | uture Volume (veh/h) | 200 | 45 | 208 | 41 | 36 | 25 | 331 | 1429 | 43 | 22 | 1814 | 999 |
| 1,00 | nitial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 9 | 0 9 | 0 | 0 0 |
| 100 | ed-Bike Adj(A_pb1) | 8.1 | | 8.6 | 8: | | 8. | 00.1 | | 00.1 | 00.1 | | 00.1 |
| 1870 1870 | Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1:00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 1870 | Work Zone On Approach | | 2 | | | 2 | | į | 8 | | | 0 1 | |
| 590 0 564 46 43 58 188 48 6 1 70 29 0 < | Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| 0.90 0.90 <td< td=""><td>Adj Flow Rate, veh/h</td><td>230</td><td>0</td><td>564</td><td>46</td><td>43</td><td>28</td><td>368</td><td>1588</td><td>48</td><td>61</td><td>2016</td><td>740</td></td<> | Adj Flow Rate, veh/h | 230 | 0 | 564 | 46 | 43 | 28 | 368 | 1588 | 48 | 61 | 2016 | 740 |
| 2 | eak Hour Factor | 0.90 | 0.00 | 0.00 | 0.90 | 0.90 | 0.90 | 0.00 | 0.90 | 0.00 | 0.90 | 0.90 | 0.90 |
| 726 0 518 95 95 88 425 2145 66 79 140 3863 0.00 518 95 95 88 425 2042 0.04 0.34 3863 0.0 1588 1781 1777 1585 3456 5093 159 1781 1702 1 2112 0.0 265 3.3 3.1 4.7 136 341 44 44.3 2 212 0.0 265 3.3 3.1 4.7 136 34.1 34.1 44 44.3 44.3 212 0.0 265 3.3 3.1 4.7 136 34.1 34.1 44.4 44.3 </td <td>Percent Heavy Veh, %</td> <td>5</td> <td>7</td> <td>5</td> <td>7</td> <td>5</td> <td>2</td> <td>7</td> <td>5</td> <td>7 !</td> <td>5</td> <td>2</td> <td>2</td> | Percent Heavy Veh, % | 5 | 7 | 5 | 7 | 5 | 2 | 7 | 5 | 7 ! | 5 | 2 | 2 |
| 0.07 0.08 0.09 0.05 0.06 0.05 0.06 0.03 154 1781 184 343 356 166 575 61 2016 576 62 63 46 46 43 58 346 1061 575 61 2016 506 509 1506 75 61 2016 506 500 1701 700 70 | Jap, veh/h | 726 | 0 0 | 518 | 95 | 95 | £ 5 | 425 | 2145 | 65 | 6/ | 1740 | 863 |
| 590 1989 1/81 1/12 1/12 1/14 4/14 4/13 1/14 4/14 4/13 1/14 4/14 4/13 1/14 4/14 4/13 1/14 4/14 | Arrive On Green | 0.07 | 0.00 | 0.07 | 0.02 | 0.05 | 0.05 | 0.12 | 0.42 | 0.42 | 0.04 | 0.34 | 0.34 |
| 1781 0 564 46 43 58 106 576 106 1702 1406 1702 1406 1702 1406 1702 1406 1702 1406 1702 140 </td <td>sat Flow, ven/n</td> <td>3563</td> <td>О</td> <td>1585</td> <td>18/1</td> <td>///</td> <td>1585</td> <td>3456</td> <td>5093</td> <td>154</td> <td>18/1</td> <td>2106</td> <td>1585</td> | sat Flow, ven/n | 3563 | О | 1585 | 18/1 | /// | 1585 | 3456 | 5093 | 154 | 18/1 | 2106 | 1585 |
| 781 781 777 1885 772 178 1702 179 179 179 179 170 </td <td>srp Volume(v), veh/h</td> <td>280</td> <td>0</td> <td>264</td> <td>46</td> <td>43</td> <td>200</td> <td>368</td> <td>1061</td> <td>575</td> <td>19</td> <td>2016</td> <td>740</td> | srp Volume(v), veh/h | 280 | 0 | 264 | 46 | 43 | 200 | 368 | 1061 | 575 | 19 | 2016 | 740 |
| 212 0.0 26.5 3.3 3.1 4.7 13.6 34.1 34.1 4.4 44.3 212 0.0 26.5 3.3 3.1 4.7 13.6 34.1 34.1 44.4 44.3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 7.8 0 518 95 86 425 143.4 776 77 1740 7.8 0 518 248 0.48 0.48 0.45 0.48 0.76 0.78 1.16 74 0.78 1.16 7.8 0 518 20.1 1.00 </td <td>srp Sat Flow(s),veh/h/ln</td> <td>1781</td> <td>0</td> <td>1585</td> <td>1781</td> <td>1777</td> <td>1585</td> <td>1728</td> <td>1702</td> <td>1843</td> <td>1781</td> <td>1702</td> <td>1585</td> | srp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| 212 0.0 26.5 3.3 3.1 4.7 13.6 34.1 34.1 44.4 44.4 44.4 44.3 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 726 0.518 95 85 4.25 1434 776 79 1740 0.81 0.00 1.09 0.48 0.45 0.68 0.7 0.7 1.00 | 2 Serve(g_s), s | 21.2 | 0.0 | 26.5 | 3.3 | 3.1 | 4.7 | 13.6 | 34.1 | 34.1 | 4.4 | 44.3 | 44.3 |
| 1,00 | Sycle Q Clear(g_c), s | 21.2 | 0.0 | 26.5 | 3.3 | 3.1 | 4.7 | 13.6 | 34.1 | 34.1 | 4.4 | 44.3 | 44.3 |
| 726 0 518 95 95 85 425 1434 776 79 1740 0.81 0.00 1.00 0.46 0.45 0.68 0.87 1434 776 243 1740 726 0.81 0.81 0.00 1.00 1.00 1.00 1.00 1.00 | Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| 0.81 0.00 1.09 0.48 0.45 0.68 0.87 0.74 0.74 0.78 1.16 726 0.30 0.38 1.02 1.02 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.0 | ane Grp Cap(c), veh/h | 726 | 0 | 218 | 95 | 95 | 82 | 425 | 1434 | 776 | 79 | 1740 | 863 |
| 726 0 518 211 210 188 572 1434 776 243 1740 133 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | //C Ratio(X) | 0.81 | 0.00 | 1.09 | 0.48 | 0.45 | 0.68 | 0.87 | 0.74 | 0.74 | 0.78 | 1.16 | 0.86 |
| 0.33 0.33 0.33 1.00 1.00 1.00 1.00 1.00 | wail Cap(c_a), veh/h | 726 | 0 | 518 | 211 | 210 | 188 | 572 | 1434 | 176 | 243 | 1740 | 863 |
| 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 | ICM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1:00 | 1:00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 882 00 499 598 897 604 559 316 316 615 429 5 65 00 657 14 12 36 83 18 34 60 783 1 00 00 00 00 00 00 00 00 00 00 00 00 00 | Jpstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 65 00 657 14 12 36 83 18 34 60 783 100 00 00 00 00 00 00 00 00 00 00 00 00 | Jniform Delay (d), s/veh | 58.2 | 0.0 | 49.9 | 29.8 | 26.7 | 60.4 | 55.9 | 31.6 | 31.6 | 61.5 | 45.9 | 23.6 |
| 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | ncr Delay (d2), s/veh | 6.5 | 0.0 | 65.7 | 1.4 | 1.2 | 3.6 | 8.3 | 1.8 | 3.4 | 0.9 | 78.3 | 10.7 |
| 10.9 0.0 25.4 1.5 1.4 2.0 6.4 14.3 15.8 2.1 31.0 6.4.7 0.0 115.6 61.2 60.9 64.0 64.2 33.5 35.0 67.5 121.1 E A F E E C C E F F 115.4 17.4 20.0 64.2 33.5 35.0 67.5 121.1 1.2 4 5 6 8 8 1.1 1.0 60.5 32.0 21.5 50.0 12.6 5.6 11.0 60.5 32.0 21.5 50.0 12.6 6.4 36.1 28.5 15.6 46.3 6.7 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 | nitial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154 | %ile BackOfQ(50%),veh/ln | • | 0.0 | 25.4 | 1.5 | 1.4 | 2.0 | 6.4 | 14.3 | 15.8 | 2.1 | 31.0 | 27.2 |
| 64.7 0.0 115.6 61.2 0.09 64.0 64.2 35.5 35.0 6/55 12/11 E A F E E E C C E F F C C E E F C C E E F C C E E F C C E E F C C E E F C C C E E E F C C C E E F C C C E E F C C C E E F C C C E E F C C C E E E E | Jnsig. Movement Delay, s/veh | | d | | 3 | 9 | | | | L | į | 1 | |
| 1154 | nGrp Delay(d),s/ven | 64.7 | 0.0 | 1.15.6 | 2.10 | 60.9 | 04.0 | 64.2 | 33.5 | 35.0 | 6/.5 | 1.121 | 34.3 |
| 154 | norp LOS | ш | A | - | ш | 1 L | ш | ш | 0 | د | ш | T 100 | اد |
| 870 02.2 37.5 1 | Approach Vol. vervn | | 1134 | | | 14/ | | | 2004 | | | /187 | |
| 11.0 605 320 215 500 1 *5.3 57 55 55 57 7 *64 361 285 156 463 00 2.3 0.0 0.4 0.0 | Approach Delay, siven | | 89.0 | | | 7:70 | | | 39.5 | | | 7.14 | |
| 11, 2 4 5 6 11,0 605 320 215 500 1 18 483 265 215 443 1 64 361 285 156 463 0 00 23 00 04 00 | Applicacii EO3 | | - | | | _ | | | ۵ | | | - | |
| 11.0 605 32.0 21.5 50.0 1 -5.3 5.7 5.5 5.5 5.7 -6.4 36.1 28.5 15.6 46.3 0.0 2.3 0.0 0.4 0.0 76.0 | imer - Assigned Phs | _ | 2 | | 4 | 2 | 9 | | 8 | | | | |
| *5.3 5.7 5.5 5.5 5.7 *18 48.3 26.5 21.5 44.3 1 6.4 36.1 28.5 15.6 46.3 0.0 2.3 0.0 0.4 0.0 76.0 | Phs Duration (G+Y+Rc), s | 11.0 | 60.5 | | 32.0 | 21.5 | 20.0 | | 12.6 | | | | |
| 718 48.3 26.5 21.5 44.3 6.4 36.1 28.5 15.6 46.3 0.0 2.3 0.0 0.4 0.0 76.0 | Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.6 | | | | |
| 64 361 285 156 463 00 23 00 04 0.0 760 | Aax Green Setting (Gmax), s | | 48.3 | | 26.5 | 21.5 | 44.3 | | 15.4 | | | | |
| c), s 0.0 2.3 0.0 0.4 my 76.0 F F | Max Q Clear Time (g_c+I1), s | | 36.1 | | 28.5 | 15.6 | 46.3 | | 6.7 | | | | |
| ıry | Sreen Ext Time (p_c), s | 0.0 | 2.3 | | 0.0 | 0.4 | 0.0 | | 0.2 | | | | |
| | ntersection Summary | | | | | | | | | | | | |
| | HCM 6th Ctrl Delay | | | 76.0 | | | | | | | | | |
| | HCM 6th LOS | | | ш | | | | | | | | | |

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Smoke Tree Resort 2025 Total AM

10: Quail Run Rd & Access A HCM 6th TWSC

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | |
|--------------------------|--------|-----------|----------|-------|-------------|------|---|
| Lane Configurations | > | | ÷ | | | ₩ | |
| Traffic Vol, veh/h | 0 | _ | 0 | 0 | | 0 | |
| Future Vol, veh/h | 0 | - | 0 | 0 | | 0 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Stop | Stop Stop | Free | Free | Free | Free | |
| RT Channelized | | None | • | None | | None | |
| Storage Length | 0 | | • | • | | | |
| Veh in Median Storage, # | 0 # | • | 0 | • | 1 | 0 | |
| Grade, % | | | 0 | | ľ | 0 | |
| Peak Hour Factor | 8 | 06 | 06 | 06 | 8 | 8 | |
| Heavy Vehicles, % | 2 | | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | | 0 | 0 | _ | 0 | |
| Majorffdinor | Minord | | Majort | | CroicM | | |
| | | ľ | Major I | | zin(a) | | |
| Conflicting Flow All | 7 | 0 | > | > | 0 | > | |
| Stage 1 | 0 | • | • | • | | | |
| Stage 2 | 2 | | • | • | • | | |
| Critical Hdwy | 6.42 | 6.22 | 1 | 1 | 4.12 | | |
| Critical Hdwy Stg 1 | 5.42 | | • | • | | | |
| Critical Hdwy Stg 2 | 5.42 | • | 1 | 1 | 1 | 1 | |
| | 3.518 | 3.318 | • | • | 2.218 | | |
| neuver | 1021 | • | • | • | 1 | 1 | |
| Stage 1 | ' | • | , | , | • | ' | |
| Stage 2 | 1021 | • | • | • | 1 | 1 | |
| | | | • | ٠ | | Ť | |
| | 1021 | • | , | • | | , | |
| neuver | 1021 | • | | | • | | |
| Stage 1 | 1 | • | 1 | 1 | 1 | Ť | |
| Stage 2 | 1021 | • | ' | ' | | ' | |
| | | | | | | | |
| Approach | WB | | NB | | SB | | |
| HCM Control Delay, s | | | 0 | | | | |
| HCM LOS | 1 | | | | | | |
| Minor Lane/Major Mvmt | | NBT | NBRWBLn1 | VBLn1 | SBL | SBT | |
| Capacity (veh/h) | | | | | | | |
| HCM Lane V/C Ratio | | • | • | • | | | |
| HCM Control Delay (s) | | • | • | • | | | |
| HCM Lane LOS | | • | • | • | ' | | |
| | | | | | | | |

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Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lams for furning movement.

"HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Smoke Tree Resort

| Smoke Tree Resort 2025 Total AM Mitigated | ated | | | | | | | 9: So | ottsda | 9: Scottsdale Rd & Lincoln Dr | Timings |
|---|-----------|----------|------------|----------|---------------------|--------------|-------|-------|--------|-------------------------------|---------|
| | 4 | † | ~ | \ | ţ | • | - | ۶ | - | • | |
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | * | ₹ | ¥. | r | ₽ | F | 4413 | ۳ | 444 | ¥c_ | |
| Traffic Volume (vph) | 200 | 42 | 208 | 41 | 36 | 331 | 1429 | 22 | 1814 | 999 | |
| Future Volume (vph) | 200 | 42 | 208 | 41 | 39 | 331 | 1429 | 22 | 1814 | 999 | |
| Turn Type | Split | NA | vo+mq | Split | NA | Prot | NA | Prot | NA | hm+ov | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | - | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | 2 | ∞ | ∞ | 2 | 7 | - | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 30.0 | 30.0 | 21.0 | 19.0 | 19.0 | 21.0 | 28.0 | 13.0 | 20.0 | 30.0 | |
| Total Split (%) | 25.0% | 25.0% | 17.5% | 15.8% | 15.8% | 17.5% | 48.3% | 10.8% | 41.7% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Lost Time Adjust (s) | 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 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | С-Мах | None | |
| Act Effct Green (s) | 23.8 | 23.8 | 40.7 | 8.2 | 8.2 | 16.9 | 26.7 | 8.2 | 48.8 | 78.3 | |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.34 | 0.07 | 0.07 | 0.14 | 0.50 | 0.07 | 0.41 | 0.65 | |
| v/c Ratio | 0.90 | 0.90 | 0.89 | 0.38 | 0.37 | 0.76 | 0.65 | 0.50 | 0.98 | 0.63 | |
| Control Delay | 77.0 | 77.0 | 35.4 | 62.1 | 28.9 | 60.3 | 25.1 | 8.79 | 50.5 | 8.4 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 77.0 | 77.0 | 35.4 | 62.1 | 28.9 | 60.3 | 25.1 | 67.8 | 50.5 | 8.4 | |
| ros | ш | ш | ۵ | ш | ပ | ш | ပ | ш | Ω | ۷ | |
| Approach Delay | | 26.9 | | | 39.3 | | 31.5 | | 39.8 | | |
| Approach LOS | | ш | | | О | | O | | D | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Length: 120 | | | | | | | | | | | |
| Actuated Cycle Length: 120 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6:3 | SBT, Sta | rt of Gree | п | | | | | | | |
| Natural Cycle: 90 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | inated | | | | | | | | | | |
| Maximum v/c Ratio: 0.98 | | | | | | 9 | | | | | |
| Intersection Signal Delay: 40.3 | 3 06 20% | | | ⊆ ⊆ | Intersection LOS: D | LOS: D | u | | | | |
| Analysis Period (min) 15 | 00.370 | | | 5 | O Level o | DCIVICO I | u | | | | |



● ▼ Ø6 (R) \$Ø **₹** 02/11/2019 CivTech BR

Smoke Tree Resort 2025 Total AM Mitigated

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| Training Configurations | • | , | _ | L | ٠ | + | ¥ |
|--|---------|-----------|---------------|------|------|------|----------|
| Secondary Color | TOW | | TOIN | NDD | CDI | CDT | CDD |
| Section Sect | WBI | | INBI | NBK | SBL | SBI | SBK |
| 500 42 508 41 39 500 42 508 41 39 100 | | £ | <u>+</u> + | | - | +++ | - |
|) 500 42 508 41 39 100 100 100 100 cch 1100 100 100 100 cch 1200 100 100 100 cch 1300 100 100 100 cch 2 2 2 2 2 cch 2 2 2 2 2 cch 3563 0 564 46 43 cch 3563 0 606 006 cch 2 2 2 2 2 cch 3563 0 606 006 cch 2 2 2 2 cch 4 4 43 cch 4 4 43 dn 1781 0 1885 1781 1777 cch 2 2 2 2 cch 2 2 2 2 cch 3563 0 606 006 cch 2 2 2 2 cch 3563 0 606 cch 2 2 2 2 cch 3563 0 1885 1781 1777 cch 2 2 2 2 cch 2 2 2 c | | 52 331 | 1429 | 43 | 22 | 1814 | 999 |
| ach 1.00 1.00 1.00 1.00 ach 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | | co | 1429 | 43 | 22 | 1814 | 999 |
| ach 100 100 100 100 100 ach 1870 1870 1870 1870 1870 1870 1870 1870 | 0 | | 0 | 0 | 0 | 0 | 0 |
| ach 100 1,00 1,00 1,00 1,00 1,00 1,00 1,00 | | | | 1.00 | 1.00 | | 1.00 |
| sch 1870 1870 1870 1870 1870 1870 1870 1870 | 1.00 | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 1870 1870 1870 1870 1870 1870 1870 | No | | No No | | | No | |
| 590 0 564 46 43 090 0,90 0,90 0,90 0,90 0,90 0,90 0,90 | 1870 1 | _ | 1870 | 1870 | 1870 | 1870 | 1870 |
| 6 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9 | 43 | | 1588 | 48 | 61 | 2016 | 740 |
| 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 06:0 | 06.0 06.0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 |
| 1227 | 2 | 2 2 | 2 | 2 | 2 | 2 | 2 |
| 0.20 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 103 | | 2286 | 69 | 78 | 1885 | 606 |
| 3563 0 1585 1781 1777 7 559 0 564 46 43 41 1771 1771 1771 1771 1771 1771 177 | 90:0 | 0.06 0.12 | 0.45 | 0.45 | 0.04 | 0.37 | 0.37 |
| Mn 1781 0 1585 1781 1777 1779 190 0 1585 1781 1777 1779 190 0.0 24.5 3.0 2.8 190 0.0 24.5 3.0 2.8 190 0.0 24.5 3.0 2.8 190 0.0 24.5 3.0 2.8 190 0.0 1.00 1.00 0.0 1.00 0.0 1.00 0.0 1.00 0.0 1.00 0.0 1.00 0.0 1.00 0.0 0. | | 1585 3456 | 5093 | 154 | 1781 | 2106 | 1585 |
| 1781 0 1885 1781 1777 1791 190 0.0 24,5 3.0 2.8 190 0.0 24,5 3.0 2.8 190 0.0 24,5 3.0 2.8 190 0.0 24,5 3.0 2.8 190 0.0 24,5 3.0 2.8 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1. | 43 | | 1061 | 575 | 61 | 2016 | 740 |
| 1900 0.0 24.5 3.0 2.8 19.0 0.0 24.5 3.0 2.8 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1. | 1777 | 585 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| 190 0.0 24.5 3.0 2.8 1.00 | 2.8 | | 30.0 | 30.0 | 4.1 | 44.3 | 44.3 |
| 1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,00 | 2.8 | | 30.0 | 30.0 | 4.1 | 44.3 | 44.3 |
| 0.81 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 0 | | | | 0.08 | 1.00 | | 1.00 |
| 0.81 0.00 1.09 0.45 0.42 1.20 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | 103 | | 1528 | 827 | 78 | 1885 | 606 |
| 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 | 0.42 | _ | 69.0 | 69.0 | 0.78 | 1.07 | 0.81 |
| 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 | 198 | | 1528 | 827 | 114 | 1885 | 606 |
| 1,00 000 100 100 100 100 100 100 100 100 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 45.5 0.0 40.4 54.7 54.6 64.4 0.0 66.5 1.1 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 6.4 0.0 66.5 1.1 1.0 0.0 0.0 0.0 0.0 9.0 0.0 24.6 1.4 1.3 52.0 0.106.9 55.8 55.6 D A F E E E 1154 147 78.8 56.6 I 12 2 4 5 10.6 59.6 30.0 20.1 5.3 5.7 5.2 5.5 6.1 32.0 24.5 15.5 6.1 32.0 24.5 16.5 6.1 32.0 24.0 0.1 | 54.6 | | 26.5 | 26.5 | 26.8 | 37.8 | 20.4 |
| 00 00 00 00 00 00 00 00 00 00 00 00 00 | 1.0 | _ | 1.2 | 2.1 | 10.4 | 42.2 | 7.9 |
| 9.0 0.0 24.6 1.4 1.3 52.0 0.0 106.9 55.8 55.6 D A F E E 115.4 1.7 115.4 56.6 1.0 59.6 30.0 20.1 1.0 59.6 30.0 20.1 1.1 52.3 24.5 15.5 6.1 32.0 26.5 14.6 0.0 2.4 0.0 0.1 | 0.0 | 0.0 0.0 | 0:0 | 0:0 | 0.0 | 0:0 | 0.0 |
| 220 0.0 106.9 55.8 55.6 D A F E E E E E E T 1154 147 147 147 147 147 15.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.3 5.7 5.8 5.5 5.5 6.1 3.2 0 2.4 0.0 0.1 5.8 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 | 1.4 1.3 | 1.8 6.3 | 12.2 | 13.4 | 2.1 | 25.4 | 24.5 |
| 220 0.0 106.7 20.8 20.0 1.0 1.154 F E E E E E E E E E E E E E E E E E E | , , | | , 10 | | 01/ | | 000 |
| 1154 147 18.8 56.6 1 | 00.00 | 57.9 07.3 | 0.12 | 0.82 | 7./0 | 80.0 | 28.3 |
| 1 2 4 5 5 1 1 1 2 5 1 2 1 1 2 1 2 1 2 1 2 1 2 | | J | 2004 |) | _ | 2817 | |
| 1 2 4 5 10.6 59.6 30.0 20.1 5.3 5.7 5.3 5.7 5.5 5.5 6.1 32.0 24.5 15.5 0.0 2.4 0.0 0.1 58.2 E | 26.6 | | 35.2 | | | 66.2 | |
| 10.6 59.6 30.0 20.1 *5.3 5.7 5.5 55 *7.7 52.3 24.5 15.5 6.1 32.0 2.4 5 *6.1 32.0 24.5 15.5 8.0 0.1 58.2 E | Е | | ٥ | | | ш | |
| 10.6 59.6 30.0 20.1 *5.3 5.7 5.5 5.5 *7.7 52.3 24.5 15.5 6.1 32.0 26.5 14.6 0.0 2.4 0.0 0.1 58.2 E | 4 5 | 9 | 00 | | | | |
| *5.3 5.7 5.5 5.5 *7.7 52.3 24.5 15.5 6.1 32.0 26.5 14.6 0.0 2.4 0.0 0.1 58.2 E | 20.1 | 50.0 | 12.5 | | | | |
| 7.7 52.3 24.5 15.5 6.1 32.0 26.5 14.6 0.0 2.4 0.0 0.1 58.2 E | 5.5 | 5.7 | 9.9 | | | | |
| 6.1 32.0 26.5 14.6 0.0 2.4 0.0 0.1 58.2 E E | 15.5 | 44.3 | 13.4 | | | | |
| c), s 0.0 2.4 0.0 0.1 ry 58.2 E | 14.6 | 46.3 | 6.3 | | | | |
| ıry | 0.1 | 0.0 | 0.2 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Notes | | | | | | | |

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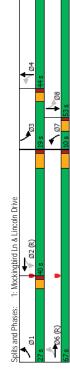
Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for furning movement.
*HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

02/11/2019
CVTech BR

Smoke Tree Resort 2025 Total PM

1: Mockingbird Ln & Lincoln Drive Timings

| → | SBT | æ | 25 | 25 | NA | ∞ | | œ | | 7.0 | 33.5 | 53.0 | 40.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 21.9 | 0.17 | 0.63 | 27.4 | 0.0 | 27.4 | ပ | 31.1 | ပ | | | | | | | | | | |
|----------|------------|---------------------|----------------------|---------------------|-----------|------------------|------------------|----------------|--------------|---------------------|-------------------|-----------------|-----------------|-----------------|------------------|----------------------|---------------------|----------|--------------------|-------------|---------------------|--------------------|-----------|---------------|-------------|-------------|-----|----------------|--------------|----------------------|-------------------|----------------------------|---|-------------------|------------------------------------|-------------------------|---------------------------------|---|--------------------------|
| ٠ | SBL | F | 0/ | 70 | pm+pt | n | ∞ | က | | 3.5 | 8.0 | 19.0 | 14.6% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 26.4 | 0.20 | 0.30 | 42.9 | 0.0 | 42.9 | ۵ | | | | | | | | | | | U | |
| ← | NBT | £, | 89 | 89 | NA | 4 | | 4 | | 7.0 | 33.5 | 44.0 | 33.8% | 4.0 | 2.5 | 0.0 | 6.5 | Lag | Yes | None | 11.8 | 0.09 | 0.57 | 61.9 | 0.0 | 61.9 | ш | 59.9 | ш | | | | | | | | LOS: B | Service | |
| • | NBL | <u>r</u> | ∞ | 80 | pm+pt | 7 | 4 | 7 | | 2.0 | 6.5 | 10.0 | 7.7% | 3.5 | 1.0 | 0.0 | 4.5 | Lead | Yes | None | 18.2 | 0.14 | 90:0 | 37.6 | 0.0 | 37.6 | ٥ | | | | | | reen | | | | Intersection LOS: B | ICU Level of Service C | |
| ţ | WBT | ₩. | 1023 | 1023 | NA | 2 | | 7 | | 15.0 | 27.0 | 40.0 | 30.8% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 69.2 | 0.53 | 0.65 | 19.9 | 0.0 | 19.9 | В | 19.6 | В | | | | Start of (| | | | Ϊ́ | ⊴ | |
| \ | WBL | <i>y</i> - | 27 | 27 | Perm | | 2 | 2 | | 15.0 | 27.0 | 40.0 | 30.8% | 4.5 | 1.5 | 0.0 | 0.9 | Lag | Yes | C-Max | 69.2 | 0.53 | 0.12 | 10.7 | 0.0 | 10.7 | В | | | | | | 16:EBTL, | | | | | | |
| † | EBT | ₩. | 928 | 928 | NA | 9 | | 9 | | 15.0 | 27.0 | 67.0 | 51.5% | 4.5 | 1.5 | 0.0 | 0.9 | | | C-Max | 93.6 | 0.72 | 0.43 | 9.2 | 0.0 | 9.2 | A | 13.5 | В | | | | WBTL and | | | | | | |
| 4 | EBL | je- | 267 | 267 | pm+pt | _ | 9 | - | | 3.5 | 8.0 | 27.0 | 20.8% | 3.0 | 1.0 | 0.0 | 4.0 | Lead | Yes | None | 92.6 | 0.74 | 0.73 | 29.7 | 0.0 | 29.7 | ပ | | | | | | phase 2:\ | | inated | | .0 | nn 72.2% | |
| | Lane Group | Lane Configurations | Traffic Volume (vph) | Future Volume (vph) | Turn Type | Protected Phases | Permitted Phases | Detector Phase | Switch Phase | Minimum Initial (s) | Minimum Split (s) | Total Split (s) | Total Split (%) | Yellow Time (s) | All-Red Time (s) | Lost Time Adjust (s) | Total Lost Time (s) | Lead/Lag | Lead-Lag Optimize? | Recall Mode | Act Effct Green (s) | Actuated g/C Ratio | v/c Ratio | Control Delay | Queue Delay | Total Delay | LOS | Approach Delay | Approach LOS | Intersection Summary | Cycle Length: 130 | Actuated Cycle Length: 130 | Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green | Natural Cycle: 90 | Control Type: Actuated-Coordinated | Maximum v/c Ratio: 0.73 | Intersection Signal Delay: 19.5 | Intersection Capacity Utilization 72.2% | Analysis Period (min) 15 |



02/12/2019 CivTech BR

Smoke Tree Resort 2025 Total PM

1: Mockingbird Ln & Lincoln Drive HCM 6th Signalized Intersection Summary

| Fell EBT EBT EBT WBL WBT WBR NBL NBT | | \ | Ť | /- | - | | , | _ | - | _ | | - | • |
|--|------------------------------|------|----------|-----------|------|----------|------|------|------|------|------|------|------|
| 10 10 10 10 10 10 10 10 | Movement | EBI | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 1, 2, 6, 6, 8, 8, 1, 10, 10, 10, 10, 10, 10, 10, 10, 10, | Lane Configurations | F | ₩ | | F | ₽ | | r | 2 | | r | 2 | |
| 1, 267 958 32 27 1023 71 8 68 21 70 52 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 1, 00 297 1064 36 30 1137 79 9 76 23 78 58 297 1064 36 30 1137 79 9 76 23 78 58 297 1064 81 33 1914 13 106 190 0.90 0.90 297 1064 81 33 1914 13 106 190 0.90 0.90 297 1064 81 33 1914 13 106 190 0.90 0.90 297 1064 81 33 1914 133 106 190 0.90 0.90 297 1064 81 33 1914 133 106 190 0.90 0.90 298 297 204 81 337 1914 133 106 190 0.90 298 290 0.90 0.90 0.90 0.90 0.90 0.90 0.90 290 0.90 0.90 0.90 0.90 0.90 0.90 0.90 291 178 178 137 1849 513 1777 1828 1781 0.14 0.14 0.05 0.17 291 178 178 178 178 178 178 178 178 178 1.00 292 2 2 2 2 2 2 2 293 294 295 206 209 0.00 0.00 0.00 294 178 178 178 178 178 178 1.00 295 178 178 178 178 178 1.00 1.00 1.00 1.00 295 178 178 178 1.00 1.00 1.00 1.00 1.00 1.00 295 178 178 178 1.00 1.00 1.00 1.00 1.00 1.00 295 178 178 1.00 1.00 1.00 1.00 1.00 1.00 1.00 296 178 178 178 1.00 1.00 1.00 1.00 1.00 1.00 297 297 296 296 296 296 296 296 296 298 199 190 296 | Traffic Volume (veh/h) | 267 | 958 | 32 | 27 | 1023 | 71 | · ω | 89 | 21 | 70 | 25 | 169 |
| 100 | Future Volume (veh/h) | 267 | 958 | 32 | 27 | 1023 | 71 | ∞ | 89 | 21 | 70 | 25 | 169 |
| 100 | Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1,00 | Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1:00 |
| No | Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1870 | Work Zone On Approach | | 9 | | | 2 | | | 2 | | | 2 | |
| 297 1064 36 30 1137 79 9 76 23 78 58 60 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0 | Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| ch, % 200 0.90 0.90 0.90 0.90 0.90 0.90 0.90 | Adj Flow Rate, veh/h | 297 | 1064 | 36 | 30 | 1137 | 79 | 6 | 76 | 23 | 78 | 28 | 188 |
| th, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Peak Hour Factor | 0.90 | 0.00 | 0.90 | 0.00 | 06:0 | 06:0 | 06.0 | 06:0 | 06:0 | 06.0 | 0.00 | 0.00 |
| 1841 2404 81 337 1914 133 106 190 58 257 67 1841 3507 169 0.69 0.69 0.69 0.63 0.38 0.38 0.31 0.01 10.14 0.14 0.14 0.05 0.17 1841 3507 1849 513 3771 1828 1781 0 1795 1781 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1781 3567 1791 1869 1792 1791 1791 3689 1791 1792 1791 1869 1791 1791 1869 1792 1791 1791 1869 1792 1791 1791 1869 1792 1791 1791 1791 1791 1791 1791 1792 1791 1792 1791 | Cap, veh/h | 347 | 2404 | 81 | 337 | 1914 | 133 | 106 | 190 | 28 | 257 | 19 | 217 |
| 1781 3507 119 513 3371 234 1781 1378 417 1781 388 1781 1781 239 561 30 599 617 9 0 0 99 78 0 0 618 1781 1781 1284 1781 1284 1781 1284 1781 1284 1781 1284 1781 1284 1781 1284 1381 100 0.0 | Arrive On Green | 0.0 | 69.0 | 69.0 | 0.38 | 0.38 | 0.38 | 0.01 | 0.14 | 0.14 | 0.05 | 0.17 | 0.17 |
| 1781 1782 1782 1894 1994 | Sat Flow, veh/h | 1781 | 3507 | 119 | 513 | 3371 | 234 | 1781 | 1378 | 417 | 1781 | 388 | 1257 |
| 1781 1777 1849 513 1777 1828 1781 0 1795 1781 0 1791 1777 1849 513 1777 1828 1781 0 1795 1781 0 1781 1781 1782 25 351 351 0 6 0 0 0 655 47 0 0 65 47 0 0 65 47 0 0 65 47 0 0 65 47 0 0 65 67 0 67 67 67 67 67 67 | Grp Volume(v), veh/h | 297 | 539 | 561 | 30 | 266 | 617 | 6 | 0 | 66 | 78 | 0 | 246 |
| 8.6 17.8 17.8 5.0 35.1 35.1 0.6 0.0 6.5 4.7 0.0 1.00 1.00 0.6 1.00 0.6 1.00 0.0 | Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1849 | 513 | 1777 | 1828 | 1781 | 0 | 1795 | 1781 | 0 | 1644 |
| 86 17.8 17.8 7.5 35.1 35.1 0.6 0.0 65 47 0.0 1.0 1.00 0.06 1.00 0.06 1.00 0.01 0.02 1.00 0.03 1.00 0.06 1.00 0.03 1.00 0.03 1.00 0.06 0.04 0.02 1.00 0.08 0.04 0.04 0.04 0.03 0.00 0.04 0.03 0.00 0.00 | 2 Serve(g_s), s | 9.8 | 17.8 | 17.8 | 2.0 | 35.1 | 35.1 | 9:0 | 0.0 | 6.5 | 4.7 | 0.0 | 18.9 |
| 100 100 100 100 100 100 100 100 100 100 | Cycle Q Clear(g_c), s | 9.8 | 17.8 | 17.8 | 7.5 | 35.1 | 35.1 | 9.0 | 0.0 | 6.5 | 4.7 | 0.0 | 18.9 |
| 347 1218 1268 337 1009 1038 106 0 248 257 0 0 68 60 1 248 257 0 68 60 1 248 257 0 0 68 60 1 248 257 0 0 68 60 1 248 257 0 0 69 60 1 248 257 0 0 69 60 1 248 257 0 0 1 20 1 20 1 20 1 20 1 20 1 20 1 20 | Prop In Lane | 1.00 | | 90.0 | 1.00 | | 0.13 | 1.00 | | 0.23 | 1.00 | | 0.76 |
| 0.86 0.44 0.44 0.09 0.59 0.59 0.09 0.00 0.40 0.30 0.00 0.00 1.00 1.00 0.47 0.057 1.09 0.67 0.67 1.00 1.00 0.47 0.67 1.00 1.00 1.00 0.67 0.67 1.00 1.00 1.00 1.00 0.67 0.67 1.00 1.00 1.00 1.00 1.00 0.63 0.53 0.53 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 | Lane Grp Cap(c), veh/h | 347 | 1218 | 1268 | 337 | 1009 | 1038 | 106 | 0 | 248 | 257 | 0 | 284 |
| 507 1218 1268 337 1009 1038 162 0 518 375 0 1.00 1.00 1.00 100 0.657 0.67 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0 | V/C Ratio(X) | 98.0 | 0.44 | 0.44 | 0.09 | 0.59 | 0.59 | 0.09 | 0.00 | 0.40 | 0.30 | 0.00 | 0.86 |
| 1100 1100 100 0.67 0.67 10.0 100 100 100 100 100 100 100 1100 | Avail Cap(c_a), veh/h | 203 | 1218 | 1268 | 337 | 1009 | 1038 | 162 | 0 | 518 | 375 | 0 | 588 |
| 1.00 1.00 1.00 0.53 0.53 1.00 0.00 1.00 0.00 0.00 0.51.1 9.2 9.2 20.6 28.3 28.3 1.00 0.00 1.00 0.00 0.00 0.00 0.00 0. | HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 19.0 | 19.0 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 21.7 9.2 9.2 20.6 28.3 28.3 48.1 0.0 51.1 43.5 0.0 9.5 0.0 0.0 0.0 0.3 0.1 0.0 1.0 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 | Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.53 | 0.53 | 0.53 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| 9.5 1.2 1.1 0.3 1.4 1.3 0.3 0.0 10 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0. | Uniform Delay (d), s/veh | 21.7 | 9.2 | 9.2 | 50.6 | 28.3 | 28.3 | 48.1 | 0.0 | 51.1 | 43.5 | 0.0 | 52.3 |
| Avehance of the control of the contr | incr Delay (d2), s/veh | 9.5 | 1.2 | 1. | 0.3 | 1.4 | 1.3 | 0.3 | 0.0 | 1.0 | 0.7 | 0.0 | 7.7 |
| Sych 312 10.4 10.4 20.8 29.6 48.5 0.0 3.0 2.2 0.0 2.0 0.0 2.1 10.4 10.4 20.8 29.6 48.5 0.0 52.1 44.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 | initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| siveh 31.2 10.4 10.4 20.8 29.6 29.6 48.5 0.0 52.1 44.1 0.0 0 C B B C C C D A D D A D A D D A A D D A D A D | %ile BackOfQ(50%),veh/ln | 6.3 | 6.9 | 7.2 | 0.7 | 16.2 | 16.7 | 0.3 | 0.0 | 3.0 | 2.2 | 0.0 | 8.4 |
| 312 10.4 10.4 20.8 29.6 48.5 0.0 52.1 44.1 0.0 C B B C C C D A D D A 1397 1246 10.8 14.8 29.4 51.8 5 15.3 79.8 10.4 24.5 95.1 5.9 29.0 5, 15.3 37.9 10.4 24.5 95.1 5.9 29.0 5, 15.0 37.1 6.7 8.5 19.8 2.6 20.9 10.5 10.6 37.1 6.7 8.5 99.4 0.0 1.6 | Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| C B B C C C D A D D 1397 1246 108 1397 1246 108 1397 1246 108 140 6 1 2 3 4 6 7 8 15.3 79.8 10.4 24.5 95.1 5.9 29.0 0, s 230 33.0 15.0 6.5 6.0 4.5 6.5 15.5 10.6 37.1 6.7 8.5 19.8 2.6 20.9 15.5 10.6 37.1 6.7 8.5 19.8 2.6 20.9 16.7 26.4 | LnGrp Delay(d),s/veh | 31.2 | 10.4 | 10.4 | 20.8 | 29.6 | 29.6 | 48.5 | 0.0 | 52.1 | 44.1 | 0.0 | 60.0 |
| 1397 1246 108 14.8 29.4 51.8 8 15.3 79.8 10.4 24.5 95.1 5.9 29.0 4.0 6.0 4.0 6.5 6.0 4.5 6.5 0,5 230 34.0 15.0 37.5 61.0 5.5 46.5 1),5 10.6 37.1 6.7 8.5 19.8 2.6 20.0 0.7 0.0 0.1 0.5 9.4 0.0 1.6 | LnGrp LOS | ပ | В | В | ပ | ပ | ပ | O | Α | О | O | Α | Ш |
| 14.8 29.4 51.8 B C D D 1 2 3 4 6 7 8 5 15.3 79.8 10.4 24.5 95.1 5.9 29.0 6,5 23.0 34.0 15.0 37.5 61.0 5.5 46.5 1), 5 10.6 37.1 6.7 8.5 19.8 2.6 20.9 0.7 0.0 0.1 0.5 9.4 0.0 1.6 | Approach Vol, veh/h | | 1397 | | | 1246 | | | 108 | | | 324 | |
| 1 2 3 4 6 7 7 8 10.1 24.5 95.1 5.9 2 7 8 10.4 24.5 95.1 5.9 2 7 9.5 23.0 34.0 15.0 37.5 61.0 5.0 5.5 61.0 5.0 5.5 61.0 5.5 61.0 5.5 61.0 5.5 61.0 5.5 61.0 5.5 61.0 5.5 61.0 5.5 61.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5 | Approach Delay, síveh | | 14.8 | | | 29.4 | | | 21.8 | | | 56.2 | |
| 1 2 3 4 6 7 7 8 153 798 10.4 24.5 95.1 5.9 2 8 4 0.6 10.4 24.5 95.1 5.9 2 9.5 1.5 10.6 37.1 6.7 8.5 19.8 2.6 2 9.4 0.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 | Approach LOS | | B | | | ပ | | | Ω | | | ш | |
| 5 15.3 79.8 10.4 24.5 95.1 5.9 2 4.0 6.0 4.0 6.5 6.0 4.5 0, s 230 34.0 15.0 37.5 61.0 55 1), s 10.6 37.1 6.7 8.5 19.8 2.6 2 1), 0.7 0.0 0.1 0.5 9.4 0.0 26.4 | Timer - Assigned Phs | _ | 2 | က | 4 | | 9 | 7 | ∞ | | | | |
| 4.0 6.0 4.0 6.5 6.0 4.5 0, s 23.0 34.0 15.0 37.5 61.0 5.5 4 1), s 10.6 37.1 6.7 8.5 19.8 2.6 2 0.7 0.0 0.1 0.5 9,4 0.0 | Phs Duration (G+Y+Rc), s | 15.3 | 79.8 | 10.4 | 24.5 | | 95.1 | 5.9 | 29.0 | | | | |
| 23.0 34.0 15.0 37.5 61.0 5.5 10.6 37.1 6.7 8.5 19.8 2.6 0.7 0.0 0.1 0.5 9.4 0.0 | Change Period (Y+Rc), s | 4.0 | 0.9 | 4.0 | 6.5 | | 0.9 | 4.5 | 6.5 | | | | |
| 106 37.1 6.7 8.5 19.8 2.6 0.7 0.0 0.1 0.5 9.4 0.0 26.4 | Max Green Setting (Gmax), s | 23.0 | 34.0 | 15.0 | 37.5 | | 61.0 | 5.5 | 46.5 | | | | |
| 0.7 0.0 0.1 0.5 9.4 0.0 26.4 | Max Q Clear Time (g_c+I1), s | 10.6 | 37.1 | 6.7 | 8.5 | | 19.8 | 5.6 | 20.9 | | | | |
| ummary Jelay | Green Ext Time (p_c), s | 0.7 | 0.0 | 0.1 | 0.5 | | 9.4 | 0.0 | 1.6 | | | | |
| Delay | Intersection Summary | | | | | | | | | | | | |
| (and | HCM 6th Ctrl Delay | | | 26.4 | | | | | | | | | |
| | HOM 6th 10s | | | 1.07 | | | | | | | | | |

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

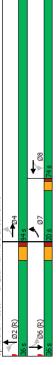
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Synchro 10 Report Page 1

Smoke Tree Resort 2: Quail Run Rd & Lincoln Drive 2025 Total PM

| | EBL S | # EBT | ₩BT 1024 1024 NA NA | NBL 1 | ₩ 4° °° °° °° °° °° °° °° °° °° °° °° °° | SBL SBL 14 14 14 Perm | → SBT SBT O O O O N AN | |
|--------------------------------|---|--------------|---------------------|-----------|--|------------------------|------------------------|--|
| | 7 | 4 4 | ω ω | 2 | 2 2 | 9 | 9 9 | |
| | 3.5 | 15.0 | 15.0 | 33.0 | 7.0 | 33.0 | 7.0 | |
| | 3.0 | 4.0 | 56.9% | 27.7% | 27.7% | 27.7% | 27.7% | |
| | 0.0 | 0.0 | 0.0 | <u>C:</u> | 0.0 | 0.0 | 0.0 | |
| | Lead | 2 | Lag | | | | | |
| | None 71.6 | None 69.1 | None 55.1 | С-Мах | C-Max 48.4 | C-Max 48.4 | C-Max 48.4 | |
| | 0.43 | 0.58 | 0.78 | | 0.00 | 0.03 | 0.14 | |
| | 0.0 | 0.0 | 0.0 | | 0.0 | 31.2 | 0.0 | |
| | ပ | C 34.2 | D 44.3 | | A | S | A.5 | |
| | | S | Q | | | | V | |
| | | | | | | | | |
| | Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | IBTL and | 16:SBTL | Start of | Green | | | |
| _ | Natural Cycle: 70 Control Type: Actuated-Coordinated | | | | | | | |
| | | | | | | | | |
| ntersection Signal Delay: 37.5 | 74 | | | | itersectio | Intersection LOS: D | | |
| ⊆ | ntersection Capacity Utilization 61.3% Analysis Period (min) 15 | | | 2 | O Level | ICU Level of Service B | n o | |

Splits and Phases: 2: Quail Run Rd & Lincoln Drive



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Smoke Tree Resort 2025 Total PM

2: Quail Run Rd & Lincoln Drive HCM 6th Signalized Intersection Summary

| | \ | Ť | ٠ | - | | , | _ | - | _ | | • | , |
|------------------------------|----------------|--------------|------|------|----------|------|--------------|------|------|------|------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | F | + | | F | ₩ | | | 4 | | F | 2, | |
| Traffic Volume (veh/h) | 82 | 981 | 2 | 0 | 1024 | 25 | - | 0 | 2 | 14 | 0 | 93 |
| Future Volume (veh/h) | 83 | 981 | 2 | 0 | 1024 | 25 | - | 0 | 2 | 14 | 0 | 93 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 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 | | 8 | | | 8 | | | 8 | | | 8 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 94 | 1090 | 2 | 0 | 1138 | 28 | - | 0 | 2 | 16 | 0 | 103 |
| Peak Hour Factor | 0.90 | 06:0 | 0.00 | 0.00 | 0.00 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 183 | 1569 | m | 22 | 1251 | 31 | 251 | 17 | 462 | 727 | 0 | 749 |
| Arrive On Green | 0.09 | 0.86 | 98.0 | 0.00 | 0.71 | 0.71 | 0.47 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h | 1781 | 3639 | 7 | 516 | 3544 | 87 | 453 | 36 | 626 | 1415 | 0 | 1585 |
| Grp Volume(v), veh/h | 94 | 532 | 260 | 0 | 270 | 296 | 3 | 0 | 0 | 16 | 0 | 103 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1869 | 516 | 1777 | 1855 | 1468 | 0 | 0 | 1415 | 0 | 1585 |
| O Serve(g_s), s | 4.3 | 13.4 | 13.4 | 0.0 | 34.3 | 34.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.8 |
| Cycle Q Clear(g_c), s | 4.3 | 13.4 | 13.4 | 0.0 | 34.3 | 34.3 | 4.8 | 0.0 | 0.0 | 0.7 | 0.0 | 4.8 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.05 | 0.33 | | 0.67 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 183 | 99/ | 908 | 22 | 627 | 655 | 731 | 0 | 0 | 727 | 0 | 749 |
| V/C Ratio(X) | 0.51 | 69.0 | 69:0 | 0.00 | 0.91 | 0.91 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.14 |
| Avail Cap(c_a), veh/h | 318 | 1196 | 1258 | 141 | 923 | 963 | 731 | 0 | 0 | 727 | 0 | 749 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1:00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.91 | 0.91 | 0.91 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Unitorm Delay (d), s/veh | 78.7 | 0.9 | 0.9 | 0.0 | 1/.4 | 1/.4 | 18.1 | 0.0 | 0.0 | 18.3 | 0.0 | 19.3 |
| Incr Delay (d2), s/veh | 2.0 | 1.0 | 1.0 | 0.0 | 9.4 | 9.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 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/lin | <u>~</u> ∞: | 2.7 | 2.8 | 0.0 | 9.3 | 6.7 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 1.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 30.2 | 0.7 | 0.7 | 0.0 | 26.8 | 26.5 | 18.1 | 0.0 | 0.0 | 18.3 | 0.0 | 19.7 |
| LNGrp LUS | اد | ∢ ; | ⋖ | ⋖ | ا د | اد | 20 | ∢ , | ⋖ | 20 | ⋖ | 2 |
| Approach Vol, veh/h | | 1186 | | | 1166 | | | က | | | 119 | |
| Approach Delay, síveh | | 8.9 | | | 26.7 | | | 18.1 | | | 19.5 | |
| Approach LOS | | A | | | O | | | В | | | B | |
| Timer - Assigned Phs | | 2 | | 4 | | 9 | 7 | 00 | | | | |
| Phs Duration (G+Y+Rc), s | | 67.4 | | 62.6 | | 67.4 | 10.2 | 52.4 | | | | |
| Change Period (Y+Rc), s | | 0.9 | | 6.5 | | 0.9 | 4.0 | 6.5 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 87.5 | | 30.0 | 16.0 | 67.5 | | | | |
| | | 8.9 | | 15.4 | | 8.9 | 6.3 | 36.3 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 6.7 | | 9.0 | 0.1 | 9.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 17.8 | | | | | | | | | |
| | | | 2 | | | | | | | | | |

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Smoke Tree Resort 2025 Total PM

4: Smoke Tree Access B & Lincoln Dr

Smoke Tree Resort 2025 Total PM

5: Lincoln Medical West & Lincoln Dr HCM 6th TWSC

| ntersection | | | | | | | |
|--------------------------------|--------|-------|--------|------|--------|------|--|
| int Delay, s/veh | 0.7 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ₹ | | ۴ | \$ | > | | |
| Traffic Vol, veh/h | 8/6 | 70 | 36 | 1032 | 18 | 34 | |
| Future Vol, veh/h | 876 | 70 | 36 | 1032 | 18 | 34 | |
| Conflicting Peds, #/hr | | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | - | None | • | None | | None | |
| Storage Length | | • | 25 | • | 0 | | |
| Veh in Median Storage, | 0 # | • | 1 | 0 | 0 | | |
| Grade, % | 0 | ٠ | 1 | 0 | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 06 | |
| Heavy Vehicles, % Mvmt Flow | 1087 | 22 | 40 | 1147 | 20 | 38 2 | |
| | | | | | | | |
| Major/Minor IV | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 0 1109 | 0 | 1752 | 555 | |
| Stage 1 | | • | 1 | | 1098 | | |
| Stage 2 | | | | ٠ | 654 | | |
| Critical Hdwy | ٠ | ٠ | 4.14 | ٠ | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | | • | • | | 5.84 | | |
| Critical Hdwy Stg 2 | • | 1 | 1 | • | 5.84 | | |
| Follow-up Hdwy | ٠ | ٠ | 2.22 | ٠ | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | ٠ | • | 625 | • | 77 | 475 | |
| Stage 1 | ٠ | ٠ | • | • | 787 | | |
| Stage 2 | | | | | 4/4 | | |
| Platouri blockeu, 76 | ٠ | ١ | L | ۱ | C | L | |
| Mov Cap-1 Maneuver | | • | 679 | | 700 | 4/5 | |
| Mov Cap-2 Maneuver | | ٠ | 1 | | 180 | | |
| Stage 1 | | | | | 702 | | |
| Stage 2 | ٠ | | | ١ | 4/4 | | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0.4 | | 19.7 | | |
| HCM LOS | | | | | O | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | | 303 | | ٠ | 625 | | |
| HCM Lane V/C Ratio | | 0.191 | | | 0.064 | | |
| HCM Control Delay (s) | | 19.7 | 1 | | 11.2 | | |
| HCM Lane LOS | | C | | | ٥ | | |
| | | | | , | Ω | | |

| | r NBL NBR | * | 30 | 30 | 0 | Stop | - None | | - 0 0 | 6 | 3 33 29 | Minor1 | 0 1744 563 | - 1121 - | - 6.84 6.94 | - 5.84 - | - 5.84 - | | - 78 470 | - 44/ - | - 75 470 | - 185 - | - 144 - | NB | 23.4 | U | _ | - 617 - | - 0.038 - | - 11.1 - |
|----------------------|--------------|-------------------------|-----|------------------------|-------------|-----------|--------|------------|-------|----|---------------------------------------|--------------------|------------------------|----------|-----------------|----------|---------------------|------|----------|---------|-----------|---------|----------|-------------|--------------|---------|---------|---------|-----------|-----------------------|
| | WBL WBT | * | - | 21 1038 | | Free Free | - None | 0 - | - | 0. | 23 23 23 1153 | Major2 | 1125 0 | | 4.14 - | | | 2.22 | 617 - | | - /10 | | | WB | 0.2 | | EBT EBR | | | |
| .7 | EBR | 2 | 7 2 |)5 7 | 0 | Free | - None | | 0 | 6 | 2 2 17 8 | | 0 0 | | 7 | | | 2 | | | | | | | 0 | | | 257 | 0.242 | 23.4 |
| Int Delay, s/veh 0.7 | Movement EBT | Lane Configurations +13 | | Future Vol, veh/h 1005 | eds, #/hr 0 | Free | | Storage, # | , | 6 | Heavy Vehicles, % 2 Mvmt Flow 1117 | Major/Minor Major1 | Conflicting Flow All 0 | Stage 1 | Critical Hdwy - | | Critical Hdwy Stg 2 | | euver | Stage 2 | | neuver | - Sage 2 | Approach EB | rol Delay, s | HCM LOS | or Mvmt | | | HCM Control Delay (s) |

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6: Lincoln Medical East & Lincoln Dr Smoke Tree Resort 2025 Total PM

| Intersection | | | | | | | |
|------------------------|----------|-------|--------|------|--------|------|--|
| Int Delay, síveh | 0.2 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | * | | | ** | | ĸ | |
| Traffic Vol, veh/h | 1027 | 4 | 0 | 1058 | 2 | - 8 | |
| Future Vol, veh/h | 1027 | 4 | 0 | 1058 | 2 | 30 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | • | None | • | None | | None | |
| Storage Length | • | • | • | • | • | 0 | |
| Veh in Median Storage, | # | 1 | 1 | 0 | 0 | 1 | |
| Grade, % | 0 | • | | 0 | 0 | • | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1141 | 4 | 0 | 1176 | 2 | 33 | |
| | | | | | | | |
| Major/Minor M | Major1 | 2 | Major2 | 2 | Minor1 | | |
| Conflicting Flow All | 0 | 0 | | | 1731 | 573 | |
| Stage 1 | • | • | • | • | 1143 | ٠ | |
| Stage 2 | | | | • | 288 | , | |
| Critical Hdwy | 1 | 1 | • | 1 | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | • | • | • | • | 5.84 | • | |
| Critical Hdwy Stg 2 | • | • | 1 | • | 5.84 | • | |
| Follow-up Hdwy | • | • | • | • | 3.52 | 3.32 | |
| Pot Cap-1 Maneuver | • | • | 0 | • | 79 | 463 | |
| Stage 1 | • | • | 0 | • | 266 | • | |
| Stage 2 | | | 0 | ٠ | 218 | • | |
| Platoon blocked, % | • | • | | ٠ | | | |
| Mov Cap-1 Maneuver | 1 | 1 | 1 | 1 | 79 | 463 | |
| Mov Cap-2 Maneuver | • | • | • | 1 | 192 | • | |
| Stage 1 | 1 | 1 | 1 | 1 | 266 | 1 | |
| Stage 2 | • | • | • | • | 218 | ' | |
| | | | | | | | |
| Approach | EB | | WB | | NB | | |
| HCM Control Delay, s | 0 | | 0 | | 13.4 | | |
| HCM LOS | | | | | В | | |
| | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | EBT | EBR | WBT | | |
| Capacity (veh/h) | | 463 | 1 | 1 | 1 | | |
| HCM Lane V/C Ratio | | 0.072 | | ٠ | • | | |
| HCM Control Delay (s) | | 13.4 | 1 | | 1 | | |
| HCM Lane LOS | | Ф | • | ٠ | • | | |
| HCM 95th %tile Q(veh) | | 0.2 | • | • | • | | |
| | | | | | | | |

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Smoke Tree Resort 2025 Total PM

7: Apartment Drwy & Lincoln Dr

| S | | | | | | | | | | | | | |
|----------------------------|-------|-------------|------------------------|----------|--------------|---------|-----------|--------|-----------------|---------|---------|---|-------|
| ane Configurations | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| | K- | ₹ | | * | * | | | 4 | | K. | | ¥c_ | |
| I raffic Vol, veh/h | 00 | 066 | 46 | 7 | 954 | 10 | 74 | c | 53 | ∞ | 0 | 88 | |
| Future Vol, veh/h | ∞ | 066 | 46 | 7 | 954 | 10 | 74 | S | 53 | 8 | 0 | 38 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | |
| RT Channelized | | | None | 1 | • | None | 1 | 1 | None | 1 | 1 | None | |
| Storage Length | 22 | | ٠ | 25 | | ٠ | ٠ | ٠ | ٠ | 0 | ٠ | 0 | |
| Veh in Median Storage, # | | 0 | 1 | | 0 | 1 | ٠ | 0 | 1 | 1 | 0 | | |
| Grade, % | ٠ | 0 | ٠ | ٠ | 0 | ٠ | ١ | 0 | • | ٠ | 0 | | |
| Peak Hour Factor | 8 | 06 | 06 | 06 | 8 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 2 | 7 | 2 | |
| Wvmt Flow | 6 | 1100 | 21 | ∞ | 1060 | = | 82 | က | 26 | 6 | 0 | 42 | |
| | 7 | | 2 | Croic | | 2 | Lacai | | 2 | (inor) | | | |
| ≥ | | | > | Major 2 | | 2 | MILIOLI | | 2 | MILIOIZ | | | |
| ۸AII | 1071 | 0 | 0 | 1151 | 0 | 0 | 1690 | 2231 | 216 | 1652 | • | 536 | |
| Stage 1 | | | | | | | 544 | 1007 | | 1082 | | | |
| | | ١ | ٠ | | ١ | • | 040 | 100/ | | 0/0 | ١ | | |
| Critical Howy | 4. 14 | | | 4.14 | | | 40.7 | 0.04 | 0.94 | 45.7 | | 0.94 | |
| Allical Edwy Stg 1 | | • | ١ | | | ۱ | 40.0 | D. C. | ١ | 0.04 | | | |
| 7 6 | , 5 | | | , , | | | 90.0 | 20.04 | , ,, | 0.04 | | , ,, | |
| | 77.7 | ٠ | | 77.7 | ۱ | | 2.52 | 4.02 | 3.32 | 3.32 | ' < | 3.32 | |
| leannel | 7+7 | | | 200 | | | 212 | 24, | 400 | 222 | 0 0 | 404 | |
| Stage 1 | | ٠ | ٠ | | ٠ | ٠ | 213 | 213 | ٠ | 727 | 0 | | |
| Stage 2 | | | | | | | 490 | 067 | | 4/4 | 0 | | |
| | 147 | ٠ | ٠ | 007 | | | L | 7 | 077 | C. | | 00.8 | |
| | 04/ | | | 903 | | | ~ 22 L | 4 4 | 400 | 25 | | 484 | |
| Mov Cap-2 Maneuver | | • | ٠ | ١ | ۱ | ١ | ~ 22 | - 4 | ۱ | 200 | ۱ | ٠ | |
| Stage 1 | | | | | | | 710 | 607 | | 677 | | | |
| Stage 2 | | ٠ | ٠ | | ٠ | | 7447 | 987 | | 403 | ٠ | | |
| | | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 0.1 | | | 0.1 | | ↔ | \$ 443.8 | | | 26.1 | | | |
| HCM LOS | | | | | | | ш | | | Ω | | | |
| | | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | Z | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR S | WBR SBLn1 SBLn2 | BLn2 | | | |
| Capacity (veh/h) | | 82 | 647 | , | • | 603 | , | | 52 | 489 | | | |
| HCM Lane V/C Ratio | _ | 1.699 0.014 | 0.014 | • | | 0.013 | • | • | 0.171 | 980.0 | | | |
| HCM Control Delay (s) | \$ | \$ 443.8 | 10.6 | | 1 | = | | | 88 | 13.1 | | | |
| HCM Lane LOS | | ட | В | • | • | В | • | • | ш | В | | | |
| HCM 95th %tile Q(veh) | | 12 | 0 | • | • | 0 | • | • | 9.0 | 0.3 | | | |
| Notes | | | | | | | | | | | | | |
| ~: Volume exceeds capacity | ity | \$: Del | \$: Delay exceeds 300s | seds 30 | | F: Comp | utation | Not De | fined | *: All | major v | +: Computation Not Defined *: All major volume in platoon | atoon |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Smoke Tree Resort 2025 Total PM

| tersection | | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|--------------|------|---------|------|------|--|
| nt Delay, s/veh | 4.1 | | | | | | | | | | | | |
| 1 ovement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| ane Configurations | F | 4₽ | | - | 4₽ | | | 4 | | <u></u> | | ĸ. | |
| raffic Vol, veh/h | 12 | 983 | 09 | 69 | 952 | 6 | 16 | - | 100 | വ | 0 | 8 | |
| uture Vol, veh/h | 12 | 983 | 09 | 69 | 952 | 6 | 16 | - | 100 | 2 | 0 | 00 | |
| 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 S | Stop | Stop | Stop | Stop | |
| RT Channelized | • | • | None | 1 | 1 | None | 1 | 1 | None | • | • | None | |
| Storage Length | 25 | ٠ | • | 22 | ٠ | ٠ | ٠ | ٠ | ٠ | 0 | ٠ | 0 | |
| /eh in Median Storage, # | # | 0 | • | ٠ | 0 | • | ٠ | 0 | ٠ | ٠ | 0 | | |
| Grade, % | ٠ | 0 | • | • | 0 | ٠ | ٠ | 0 | • | ٠ | 0 | | |
| Peak Hour Factor | 06 | 8 | 06 | 8 | 06 | 06 | 06 | 8 | 8 | 06 | 8 | 06 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 2 | 2 | 7 | 2 | 7 | 7 | 2 | 2 | |
| Avmt Flow | 13 | 1092 | 19 | 11 | 1058 | 10 | 9 | - | Ξ | 9 | 0 | 6 | |

| | 534 | | | 6.94 | | 1 | 3.32 | 491 | , | | | 491 | | | | | | | | | | | | |
|---------------|----------------------|---------|---------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| | | 1 | ' | 1 | | 1 | | 0 | 0 | 0 | | 1 | • | 1 | 1 | | | | | | | | | |
| Minor2 | 1790 | 1217 | 573 | 7.54 | 6.54 | 6.54 | 3.52 | 21 | 192 | 472 | | 33 | 33 | 188 | 349 | SB | 59.6 | ш | SBLn2 | 491 | - 0.168 0.018 | 12.5 | В | 0.1 |
| _ | 280 | 1 | • | 6.94 | | 1 | 3.32 | 458 | • | 1 | | 458 | • | 1 | 1 | | | | 3Ln1 | 33 | .168 | 135 | ш | 0.5 |
| | 2374 | 1152 | 1222 | 6.54 | 5.54 | 5.54 | 4.02 | 34 | 270 | 250 | | 53 | 29 | 265 | 218 | | | | WBR SBLn1 SBLn2 | | 0 - | | ٠ | |
| Minor1 | 0 1835 | 1152 | 683 | 7.54 | 6.54 | 6.54 | 3.52 | 47 | 210 | 405 | | 41 | 41 | 206 | 347 | R | 62.9 | ш | WBT | | | • | • | • |
| Σ | 0 | ٠ | ٠ | 1 | ٠ | 1 | ٠ | ٠ | • | ì | ٠ | 1 | • | 1 | • | | | | WBL | 266 | - 0.128 | 11.9 | В | 0.4 |
| | 0 | 1 | • | 1 | | 1 | • | 1 | • | 1 | | 1 | • | 1 | 1 | | | | EBR | | | 1 | • | • |
| Major2 | 0 1159 | ٠ | ٠ | 4.14 | ٠ | i. | 2.22 | 266 | • | ř | | 266 | • | ì | | WB | 0.8 | | EBT | | ٠ | ٠ | • | |
| 2 | 0 | • | • | 1 | | 1 | ٠ | • | • | 1 | | 1 | • | 1 | • | | | | EBL | 648 | 0.021 | 10.7 | В | 0.1 |
| | 0 | • | ٠ | 1 | ٠ | 1 | ٠ | • | • | 1 | ٠ | 1 | • | 1 | 1 | | | | NBLn1 | 182 | 0.714 0.021 | 67.9 | ш | 4.5 |
| Major1 | 1068 | | | 4.14 | | 1 | 2.22 | 648 | | 1 | | 648 | | 1 | 1 | FB | 0.1 | | | | | | | |
| Major/Minor M | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

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Smoke Tree Resort 2025 Total PM

8: AJ's Drwy & Lincoln Dr HCM 6th TWSC

9: Scottsdale Rd & Lincoln Dr

| | 4 | † | ~ | > | ţ | • | ← | ۶ | - | • | |
|--|---------------|----------|------------|-------------|---------------------|---------------------|----------|-------|-------|-------|--|
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | r | 4 | * | r | ₽ ₽ | F | 4413 | r | 444 | * | |
| Traffic Volume (vph) | 269 | 61 | 481 | 61 | 89 | 461 | 1762 | 99 | 1702 | 546 | |
| Future Volume (vph) | 269 | 61 | 481 | 61 | 89 | 461 | 1762 | 99 | 1702 | 546 | |
| Turn Type | Split | A | vo+mq | Split | ¥ | Prot | ¥ | Prot | NA | vo+mq | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | - | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | - | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 32.0 | 32.0 | 27.0 | 21.0 | 21.0 | 27.0 | 54.0 | 23.0 | 20.0 | 32.0 | |
| Total Split (%) | 24.6% | 24.6% | 20.8% | 16.2% | 16.2% | 20.8% | 41.5% | 17.7% | 38.5% | 24.6% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| Lost Time Adjust (s) | 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 | 9.9 | 9.9 | 5.5 | 2.7 | 5.3 | 2.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Act Effct Green (s) | 26.5 | 26.5 | 49.8 | 6.7 | 6.7 | 23.3 | 64.1 | 6.7 | 48.2 | 80.4 | |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.38 | 0.07 | 0.07 | 0.18 | 0.49 | 0.07 | 0.37 | 0.62 | |
| v/c Ratio | 1.02 | 1.02 | 0.77 | 0.52 | 0.50 | 0.83 | 0.81 | 0.55 | 1.00 | 0.57 | |
| Control Delay | 116.0 | 115.7 | 24.0 | 71.2 | 32.4 | 63.8 | 32.3 | 72.8 | 62.7 | 11.4 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 116.0 | 115.7 | 24.0 | 71.2 | 32.4 | 63.8 | 32.3 | 72.8 | 62.7 | 11.4 | |
| FOS | ш | ш | S | ш | ပ | ш | O | ш | ш | Ω | |
| Approach Delay | | 76.1 | | | 43.9 | | 38.6 | | 50.8 | | |
| Approach LOS | | Ш | | | D | | O | | D | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Length: 130 Artuated Cycle Length: 130 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6: | SBT, Sta | rt of Gree | _ | | | | | | | |
| Natural Cycle: 100 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | linated | | | | | | | | | | |
| Maximum v/c Ratio: 1.02 | | | | | | | | | | | |
| Intersection Signal Delay: 50.6 Intersection Capacity Hilization 87.8% | 6 on 87.8% | | | <u>=</u> C | Intersection LOS: D | LOS: D f Service | ш | | | | |
| Analysis Period (min) 15 | 0.00 | | | 2 | | | , | | | | |
| Aldiyala r cilca (min) | | | | | | | | | | | |

Splits and Phases:

9: Scottsdale Rd & Lincoln Dr 02

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₹ ◆ Ø6 (R) **\$**02

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Smoke Tree Resort 2025 Total PM

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

1.00 1870 607 0.90 1740 1740 1740 1.00 1.00 42.9 49.3 0.0 1.00 No 1870 2 0.34 0.34 5106 11702 44.3 44.3 66.2 66 66 1.00 1.00 00 00 00 39.7 D 56 00.00 2 2 66 60.00 146 709 11844 144.5 0.00 833 11.7 7.9 0.00 11.00 10.00 1 36.1 D 2526 44.5 D 1.00 No 1870 1958 0.90 2 2306 0.45 5102 1305 1702 44.3 15.0 5.6 15.4 9.0 0.4 0.85 0.85 1538 1.00 1.00 31.7 4.4 4.4 0.0 NBL 461 461 0 0 1.00 2 0.16 3456 1728 1728 1728 1728 1729 0.02 559 0.02 557 1.00 1.00 0.10 0.0 0.0 0.0 72.5 87 0 0.100 1870 87 0.90 50.0 5.7 44.3 46.3 0.0 63.1 1.09 **4** 89 89 0 2 128 0.07 7771 1.00 No 1870 76 0.90 76 1777 5.4 5.4 128 0.59 210 1.00 1.00 58.5 1.6 0.0 231 26.5 5.5 21.5 21.0 0.1 59.5 32.0 5.5 26.5 28.5 0.0 19 0 0.1 481 0 0 1.00 1.00 1870 534 0.90 62.7 0.00 6 6 6 1.00 No 1870 0.90 0.0 0.00 0.0 A 1215 72.9 64.4 5.7 48.3 46.5 1.0 t * 18 7.3 0.0 569 569 0 1.00 1870 681 0.90 79.3 Ind Delay (d2), siveh initial Q Delay(d3),siveh % lie BackOfQ(50%),veh/in 1 Unsig. Movement Delay, siveh LnGrp Delay(d),siveh 77 Max Green Setting (Gmax), s Max Q Clear Time (g_c+I1), s Max Q Clear Time (g_c+I1), s Green Ext Time (p_c), s Timer - Assigned Phs Phs Duration (G+Y+Rc), s Change Period (Y+Rc), s Initial Q (Qb), veh Ped-Bike Adj(A_pbT) Parking Bus, Adj Work Zone On Approach Grp Volume(v), veh/h Grp Sat Flow(s), veh/h/ln Q Serve(g_s), s Cycle Q Clear(g_c), s Prop in Lane Lane Grp Cap(c), veh/h V/C Ratio(X) Avail Cap(c_a), veh/h HCM Platoon Ratio Adj Sat Flow, vehrhin Adj Flow Rate, vehrh Peak Hour Factor Percent Heavy Veh, % Cap, vehrh Arrive On Green Sat Flow, vehrh Upstream Filter(I) Uniform Delay (d), s/veh LnGrp LOS Approach Vol, veh/h Approach Delay, s/veh Approach LOS Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) HCM 6th Ctrl Delay HCM 6th LOS

User approved pedestrian interval to be less than phase max green. User approved volume balancing among the lanes for furning movement.

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Smoke Tree Resort 2025 Total PM

10: Quail Run Rd & Access A HCM 6th TWSC

| | SBT | ** | 0 | 0 | 0 | Free | None | | 0 | 0 | 06 | 2 | 0 | | 0 | | | | | | | | | | | | | | | | | | | SBT | | | | | |
|------------------|----------|---------------------|--------------------|-------------------|------------------------|--------------|----------------|----------------|-----------------------|----------|------------------|-------------------|-----------|---------------|----------------------|---------|---------|---------------|---------------------|---------------------|----------------|--------------------|---------|---------|--------------------|--------------------|--------------------|---------|---------|----------|-----------|----------------------|---------|-----------------------|------------------|--------------------|-----------------------|--------------|-----------------------|
| | NBR SBL | | 0 | 0 | 0 0 | Free Free | None - | | | | 06 06 | 2 2 | 0 1 | Major2 | 0 0 | | | - 4.12 | | | - 2.218 | | | | | | | | | CD | 30 | | | /BLn1 SBL | | | | | ì |
| | WBR NBT | 42 | 1 0 | 1 | 0 0 | Stop Free | None - | | 0 - | 0 | 06 06 | 2 2 | 1 0 | Major1 | 0 0 | • | | 6.22 - | | | 3.318 - | | | | | | | | | QN | QN o | 0 | | NBT NBRWBLn1 | | | | | |
| 0 | WBL W | <u>}</u> - | 0 | 0 | 0 | Stop Si | - N | 0 | 0 #′ | 0 | 06 | 2 | 0 | Minor1 | 2 | 0 | 2 | 6.42 6. | 5.42 | 5.42 | 3.518 3.3 | 1021 | | 1021 | | 1021 | 1021 | , , | 1701 | M/D | WD | | | | | | | | |
| Int Delay, s/veh | Movement | Lane Configurations | Traffic Vol, veh/h | Future Vol, veh/h | Conflicting Peds, #/hr | Sign Control | RT Channelized | Storage Length | Veh in Median Storage | Grade, % | Peak Hour Factor | Heavy Vehicles, % | Mvmt Flow | Major/Minor N | Conflicting Flow All | Stage 1 | Stage 2 | Critical Hdwy | Critical Hdwy Stg 1 | Critical Hdwy Stg 2 | Follow-up Hdwy | Pot Cap-1 Maneuver | Stage 1 | Stage 2 | Platoon blocked, % | Mov Cap-1 Maneuver | Mov Cap-2 Maneuver | Stage 1 | Stage 2 | Approach | Apploacii | HCM Control Delay, s | HCM LOS | Minor Lane/Major Mvmt | Capacity (veh/h) | HCM Lane V/C Ratio | HCM Control Delay (s) | HCM Lane LOS | HCM 95th %tile Q(veh) |

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HCM 6th computational engine requires equal clearance times for the phases crossing the barrier

9: Scottsdale Rd & Lincoln Dr Timings Smoke Tree Resort 2025 Total PM Mitigated

| 2025 Lotal PM Mitigated | ated | | | | | | | | | | I Imings |
|---|------------|----------|-------------|-------------|-----------------------|------------|----------|-------------|-------|-------|----------|
| | 1 | 1 | ~ | > | ţ | • | ← | ۶ | - | • | |
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Configurations | <i>y</i> - | 4 | ¥C. | <i>y</i> - | ₹ | F | 444 | * | 444 | ¥. | |
| Traffic Volume (vph) | 269 | 61 | 481 | 61 | 89 | 461 | 1762 | 99 | 1702 | 546 | |
| Future Volume (vph) | 699 | 61 | 481 | 61 | 89 | 461 | 1762 | 99 | 1702 | 546 | |
| Turn Type | Spill | NA | vo+mq | Spilt | NA | Prot | NA | Prot | NA | hm+ov | |
| Protected Phases | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | _ | 9 | 4 | |
| Permitted Phases | | | 4 | | | | | | | 9 | |
| Detector Phase | 4 | 4 | 2 | ∞ | ∞ | 2 | 2 | | 9 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 10.0 | 2.0 | 10.0 | 7.0 | |
| Minimum Split (s) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 16.7 | 11.0 | 16.0 | 13.0 | |
| Total Split (s) | 30.0 | 30.0 | 21.0 | 19.0 | 19.0 | 21.0 | 28.0 | 13.0 | 50.0 | 30.0 | |
| Total Split (%) | 25.0% | 25.0% | 17.5% | 15.8% | 15.8% | 17.5% | 48.3% | 10.8% | 41.7% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 3.6 | 3.6 | 4.0 | 4.7 | 3.3 | 4.7 | 4.0 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | 2.0 | 1.0 | 1.5 | |
| 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) | 5.5 | 5.5 | 5.5 | 2.6 | 2.6 | 5.5 | 2.7 | 5.3 | 5.7 | 5.5 | |
| Lead/Lag | | | Lead | | | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Recall Mode | None | None | None | None | None | None | None | None | C-Max | None | |
| Act Effet Green (s) | 24.5 | 24.5 | 44.0 | 9.4 | 9.4 | 19.5 | 57.8 | 8.4 | 44.3 | 74.5 | |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.37 | 0.08 | 0.08 | 0.16 | 0.48 | 0.07 | 0.37 | 0.62 | |
| v/c Ratio | 1.01 | 1.01 | 0.82 | 0.49 | 0.49 | 0.92 | 0.83 | 0.59 | 1.01 | 0.56 | |
| Control Delay | 100.0 | 9.66 | 29.0 | 64.6 | 29.9 | 72.4 | 31.6 | 73.2 | 60.5 | 9.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 100.0 | 9.66 | 29.0 | 64.6 | 29.9 | 72.4 | 31.6 | 73.2 | 9.09 | 9.5 | |
| TOS | ш | ш | S | ш | ပ | ш | S | ш | ш | A | |
| Approach Delay | | 69.2 | | | 40.1 | | 39.9 | | 48.7 | | |
| Approach LOS | | ш | | | Q | | D | | D | | |
| Intersection Summary | | | | | | | | | | | |
| Cycle Lenath: 120 | | | | | | | | | | | |
| Actuated Cycle Length: 120 | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | phase 6: | SBT, Sta | irt of Gree | _ | | | | | | | |
| Natural Cycle: 100 | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | inated | | | | | | | | | | |
| Maximum v/c Ratio: 1.01 | | | | | | | | | | | |
| Intersection Signal Delay: 48.9 | ~ | | | ≟ | Intersection LOS: D | LOS: D | | | | | |
| Intersection Capacity Utilization 87.8% | n 87.8% | | | \circ | CU Level of Service E | of Service | ш | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | |

? Splits and Phases: 9: Scottsdale Rd & Lincoln Dr 🛡 🔻 Ø6 (R) 02 \$0 **€**

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Synchro 10 Report Page 10

Smoke Tree Resort 2025 Total PM Mitigated

9: Scottsdale Rd & Lincoln Dr HCM 6th Signalized Intersection Summary

| | • | † | ~ | > | ţ | 4 | • | - | • | ٠ | - | • |
|------------------------------|----------|----------|----------------|-------------|----------|-------|-------|------------|------|------|---------|----------|
| Marcomont | 2 | TOT | | IOW | TOW | O O/W | Ī | TON | CON | 100 | TOO | 000 |
| Movement | EBL | EBI | EBK | WBL | WBI | WBK | NBL | INBI | NBK | SBL | SBI | SBK |
| Lane Configurations | F | ক : | - | F- | <u>^</u> | e e | F | <u>+</u> + | i | - | +++ | L |
| Iraffic Volume (veh/h) | 696 | 1.9 | 481 | 19 | 89 | 8/ | 461 | 79/1 | 20 | 99 | 70/1 | 546 |
| Future Volume (veh/h) | 269 | 61 | 481 | 61 | 89 | ∞ α | 461 | 1762 | 20 | 99 | 1702 | 546 |
| Ded-Rike Adi/A phT) | 1 00 | > | 100 | 100 | > | 100 | 1 00 | 0 | 0 0 | 0 0 | 0 | 9 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 8.1 |
| Work Zone On Approach | | 8 | | | S N | | | N N | | | 8 | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 681 | 0 | 534 | 89 | 9/ | 87 | 512 | 1958 | 99 | 73 | 1891 | 409 |
| Peak Hour Factor | 06.0 | 06:0 | 06.0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 06:0 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 7 | 7 | 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 727 | 0 | 528 | 130 | 130 | 116 | 446 | 2285 | 99 | 93 | 1885 | 606 |
| Arrive On Green | 0.20 | 0.00 | 0.20 | 0.07 | 0.07 | 0.07 | 0.13 | 0.45 | 0.45 | 0.05 | 0.37 | 0.37 |
| Sat Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1777 | 1585 | 3456 | 5102 | 146 | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h | 681 | 0 | 534 | 89 | 9/ | 87 | 512 | 1305 | 60/ | 73 | 1891 | 607 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1844 | 1781 | 1702 | 1585 |
| Q Serve(g_s), s | 22.6 | 0.0 | 24.5 | 4.4 | 5.0 | 6.5 | 15.5 | 41.2 | 41.4 | 4.9 | 44.3 | 31.8 |
| Cycle Q Clear(g_c), s | 22.6 | 0.0 | 24.5 | 4.4 | 2.0 | 6.5 | 15.5 | 41.2 | 41.4 | 4.9 | 44.3 | 31.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 727 | 0 | 528 | 130 | 130 | 116 | 446 | 1524 | 826 | 93 | 1885 | 606 |
| V/C Ratio(X) | 0.94 | 0.00 | 1.01 | 0.52 | 0.59 | 0.75 | 1.15 | 0.86 | 0.86 | 0.79 | 1:00 | 0.67 |
| Avail Cap(c_a), veh/h | 727 | 0 | 278 | 199 | 198 | 177 | 446 | 1524 | 826 | 114 | 1885 | 606 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0 ! | 1:00 | 1:00 |
| Upstream Filter(I) | 00.1 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.0 | 0.0 | 40.0 | 53.6 | 53.9 | 54.6 | 52.3 | 29.7 | 29.7 | 56.2 | 37.8 | 17.7 |
| ncr Delay (d2), s/veh | 19.2 | 0.0 | 41.8 | 1.2 | 1.6 | 3.7 | 89.4 | 4.8 | 8.6 | 19.7 | 21.5 | 3.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0:0 |
| %ile BackOfQ(50%),veh/ln | 11.9 | 0.0 | 21.5 | 2.0 | 2.3 | 2.7 | 12.2 | 17.4 | 19.8 | 2.7 | 21.8 | 18.8 |
| Unsig. Movement Delay, s/veh | | c c | 3 | | | C | 1 | | 0 | L | c C | |
| LnGrp Delay(d),s/ven | 7.99 | 0.0 | 8. 8. 1. | 54.8 | 55.4 | 28.5 | 141./ | 34.5 | 38.3 | 75.9 | 59.3 | 21.6 |
| LnGrp LOS | ш | A 121 | - | ۵ | 73.1 | ш | _ | 2 2 | ۵ | ш | 1 12 3C | اد |
| Approach Vol. Verini | | 0171 | | | 162 | | | 0707 | | | 1/67 | |
| Approach Delay, Siveri | | - 27 | | | 20.3 | | | 27.2 | | | 500.4 | |
| Apploach EC3 | | _ | | | _ | | | _ | | | ۵ | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 2 | 9 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.6 | 59.4 | | 30.0 | 21.0 | 20.0 | | 14.4 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 9.9 | | | | |
| Max Green Setting (Gmax), s | r.7.7 | 52.3 | | 24.5 | 15.5 | 44.3 | | 13.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.9 | 43.4 | | 26.5 | 17.5 | 46.3 | | 8.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.7 | | 0.0 | 0.0 | 0.0 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 57.7 | | | | | | | | | |
| HCM 6th LOS | | | ш | | | | | | | | | |
| | | | | | | | | | | | | |

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the larnes for furning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

02/11/2019

Civ/Tech BR

APPENDIX I

QUEUE STORAGE ANALYSIS



| | ۶ | - | • | ← | • | † | > | ļ | |
|-------------------------|------|------|------|------|------|----------|-------------|------|--|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | |
| Lane Group Flow (vph) | 269 | 1209 | 28 | 1132 | 7 | 69 | 94 | 388 | |
| v/c Ratio | 0.75 | 0.52 | 0.13 | 0.63 | 0.05 | 0.29 | 0.27 | 0.85 | |
| Control Delay | 30.1 | 14.1 | 8.6 | 11.4 | 29.7 | 34.6 | 36.4 | 49.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 30.1 | 14.1 | 8.6 | 11.4 | 29.7 | 34.6 | 36.4 | 49.1 | |
| Queue Length 50th (ft) | 86 | 235 | 1 | 23 | 5 | 36 | 64 | 225 | |
| Queue Length 95th (ft) | 231 | 473 | m29 | #729 | 13 | 68 | 85 | 310 | |
| Internal Link Dist (ft) | | 105 | | 1255 | | 475 | | 337 | |
| Turn Bay Length (ft) | 150 | | 95 | | 80 | | 135 | | |
| Base Capacity (vph) | 430 | 2345 | 221 | 1794 | 299 | 422 | 588 | 730 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.63 | 0.52 | 0.13 | 0.63 | 0.02 | 0.16 | 0.16 | 0.53 | |

Intersection Summary

02/12/2019 CivTech BR

 ^{# 95}th 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.

| | ٠ | → | • | • | † | \ | ļ |
|-------------------------|------|----------|------|------|----------|----------|------|
| Lane Group | EBL | EBT | WBL | WBT | NBT | SBL | SBT |
| Lane Group Flow (vph) | 128 | 1245 | 2 | 1054 | 10 | 29 | 73 |
| v/c Ratio | 0.55 | 0.70 | 0.02 | 0.77 | 0.01 | 0.05 | 0.09 |
| Control Delay | 35.4 | 35.7 | 21.5 | 38.4 | 0.0 | 28.4 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 35.4 | 35.7 | 21.5 | 38.4 | 0.0 | 28.4 | 0.2 |
| Queue Length 50th (ft) | 73 | 416 | 1 | 402 | 0 | 15 | 0 |
| Queue Length 95th (ft) | 151 | 626 | 6 | 426 | 0 | 42 | 0 |
| Internal Link Dist (ft) | | 1255 | | 319 | 137 | | 291 |
| Turn Bay Length (ft) | 25 | | 25 | | | | |
| Base Capacity (vph) | 297 | 2382 | 149 | 1834 | 689 | 562 | 798 |
| 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 | 0.43 | 0.52 | 0.01 | 0.57 | 0.01 | 0.05 | 0.09 |
| Intersection Summary | | | | | | | |

| | ۶ | → | • | • | • | • | † | \ | ļ | 4 | |
|-------------------------|------|----------|------|------|------|------|----------|----------|------|------|--|
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Group Flow (vph) | 300 | 303 | 564 | 46 | 101 | 368 | 1636 | 61 | 2016 | 740 | |
| v/c Ratio | 0.90 | 0.90 | 0.89 | 0.38 | 0.37 | 0.76 | 0.65 | 0.50 | 0.98 | 0.63 | |
| Control Delay | 77.0 | 77.0 | 35.4 | 62.1 | 28.9 | 60.3 | 25.1 | 67.8 | 50.5 | 8.4 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 77.0 | 77.0 | 35.4 | 62.1 | 28.9 | 60.3 | 25.1 | 67.8 | 50.5 | 8.4 | |
| Queue Length 50th (ft) | 238 | 241 | 228 | 35 | 16 | 142 | 347 | 46 | 560 | 133 | |
| Queue Length 95th (ft) | #404 | #408 | #317 | 73 | 45 | 194 | 436 | 91 | #732 | 274 | |
| Internal Link Dist (ft) | | 389 | | | 130 | | 477 | | 335 | | |
| Turn Bay Length (ft) | 175 | | | 90 | | 275 | | 185 | | | |
| Base Capacity (vph) | 343 | 346 | 641 | 197 | 412 | 497 | 2524 | 130 | 2067 | 1175 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.87 | 0.88 | 0.88 | 0.23 | 0.25 | 0.74 | 0.65 | 0.47 | 0.98 | 0.63 | |

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

| | ۶ | - | • | ← | 4 | † | - | ↓ | |
|-------------------------|------|------|------|------|------|----------|------|----------|--|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | |
| Lane Group Flow (vph) | 297 | 1100 | 30 | 1216 | 9 | 99 | 78 | 246 | |
| v/c Ratio | 0.76 | 0.43 | 0.11 | 0.63 | 0.05 | 0.57 | 0.30 | 0.62 | |
| Control Delay | 30.7 | 9.2 | 3.3 | 6.4 | 37.2 | 62.3 | 42.7 | 25.8 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 30.7 | 9.2 | 3.3 | 6.4 | 37.2 | 62.3 | 42.7 | 25.8 | |
| Queue Length 50th (ft) | 115 | 190 | 1 | 22 | 6 | 72 | 54 | 70 | |
| Queue Length 95th (ft) | 230 | 291 | m8 | 578 | 20 | 127 | 91 | 164 | |
| Internal Link Dist (ft) | | 105 | | 1255 | | 475 | | 337 | |
| Turn Bay Length (ft) | 150 | | 95 | | 80 | | 135 | | |
| Base Capacity (vph) | 441 | 2534 | 263 | 1915 | 313 | 408 | 566 | 743 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.67 | 0.43 | 0.11 | 0.63 | 0.03 | 0.24 | 0.14 | 0.33 | |
| Intersection Summary | | | | | | | | | |

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

02/12/2019 CivTech BR

| | • | → | ← | † | \ | ļ |
|-------------------------|------|----------|----------|----------|----------|------|
| Lane Group | EBL | EBT | WBT | NBT | SBL | SBT |
| Lane Group Flow (vph) | 94 | 1092 | 1166 | 3 | 16 | 103 |
| v/c Ratio | 0.43 | 0.58 | 0.78 | 0.00 | 0.03 | 0.14 |
| Control Delay | 28.4 | 19.9 | 35.7 | 0.0 | 31.2 | 0.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 28.4 | 19.9 | 35.7 | 0.0 | 31.2 | 0.4 |
| Queue Length 50th (ft) | 41 | 264 | 436 | 0 | 9 | 0 |
| Queue Length 95th (ft) | 92 | 289 | 458 | 0 | 29 | 0 |
| Internal Link Dist (ft) | | 1255 | 319 | 137 | | 291 |
| Turn Bay Length (ft) | 25 | | | | | |
| Base Capacity (vph) | 292 | 2382 | 1831 | 648 | 524 | 749 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.32 | 0.46 | 0.64 | 0.00 | 0.03 | 0.14 |
| Intersection Summary | | | | | | |

| | ۶ | → | \rightarrow | • | ← | 4 | † | > | ļ | 4 | |
|-------------------------|-------|----------|---------------|------|----------|------|----------|-------------|------|------|--|
| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR | |
| Lane Group Flow (vph) | 348 | 352 | 534 | 68 | 163 | 512 | 2014 | 73 | 1891 | 607 | |
| v/c Ratio | 1.01 | 1.01 | 0.82 | 0.49 | 0.49 | 0.92 | 0.83 | 0.59 | 1.01 | 0.56 | |
| Control Delay | 100.0 | 99.6 | 29.0 | 64.6 | 29.9 | 72.4 | 31.6 | 73.2 | 60.5 | 9.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 100.0 | 99.6 | 29.0 | 64.6 | 29.9 | 72.4 | 31.6 | 73.2 | 60.5 | 9.2 | |
| Queue Length 50th (ft) | ~292 | ~295 | 210 | 52 | 30 | 202 | 503 | 55 | ~540 | 138 | |
| Queue Length 95th (ft) | #495 | #501 | #346 | 97 | 63 | #344 | 597 | #120 | #658 | 232 | |
| Internal Link Dist (ft) | | 389 | | | 130 | | 477 | | 335 | | |
| Turn Bay Length (ft) | 175 | | | 90 | | 275 | | 185 | | | |
| Base Capacity (vph) | 343 | 347 | 654 | 197 | 440 | 558 | 2441 | 130 | 1877 | 1080 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.01 | 1.01 | 0.82 | 0.35 | 0.37 | 0.92 | 0.83 | 0.56 | 1.01 | 0.56 | |

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.

Signalized Intersection 2025

Average Vehicle Length (ft): 25 Cycles: 2

Intersection Cycle Length (sec):

Intersection Cycle Length (sec): 130
Equation Used: storage length = 2 x (vehicles/hour)/(cycles/hour) x average vehicle length

| Interception | Annrasah | AM Peak | Midday | PM Peak | Max vehs per | Max trucks | Storage |
|----------------------------------|----------|----------|--------|----------|--------------|--------------|---------|
| Intersection | Approach | (veh/hr) | Peak | (veh/hr) | 2 cycles | per 2 cycles | Length |
| | NB Left | 6 | 0 | 8 | 1 | 0 | 25' |
| | SB Left | 85 | 0 | 70 | 7 | 0 | 175' |
| | EB Left | 242 | 0 | 267 | 20 | 0 | 500' |
| Mockingbird Lane & Lincoln Dr | WB Left | 25 | 0 | 27 | 2 | 0 | 50' |
| Mockingbild Laile & Lilicolli Di | NB Right | 25 | 0 | 21 | 2 | 0 | 50' |
| | SB Right | 253 | 0 | 169 | 19 | 0 | 475' |
| | EB Right | 33 | 0 | 32 | 3 | 0 | 75' |
| | WB Right | 48 | 0 | 71 | 6 | 0 | 150' |
| | NB Left | 1 | 0 | 1 | 1 | 0 | 25' |
| | SB Left | 26 | 0 | 14 | 2 | 0 | 50' |
| | EB Left | 115 | 0 | 85 | 9 | 0 | 225' |
| Quail Run Rd & Lincoln Dr | WB Left | 2 | 0 | 0 | 1 | 0 | 25' |
| Quali Null Na & Ellicoli Di | NB Right | 8 | 0 | 2 | 1 | 0 | 25' |
| | SB Right | 66 | 0 | 93 | 7 | 0 | 175' |
| | EB Right | 4 | 0 | 2 | 1 | 0 | 25' |
| | WB Right | 12 | 0 | 25 | 2 | 0 | 50' |
| | NB Left | 331 | 0 | 461 | 34 | 0 | 850' |
| | SB Left | 55 | 0 | 66 | 5 | 0 | 125' |
| | EB Left | 500 | 0 | 569 | 42 | 0 | 1050' |
| Scottsdale Rd & Lincoln Dr | WB Left | 41 | 0 | 61 | 5 | 0 | 125' |
| Scottsdale Nd & Lincoln Di | NB Right | 43 | 0 | 50 | 4 | 0 | 100' |
| | SB Right | 666 | 0 | 546 | 49 | 0 | 1225' |
| | EB Right | 508 | 0 | 481 | 37 | 0 | 925' |
| | WB Right | 52 | 0 | 78 | 6 | 0 | 150' |



Unsignalized Intersection 2025

Average Vehicle Length (ft): 25

Equation Used: storage length = $2 \times (vehicles/hour)/(60 \text{ minutes/hour}) \times average vehicle length}$

| Intersection | Approach | AM Peak | Midday | PM Peak | Veh per 2 | Trucks per | Storage |
|-------------------------------|----------|----------|--------|----------|-----------|------------|---------|
| intersection | Approach | (veh/hr) | Peak | (veh/hr) | minutes | 2 minutes | Length |
| | NB Left | 16 | 0 | 18 | 1 | 0 | 25' |
| | SB Left | 0 | 0 | 0 | 0 | 0 | 0' |
| | EB Left | 0 | 0 | 0 | 0 | 0 | 0' |
| Smoke Tree Access B & Lincoln | WB Left | 26 | 0 | 36 | 2 | 0 | 50' |
| Dr | NB Right | 22 | 0 | 34 | 2 | 0 | 50' |
| | SB Right | 0 | 0 | 0 | 0 | 0 | 0' |
| | EB Right | 17 | 0 | 20 | 1 | 0 | 25' |
| | WB Right | 0 | 0 | 0 | 0 | 0 | 0' |



APPENDIX J

SIGHT DISTANCE ANALYSIS



Smoke Tree

Sight Distance Analysis

Location: Smoke Tree Access B & Lincoln Dr

| Assumption | s and/or | Givens |
|------------|----------|--------|
| | | |

| Elements of Design from AASHTO | 6th | Edition | AASHTO Ref |
|------------------------------------|-----|---------------------------|----------------|
| Driver Eve Height | | | |
| Passenger Vehicle | | 3.50 ft | §3.2.6, p 3-14 |
| Truck | | 7.60 ft | §3.2.6, p 3-14 |
| Object Height | | | |
| Stopping Sight Distance | | 2.00 ft | §3.2.6, p 3-14 |
| Passing Sight Distance | | 3.50 ft | §3.2.6, p 3-14 |
| Vehicle Height | | 4.25 ft | §3.2.6, p 3-14 |
| Driver Eye Location | | | |
| From Edge of Major Rd Traveled Way | | 14.50 ft | 9.5.3, B1 |
| Deceleration Rate (a) | | | |
| Passenger Vehicle | | 11.20 ft/sec ² | §3.2.2, p 3-3 |
| Truck | | N/A ft | |
| Brake reaction time (t) | | 2.50 sec | §3.2.2, p 3-4 |

Site Specific Data (Bike & turn lanes are outside traveled way and are not considered)

| opecine bata (bike & turn lanes are outside t | uvere | a way ana | are not con | i i Si dei edj |
|---|--------|------------|--------------|------------------|
| Major Street Design Speed (V _{major}) | | 45 | MPH | |
| Grades - Approaching Minor Street from: (- = | approa | ching dowr | hill) | |
| Left (G _L) | | 0.00 | % | |
| Right (G _R) | | 0.00 | % | |
| Approach Grade Adjustment Factor | Left | 1.0 | | Tbl 9-4, p 9-35 |
| | Right | 1.0 | | |
| Major Road Through Lanes on Each Approach | 1 | 2.0 | (Use 1 for I | RI/RO[/LI] only) |
| Median Width (in "Lane Equivalents") | | 12.0 | (Use 0 for I | RI/RO[/LI] only) |
| Minor Road Approach Upgrade, if >3% | | 0.00 | % | _ |
| Minor Road Access (check restricted) | | | | |
| | LI | LO/Th | RO | |

Stopping Sight Distance = Brake Reaction Distance + Braking Distance

d=1.47Vt+1.075 $\frac{V^2}{a}$ Neglecting Effect of Grade Eq 3-2, p 3-4 Calculated d= 359.8 ft Design d= 360 ft With Effect of Grade Eq 3-3, p 3-5 d=1.47Vt+-Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance.

§3.2.2, p 3-6



February 2019 Appendix J

Smoke Tree

Sight Distance Analysis

Location: Smoke Tree Access B & Lincoln Dr

Intersection Sight Distances

| section Signit Distances | | AASHTO Ref | | |
|---|-----------------|-----------------|-----------------------|-----------------|
| Case B—Intersections with Stop Control | ol on the Minor | Road | | §9.5.3, p 9-36 |
| Case B1—Left Turn from the Minor | Road | | | §9.5.3, p 9-36 |
| Design Vehicle | | Time (| Sap (t _g) | |
| Passenger Car | | 7.5 | sec | Tbl 9-5, p 9-37 |
| Single-Unit Tuck | | 9.5 | sec | Tbl 9-5, p 9-37 |
| Combination Truck | | 11.5 | sec | Tbl 9-5, p 9-37 |
| Time gap adjustments | | | | |
| Add'l lanes to cross (1st is as | ssumed) | | | |
| Passenger Car | | 0.5 | sec | See Notes |
| Trucks | | 0.7 | sec | below |
| Minor Approach Upgrade (P | er each 1%>3% | 0.2 | sec | Tbl 9-5, p 9-37 |
| Site data | | | | |
| Major Road Lanes on Left Ap | | §9.5.3, p 9-37 | | |
| Minor Road Approach Upgrad | le, if >3% | 0 | % | §9.5.3, p 9-37 |
| Time Gap based on site data Design Vehicle Gap+Adj for A | pproach Grade: | >3%+Adjs for | Add'l Lai | nes & Median |
| Passenger Car | | 14.0 | sec | |
| Single-Unit Tuck | | 18.6 | sec | |
| Combination Truck | | 20.6 | sec | |
| ISD to left & right along Major Ro | ad ISD=1.4 | $7V_{major}t_g$ | (ft) | Eq 9-1, p 9-37 |
| | | ISD to Left | | |
| | | and Right | - | |
| Passenger Car | calculated ISE | | ft | |
| | design ISE |)= 930 | ft | |
| Single-Unit Tuck | calculated ISE |)= 1230.4 | ft | |
| | design ISE |)= 1235 | ft | |

calculated ISD= design ISD= 1362.7 ft 1365 ft



Combination Truck

Smoke Tree Sight Distance Analysis

Location: Smoke Tree Access B & Lincoln Dr

Intersection Sight Distances (cont'd)

| | | AASHTO Ref |
|---|----------------|-----------------------------|
| Case B2—Right Turn from the Minor Road | | §9.5.3, p 9-40 |
| & | | 00.5.0 |
| Case B3—Crossing Maneuver from the Minor Road | | §9.5.3, p 9-43 |
| | | |
| Design Vehicle | Time Gap | (t_g) |
| Passenger Car | 6.5 se | , , , |
| Single-Unit Tuck | 8.5 se | , p |
| Combination Truck | 10.5 se | Tbl 9-7, p 9-40 |
| | | |
| Time gap adjustments - Case B-3 Only* | | |
| Add'l lanes to cross (1st is assumed) | | |
| Passenger Car | 0.5 se | See Notes |
| Trucks | 0.7 se | below |
| Minor Approach Upgrade (Per each 1%>3%) | 0.1 se | Tbl 9-7, p 9-40 |
| Site data | | |
| Major Road Lanes on Left Approach | 2.0 | §9.5.3, p 9-40 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3, p 9-40 |
| mile Head Appleadin Opgicade, ii O/o | 0 ,0 | 30.0.0, p 0 .0 |
| | | |
| Time Gap based on site data (sec) | B2 & B3 | B3 Only |
| Design Vehicle Gap+Adj for Approach Grade>3 | %(+Adjs for Ad | Id'I Lanes & Median for B3) |
| Passenger Car | 13.0 | 13.5 |
| Single-Unit Tuck | 17.6 | 18.3 |
| Combination Truck | 19.6 | 20.3 |
| Combination fracti | .0.0 | 20.0 |

| | ISD to left (B2/B3 |) & right (B3) | along Major RdISD= | $1.47V_{major}t_{a}$ (ft |) Eq 9-1, p 9-37 |
|--|--------------------|----------------|--------------------|--------------------------|------------------|
|--|--------------------|----------------|--------------------|--------------------------|------------------|

| | | | | ISD to right |
|-------------------|------------|------|-----------|--------------|
| | | | (B2 & B3) | (B3 Only) |
| Passenger Car | calculated | ISD= | 860.0 | 893.0 |
| | design | ISD= | 860 | 895 |
| Single-Unit Tuck | calculated | ISD= | 1164.2 | 1210.5 |
| Ç | design | ISD= | 1165 | 1215 |
| Combination Truck | calculated | ISD= | 1296.5 | 1342.8 |
| | design | ISD= | 1300 | 1345 |

^{*}Number of major road lanes is irrelevant in Case B2.

The differences between Case B1 and Cases B2 & B3 are reduced time gaps and time gap adjustment for the minor approach upgrade. §9.5.3, p 9-43



Smoke Tree

Sight Distance Analysis

Location: Smoke Tree Access B & Lincoln Dr

Intersection Sight Distances (cont'd)

| section signi Distances (cont u) | | | | | AASHTO Ref |
|---|---------------|---------------------|--------------------------------|-----------------------|-----------------|
| Case F—Left Turns from the Major Ro | ad | | | | §9.5.3, p 9-51 |
| Design Vehicle | | | Time C | Sap (t _g) | |
| Passenger Car | | | 5.5 | sec | bl 9-13, p 9-51 |
| Single-Unit Tuck | | | 6.5 | sec | bl 9-13, p 9-51 |
| Combination Truck | | | 7.5 | sec | bl 9-13, p 9-51 |
| Time gap adjustments Add'l lanes to cross (1 assu | ımed) | | | | |
| Passenger Car | , | | 0.5 | sec | See Notes to |
| Trucks | | | 0.7 | sec | bl 9-13, p 9-51 |
| Site data | | | | | |
| Opposing Lanes (adj'd for x-v | wide median) | | 13.0 | | |
| Time Gap based on site data Design Vehicle Gap+Adj for A | Add'l Opposii | na Lane | s | | |
| Passenger Car | | Ü | 12.0 | sec | |
| Single-Unit Tuck | | | 15.6 | sec | |
| Combination Truck | | | 16.6 | sec | |
| ISD to front along Major Road | ISD= | :1.47V _m | _{ajor} t _g | (ft) | Eq 9-1, p 9-37 |
| Passenger Car | calculated | ISD= | 793.8 | ft | |
| - | design | ISD= | 795 | ft | |
| Single-Unit Tuck | calculated | ISD= | 1031.9 | ft | |
| | design | ISD= | 1035 | ft | |
| Combination Truck | calculated | ISD= | 1098.1 | ft | |

The differences between Case F and Cases B1, B2 & B3 are reduced time gaps and no time gap adjustment for any minor approach upgrade. §9.5.3, p 9-43

design ISD=

1100 ft

SIGHT DISTANCE SUMMARY

| | Governing | | | Combo |
|-------------------------------|-----------|-----|----------|-------|
| Sight Distance Type | Case | Car | SU Truck | Truck |
| Stopping | | | | |
| Without effect of grade | | 360 | N/A | N/A |
| With effect of grade on left | | 360 | N/A | N/A |
| With effect of grade on right | | 360 | N/A | N/A |
| Intersection | | | | |
| To Right | B1 | 930 | 1235 | 1365 |
| To Left | B2/B3 | 860 | 1165 | 1300 |
| On Major Road | F | 795 | 1035 | 1100 |



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Smoke Tree Resort

Sight Distance Analysis

Location: Quail Run Road

| Assumptions and/or Givens | | | |
|---|--------------------|-----------------------------------|------------------------|
| Elements of Design from AASHTO | 6th | Edition | AASHTO Ref |
| Driver Eye Height | | 0.50.6 | 00 0 0 - 0 44 |
| Passenger Vehicle | | 3.50 ft | §3.2.6, p 3-14 |
| Truck | | 7.60 ft | §3.2.6, p 3-14 |
| Object Height | | | |
| Stopping Sight Distance | | 2.00 ft | §3.2.6, p 3-14 |
| Passing Sight Distance | | 3.50 ft | §3.2.6, p 3-14 |
| Vehicle Height | | 4.25 ft | §3.2.6, p 3-14 |
| Driver Eye Location | | | |
| From Edge of Major Rd Trave | eled Way | 14.50 ft | 9.5.3, B1 |
| Deceleration Rate (a) | | | |
| Passenger Vehicle | | 11.20 ft/sec ² | §3.2.2, p 3-3 |
| Truck | | N/A ft | |
| Brake reaction time (t) | | 2.50 sec | §3.2.2, p 3-4 |
| Site Specific Data (Bike & turn lanes a | re outside travel | ed way and are no | ot considered) |
| Major Street Design Speed (V _{major}) | 1 | 30 MPH | |
| Grades - Approaching Minor Stree | t from: (- = appro | aching downhill) | |
| Left (G _L) | | % | |
| Right (G _R) | | % | |
| Approach Grade Adjustment | Factor Lef | t 1.0 | Tbl 9-4, p 9-35 |
| | Righ | | |
| Major Road Through Lanes on Ea | | | 1 for RI/RO[/LI] only) |
| Median Width (in "Lane Equivalent | | | for RI/RO[/LI] only) |
| Minor Road Approach Upgrade, if | | % | |
| Minor Road Access (check restrict | | | |
| | LI | LO/Th R | 3 |
| Stopping Sight Distance = Brake Reaction I | Distance + Brakir | ng Distance | |
| Neglecting Effect of Grade | d=1.47Vt+1.075 | | Eq 3-2, p 3-4 |
| · | d=1.47Vt+1.07 | a | |
| | Calculated d= | = 196.7 ft | |
| | Design de | | |
| | Design u- | 200 11 | |
| With Effect of Grade | 1 4 477 % | V^2 | Eq 3-3, p 3-5 |
| <u></u> | d=1.4/Vt+ | V ² (<u>a</u>)±G) | |
| | 30(| (32.2)±G) | |
| | Calculated d | = 196.3 ft - left | • |
| | 50.00.000 | 200 ft - rigi | |
| | Design d= | | |
| | g u | 200 ft - rigi | |
| CCDIs de not consider desire for track | | la addica a cola libilità a l'a | |
| SSD's do not consider design for truck considered to offset longer braking dista | | better visibility is | 83 2 2 r 2 E |
| considered to onset longer braking dista | IICC. | | §3.2.2, p 3-6 |

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Location: Quail Run Road

Intersection Sight Distances

| tion Signt Distances | | | | |
|---|--------------|--------------------|--|-----------------|
| | | | | AASHTO Ref |
| ase B—Intersections with Stop Contr | ol on the Mi | nor Ro | ad | §9.5.3, p 9-36 |
| Case B1-Left Turn from the Minor | Road | | | §9.5.3, p 9-36 |
| Design Vehicle | | | Time Gap (t | (a) |
| Passenger Car | | | 7.5 sec | Tbl 9-5, p 9-37 |
| Single-Unit Tuck | | | 9.5 sec | Tbl 9-5, p 9-37 |
| Combination Truck | | | 11.5 sec | Tbl 9-5, p 9-37 |
| Time gap adjustments | | | | |
| Add'l lanes to cross (1st is as | ssumed) | | | |
| Passenger Car | , | | 0.5 sec | See Notes |
| Trucks | | | 0.7 sec | below |
| Minor Approach Upgrade (F | Per each 1% | >3%) | 0.2 sec | Tbl 9-5, p 9-37 |
| Site data | | | | |
| Major Road Lanes on Left Ap | proach | | 1.0 | §9.5.3, p 9-37 |
| Minor Road Approach Upgrad | | | 0 % | §9.5.3, p 9-37 |
| Time Gap based on site data Design Vehicle Gap+Adj for A Passenger Car Single-Unit Tuck Combination Truck | Approach Gra | ade>3% | 6+Adjs for Add'l 7.5 sec 9.5 sec 11.5 sec | Lanes & Median |
| ISD to left & right along Major Ro | ad ISD= | 1.47V _n | _{najor} t _g (ft) | Eq 9-1, p 9-37 |
| | | 1 | SD to Left | |
| | | | and Right | |
| Passenger Car | calculated | | 330.8 ft | |
| 3 | design | ISD= | 335 ft | |
| Single-Unit Tuck | calculated | ISD= | 419.0 ft | |
| - | design | ISD= | 420 ft | |
| Combination Truck | calculated | ISD= | 507.2 ft | |
| | design | ISD= | 510 ft | |



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Sight Distance Analysis

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Smoke Tree Resort Sight Distance Analysis Location: Quail Run Road

Intersection Sight Distances (cont'd)

Trucks

AASHTO Ref Case B2—Right Turn from the Minor Road §9.5.3, p 9-40 Case B3-Crossing Maneuver from the Minor Road §9.5.3, p 9-43

Design Vehicle Time Gap (t_o) Passenger Car 6.5 sec Tbl 9-7, p 9-40 Single-Unit Tuck 8.5 sec Tbl 9-7, p 9-40 Combination Truck 10.5 sec Tbl 9-7, p 9-40 Time gap adjustments - Case B-3 Only* Add'l lanes to cross (1st is assumed) Passenger Car 0.5 sec See Notes

Minor Approach Upgrade (Per each 1%>3%) 0.1 sec Tbl 9-7, p 9-40 Site data Major Road Lanes on Left Approach 1.0 §9.5.3, p 9-40 Minor Road Approach Upgrade, if >3% 0 % §9.5.3, p 9-40

0.7 sec

below

B2 & B3 B3 Only Time Gap based on site data (sec) Design Vehicle Gap+Adj for Approach Grade>3%(+Adjs for Add'l Lanes & Median for B3) Passenger Car 6.5 6.5 Single-Unit Tuck 8.5 Combination Truck 10.5 10.5

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V_{major}t_g (ft) Eq 9-1, p 9-37

| | | | ISD to Left | ISD to right |
|-------------------|------------|------|-------------|--------------|
| | | | (B2 & B3) | (B3 Only) |
| Passenger Car | calculated | ISD= | 286.7 | 286.7 |
| | design | ISD= | 290 | 290 |
| Single-Unit Tuck | calculated | ISD= | 374.9 | 374.9 |
| | design | ISD= | 375 | 375 |
| Combination Truck | calculated | ISD= | 463.1 | 463.1 |
| | design | ISD= | 465 | 465 |

*Number of major road lanes is irrelevant in Case B2.

The differences between Case B1 and Cases B2 & B3 are reduced time gaps and time gap adjustment for the minor approach upgrade. §9.5.3, p 9-43



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Smoke Tree Resort Sight Distance Analysis Location: Quail Run Road

Intersection Sight Distances (cont'd)

AASHTO Ref Case F-Left Turns from the Major Road §9.5.3, p 9-51

| Design Vehicle | | | Time C | Sap (t _g) | | |
|---|----------------------|-------------------------|----------------|-----------------------|---------|----------|
| Passenger Car | | | 5.5 | sec | bl 9-13 | , p 9-51 |
| Single-Unit Tuck | | | 6.5 | sec | bl 9-13 | , p 9-51 |
| Combination Truck | | | 7.5 | sec | bl 9-13 | , p 9-51 |
| Time gap adjustments Add'l lanes to cross (1 assu | ımed) | | | | | |
| Passenger Car | | | 0.5 | sec | See I | Notes to |
| Trucks | | | 0.7 | sec | bl 9-13 | , p 9-51 |
| Site data | | | | | | |
| Opposing Lanes (adj'd for x-v | vide median) | | 0.0 | | | |
| Time Gap based on site data Design Vehicle Gap+Adj for A | Add'l Opposin | ng Lanes | | | | |
| Passenger Car | | | 5.5 | sec | | |
| Single-Unit Tuck | | | 6.5 | sec | | |
| Combination Truck | | | 7.5 | sec | | |
| ISD to front along Major Road | ISD= | :1.47V _{major} | t _a | (ft) | Eq 9-1 | , p 9-37 |
| Passenger Car | calculated | ISD= | 242.6 | ft | | |
| | design | ISD= | 245 | ft | | |
| Single-Unit Tuck | calculated | ISD= | 286.7 | ft | | |
| | design | ISD= | 290 | ft | | |
| Combination Truck | calculated design | | 330.8 335 | | | |
| | | | | | | |

The differences between Case F and Cases B1, B2 & B3 are reduced time gaps and no time gap adjustment for any minor approach upgrade. §9.5.3, p 9-43

SIGHT DISTANCE SUMMARY

| Sight Distance Type | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|-------------------|-----|----------|----------------|
| Stopping | | | | |
| Without effect of grade | | 200 | N/A | N/A |
| With effect of grade on left | | 200 | N/A | N/A |
| With effect of grade on right | | 200 | N/A | N/A |
| Intersection | | | | |
| To Right | B1 | 335 | 420 | 510 |
| To Left | B2/B3 | 290 | 375 | 465 |
| On Major Road | F | 245 | 290 | 335 |



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