

# Black Mountain Village

Traffic Impact Analysis

West of Black Mountain Boulevard  
North of Mayo Boulevard  
In Phoenix, Arizona

October 2022  
Project No. 22-1270

Prepared For:  
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Phoenix, Arizona 85024

For Submittal to:  
**City of Phoenix**

Prepared By:



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# BLACK MOUNTAIN VILLAGE TRAFFIC IMPACT STUDY

## SWC of Black Mountain Boulevard and Deer Valley Road in Phoenix, Arizona

**Prepared for:**

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Phoenix, Arizona 85024

**For Submittal to:**

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**October 2022**

CivTech Project No. 22-1270

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## EXECUTIVE SUMMARY

The Black Mountain Village proposes to rezone approximately 16-acres of undeveloped land from existing R-2 (residential) to C-2 (commercial) to consists of approximately 76,200 square feet (SF) of grocery supermarket, 41,500-SF of various commercial shops each under 40,000 SF, and 19,700-SF of fast-food restaurants with drive through window. The proposed developed is located on the southwest corner of Black Mountain Boulevard and Deer Valley Drive in the City of Phoenix, Arizona. The site is planned to provide a total of eight (8) access points, of which five (5) are planned for full movement access and the remaining three (3) are proposed restricted right-in/right-out driveways. The vicinity of the site is provided in **Figure 1**.

CivTech, Inc. has been retained by Vestar to perform the traffic impact study (TIS) for the proposed development. 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 and recommendations have been documented in this study:

### GENERAL

- The proposed development is anticipated to generate 10,660 weekday new daily trips, 729 new trips during the AM peak hour, and 723 new trips during the PM peak hour.

### EXISTING

- The results of the existing conditions analysis indicate that all study intersections operate with acceptable levels of service (LOS D or better) with the exception of the northbound approach at the intersection of **Black Mountain Boulevard & Deer Valley Drive** and the northbound and southbound left at the intersection of **Aviano Way & Deer Valley Drive**.
- The intersection of **Black Mountain Boulevard and Deer Valley Road** overall intersection is operating with acceptable levels of service (LOS D) during all three peak hours. However, the northbound approach is experiencing some delays during the AM and School PM peak hour. The northbound approach delays are 60.0 sec/veh and 81.4 sec/veh during the AM and School PM peak hour, respectively. It is expected that with signal timing adjustments by allocating more time to the northbound left movement will improve the delays and levels of service of the northbound approach.
- The intersection of **Aviano Way and Deer Valley Drive** is experiencing some delays in the northbound left and southbound left approaches during both AM and PM peak hour due to the number of vehicles anticipated to make the left out onto the arterial roadway. During the AM peak hour, the northbound and southbound left delays are 146.8 sec/veh and 87.1 sec/veh, respectively. During the PM peak hour, the northbound and southbound left delays are 48.0 sec/veh and 44.1 sec/veh, respectively. Side street delays along a major road during the peak hour are not uncommon. Delays are typically due to the number through volumes which does not allow enough gaps for side street traffic to turn onto the major road.

### 2024 OPENING YEAR

- The intersection of **34<sup>th</sup> Street & Deer Valley Drive** is expected to operate with a delay in the northbound left during the School PM peak hour. The delay is due to not enough gaps from downstream signal to allow vehicles enough time to clear the intersection. Mitigation of 2-vehicles storage for the northbound approach was applied at the intersection. In addition, signal timing adjustment to the intersection of 32<sup>nd</sup> Street & Deer Valley Drive was implemented for the intersection to function as an actuated-coordinated along the east-west approaches. With the mitigation of the signalized intersection, the School PM peak hour northbound left approach improved from a LOS F to a LOS D.
- The intersection of **Aviano Way & Deer Valley Drive** is experiencing some delays in the northbound left and southbound left movements during the AM, PM, and School PM peak hour without and with the Project. Side street delays along a major arterial roadway during the peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.
- The intersection of **Black Mountain Boulevard & Access G** is experiencing a delay of LOS F in the eastbound left approach during the AM, PM, and School PM peak hour. The delays are due to not enough gaps from downstream signal to allow vehicles enough time to clear the intersection. Mitigation signal timing adjustment to the intersection of Black Mountain Boulevard & Mayo Boulevard was implemented for the intersection to function as an actuated-coordinated along the east-west approaches. With the mitigation of the signalized intersection, the AM peak hour eastbound left approach improved to a delay of LOS C, the PM peak hour eastbound left approach improved to a delay of LOS B, and the School PM peak hour eastbound left approach improved to a delay of LOS C.

### 2029 OPENING YEAR

- The intersection of **34<sup>th</sup> Street & Deer Valley Drive** is expected to operate with a delay of 35.6 sec/veh (LOS E) in the northbound left during the School PM peak hour. The delay is less than one second greater than LOS D. Side street delays along a major arterial roadway during the peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.
- The intersection of **Black Mountain Boulevard & Deer Valley Drive** is operating with some delays in the eastbound during the AM and PM peak hour and delay in the westbound approach during the School PM peak hour. The eastbound approach is experiencing a delay of LOS E during the AM, PM, and peak hour. The westbound approach is anticipated to experience a delay of LOS E during the School PM peak hour. Signal timing adjustments were made to provide additional initial green time to the eastbound left phase during the AM and PM peak hour to improve the delay to LOS D. Signal timing adjustments were made to provide additional initial green time to the westbound left phase during the School PM peak hour improving the delay to LOS D.
- The intersection of **Black Mountain Boulevard & Mayo Boulevard** is experiencing a delay of LOS E the southbound approach during the AM peak hour. Signal timing adjustments of

allocating an additional green time to the southbound approach was made to improve the southbound approach delay to LOS D.

- The intersection of **Aviano Way & Deer Valley Drive** is experiencing some delays in the northbound left and southbound left movements during all three peak hours without and with the Project. Side street delays along a major arterial roadway during on street peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.

#### QUEUE STORAGE

- The recommended storage lengths are provided for study horizon year 2029 using the total traffic projections.

#### SIGHT DISTANCE

- Sight visibility should be provided at all driveways according to the distances calculated and that sight triangles at public intersections are maintained according to Section 31-13 of the City Code. All vegetation and trees should be maintained according to City of Phoenix regulations.

DRAFT

## INTRODUCTION

The Black Mountain Village proposes to rezone approximately 16-acres of undeveloped land from existing R-2 (residential) to C-2 (commercial) to consists of approximately 76,200 square feet (SF) of grocery supermarket, 41,500-SF of various commercial shops each under 40,000 SF, and 19,700-SF of fast-food restaurants with drive through window. The proposed developed is located on the southwest corner of Black Mountain Boulevard and Deer Valley Drive in the City of Phoenix, Arizona. The site is planned to provide a total of eight (8) access points, of which five (5) are planned for full movement access and the remaining three (3) are proposed restricted right-in/right-out driveways. The vicinity of the site is provided in **Figure 1**.

CivTech, Inc. has been retained by Vestar to perform the traffic impact study (TIS) for the proposed development. The purpose of this assessment is to address the traffic and transportation impacts of the proposed development on the surrounding streets and intersections.

## STUDY REQUIREMENTS

This study analyzes the traffic impact due to the proposed complex on the surrounding street network. The study has been prepared in conformance with the *City of Phoenix Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies*, December 2009. 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, to mitigate the additional site-generated traffic; and,
- Evaluate the internal site circulation and provide recommendations if necessary.

## STUDY AREA

The study area has been defined as including the following intersections:

- 34<sup>th</sup> Street & Deer Valley Drive
- HS Bus Entrance & Mayo Boulevard
- HS Eastern Driveway and Mayo Boulevard
- Black Mountain Boulevard & Deer Valley Drive
- Black Mountain Boulevard & Roundabout
- 36<sup>th</sup> Run & Deer Valley Drive
- 34<sup>th</sup> Street & Mayo Boulevard
- HS Bus Exit & Mayo Boulevard
- Black Mountain Boulevard & Bryce Lane
- Black Mountain Boulevard & Mayo Boulevard
- 36<sup>th</sup> Way & Deer Valley Drive
- Lone Cactus Drive & Mayo Boulevard

## HORIZON YEARS

This study has been conducted to conform to *Street Planning and Design Guidelines, Section 12.1.2 Traffic Impact Studies*, prepared by the City of Phoenix Street Transportation Department in December



2009. The proposed development is anticipated to generate more than 1,000 trips during the highest peak hour. Therefore, the City of Phoenix requires the TIS for this development to evaluate the build-out year and 5 years after build-out. It is assumed that the complex will open during 2024.

The study intersections and the site accesses will be analyzed for the AM and PM peak hours to determine the recommended intersection lane configuration, intersection stop control, turn lane storage requirements, and roadway typical sections for the development.

DRAFT



**Figure 1: Vicinity Map**

## EXISTING CONDITIONS

### LAND USE

The existing land is currently a vacant undeveloped land.

### SURROUNDING LAND USE

Directly surrounding the site are residential homes, Pinnacle High School, Fireside Elementary School, and vacant land. North of the site are residential homes. South of the site is the Pinnacle High School. East of the site are residential homes and the Fireside Elementary School. West of the site are undeveloped vacant land.

### ROADWAY NETWORK

The existing roadway network within the study area includes 32<sup>nd</sup> Street, 34<sup>th</sup> Street, Black Mountain Parkway, Lone Cactus Drive, Aviano Way, 40<sup>th</sup> Street, Deer Valley Drive, Mayo Boulevard, Rough Rider Road, and Bryce Lane. The roadway classifications were obtained from the 2014 City of Phoenix Street Classification Map.

**32<sup>nd</sup> Street** is a north-south two (2) lane minor collector road with one (1) lane and a bike lane in each direction of travel with an 18-foot raised median north of the site and one (1) lane in each travel direction south of the site. Within the vicinity of the site, 32<sup>nd</sup> Street begins at Sky Crossing Way extending south to converging into a parking lot approximately 2,000-feet south of Deer Valley Drive. There is no posted speed limit shown within the vicinity of the site.

**34<sup>th</sup> Street** is a north-south two (2) lane local street with one lane of travel northbound and one (1) lane of travel southbound. 34<sup>th</sup> Street is a series of roadway segments with the northernmost segment beginning at Glory Road in Cave Creek and the southernmost segment terminating at Corona Ave in Phoenix. 34<sup>th</sup> Street has on-street parking but is prohibited on school days between 7 AM to 4 PM. There is no posted speed limit within the vicinity of the site.

**Black Mountain Boulevard** is a north-south six (6) lane major arterial street with three (3) lanes and a bike lane in each travel direction and a 24-foot center raised median starting approximately 500-feet south of Deer Valley Drive and continue north. Approximately 500-feet south of Deer Valley Drive, Black Mountain Parkway consists of five (5) through lanes with three (3) lanes of travel northbound, two (2) lanes of travel southbound, a bike lane in each direction of travel, and a 22-foot raised median. The roadway becomes a four (4) lane street with two (2) lanes of travel in each direction south of the Pinnacle High School driveway. North of Deer Valley Drive, Black Mountain Parkway becomes a two (2) lane street with one (1) lane of travel in each direction. The roadway begins to the north at Pinnacle Peak Road and terminates to the south by merging into the SR-51. The posted speed limit is 40 miles per hour (mph) within the vicinity of the site.

**Lone Cactus Drive** is an east-west two (2) lane minor collector road with one (1) lane of travel eastbound, one (1) lane of travel westbound, and a bike lane in each direction of travel. The roadway begins to the east at Mayo Boulevard and terminates to the west at 40<sup>th</sup> Street. The posted speed limit is 35 mph within the vicinity of the site.

**Aviano Way** is a north-south two (2) lane collector road north of Deer Valley Drive with one (1) lane and a bike lane in each direction of travel with a 30-foot raised median and south of the site is a minor collector road with one (1) lane in each direction of travel. The roadway begins to the north at Rough Rider Road and terminates to the south at Lone Cactus Drive. The posted speed limit is 25 mph within the vicinity of the site.

**40<sup>th</sup> Street** is a north-south four (4) lane arterial road with two (2) lanes and a bike lane in each direction of travel with a 16-foot raised median north of Mayo Boulevard and south of Mayo Boulevard, 40<sup>th</sup> Street is one (1) lane in each direction of travel. 40<sup>th</sup> Street begins to the north at Pinnacle Peak Road extending south to cul-de-sac south of Potter Drive. The speed limit is 40 mph within the vicinity of the site.

**Deer Valley Drive** is an east-west six (6) lane major arterial road with three (3) lanes of travel eastbound, three (3) lanes of travel westbound, a bike lane in each direction of travel, and a 13-foot raised median in between. Deer Valley Drive is a series of roadway segments with the westernmost segment beginning approximately a mile west of 225<sup>th</sup> Ave and the easternmost segment terminating at 81<sup>st</sup> Street. The posted speed limit is 40 mph within the vicinity of the site.

**Mayo Boulevard** is a northwest-southeast arterial roadway. East of Black Mountain Boulevard, Mayo Boulevard is a four (4) lane road with two (2) lanes and a bike lane in each travel direction and a 15-foot raised median. West of Black Mountain Boulevard, Mayo Boulevard is a three (3) lane road with one (1) lane in the northwest approach and two (2) lanes in the southeast approach. Within the vicinity of the site, Mayo Road begins at 34<sup>th</sup> Street extending southeast to terminate at 40<sup>th</sup> Street. The posted speed limit is 40 mph within the vicinity of the site.

**Rough Rider Road** is an east-west two (2) lane minor collector road with one (1) lane and a bike lane in each direction of travel with a 16-foot raised median. Rough Rider Road begins to the east at 40<sup>th</sup> Street extending west to terminate at Deer Valley Drive. The posted speed limit is 30 mph within the vicinity of the site.

**Bryce Lane** is an east-west two (2) lane local roadway with one (1) lane of travel eastbound, one (1) lane of travel westbound, a bike lane in each direction of travel, and a 13-foot raised median in between. To the east of Black Mountain Boulevard, there is no bike lane. The roadway begins to the east on Sky Crossing Way at a roundabout and terminates to the west at 36<sup>th</sup> Street. There is no posted speed limit within the vicinity of the site.

## INTERSECTION CONFIGURATION

The intersection of **32<sup>nd</sup> Street and Deer Valley Drive** operates as a signalized intersection with permitted-protected left-turn phasing in all approaches and flashing yellow in the eastbound and westbound approaches. The northbound approach consists of an exclusive left-turn lane, one (1) shared through/right-turn lane, and a bike lane. The southbound approach consists of an exclusive left-turn lane, one (1) through lane, a bike lane, and an exclusive right-turn lane. The eastbound and westbound approaches consist of an exclusive left-turn lane, two (2) through lanes, one (1) shared through/right-turn lane, and a bike lane. A designated crosswalk is provided at each leg of the intersection.

The intersection of **34<sup>th</sup> Street and Deer Valley Drive** operates as a “T” intersection with stop control in the northbound approach. The northbound approach consists of a right-turn lane and an on-street parking lane. The eastbound consists of two (2) through lanes, one shared through/right-turn lane, and a bike lane. The westbound approach consists of an exclusive left-turn lane, three (3) through lanes, and a bike lane.

The intersection of **34<sup>th</sup> Street and Mayo Boulevard** operates as a four-legged intersection with stop control in all approaches. The south leg of the intersection only allows the Pinnacle Peak High School staff and visitor parking prohibiting any student drop off. The west leg of the intersection operates as an exit only driveway. The northbound approach consists of a shared through/right lane. The southbound approach consists of a shared left/through lane and an on-street parking lane. The eastbound consists of a shared left/through/right-turn lane. The westbound approach consists of a shared left/right-turn lane.

The intersection of **Pinnacle Peak HS Bus Entrance and Mayo Boulevard** operates as a “T” intersection with no stop control in any approaches. The south leg is a receiving lane for the high school bus only. The eastbound approach consists of one (1) through lane, a shared through/right-turn lane, and an on-street parking lane. The westbound approach consists of a shared left/through lane.

The intersection of **Pinnacle Peak HS Bus Exit and Mayo Boulevard** operates as a “T” intersection with stop control in the northbound approach. The south leg of the intersection operates as an exit only driveway. The northbound approach consists of a shared left/right-turn lane. The eastbound approach consists of two (2) through lanes and an on-street parking lane. The westbound approach consists of one (1) through lane.

The intersection of **Pinnacle Peak HS Eastern Driveway and Mayo Boulevard** operates as a “T” intersection with stop control in the northbound approach. The northbound approach consists of a shared left/right-turn lane. The eastbound approach consists of one (1) through lane and a shared through/right-turn lane. The westbound approach consists of a shared left/through lane.

The intersection of **Black Mountain Road and Rough Rider Road** operates as a four-legged intersection with stop control in the eastbound and westbound approaches. The northbound approach consists of an exclusive left-turn lane, a traffic carrot, two (2) through lanes, a bike lane, a 10-foot carrot, and an exclusive right-turn lane. The southbound approach consists of an exclusive left-turn lane, a 19-foot carrot, two (2) through lanes, a shared through/right-turn lane, and a bike lane. The eastbound and westbound approaches consist of an exclusive left-turn lane, a shared through/right-turn lane, and a bike lane.

The intersection of **Black Mountain Boulevard and Bryce Lane** operates as a four-legged intersection with stop control in the eastbound and westbound approaches. The northbound and southbound approaches consist of an exclusive left-turn lane, two (2) through lanes, a shared through/right-turn lane, and a bike lane. The eastbound approach consists of a shared left/through/right-turn lane and a bike lane. The westbound approach consists of a shared left/through/right-turn lane.

The intersection of **Black Mountain Boulevard and Deer Valley Drive** operates as a signalized intersection with protected left-turn phasing in all approaches and channelized yield right-turn lane in the northbound and eastbound approaches. The northbound and eastbound approaches consist of dual left-turn lanes, three (3) through lanes, a bike lane, and a channelized right-turn lane. The southbound and westbound approaches consist of dual left-turn lanes, two (2) through lanes, a shared through/right-turn lane, and a bike lane. A designated crosswalk is provided at each leg of the intersection.

The intersection of **Black Mountain Boulevard and Mayo Boulevard** operates as signalized intersection with permitted/protected left-turn phasing in all approaches and channelized yield right-turn lane in the northbound approach. The northbound approach consists of an exclusive left-turn lane, three (3) through lanes, a bike lane, and a dedicated right-turn lane. The southbound approach consists of an exclusive left-turn lane, two (2) through lanes, a bike lane, and an exclusive right-turn lane. The eastbound approach consists of an exclusive left-turn lane and a shared through/right-turn lane. The westbound approach consists of an exclusive left-turn lane, one (1) through lane, a 16-foot carot, and an exclusive right-turn lane. A designated crosswalk is provided at each leg of the intersection.

The intersection of **Black Mountain Boulevard and HS North Driveway** operates as a restricted right-in/right-out “T” intersection with stop control in the eastbound approach. The northbound approach consists of three (3) through lanes and a bike lane. The southbound approach consists of two (2) through lanes, a bike lane, and a dedicated right-turn lane. The eastbound approach consists of a right-turn lane.

The intersection of **Black Mountain Boulevard and Roundabout** operates as a “T” intersection with yield control in all approaches. The northbound approach consists of a shared left/through lane and one (1) through lane. The southbound approach consists of one (1) through lane and a shared through/right-turn lane. The eastbound approach consists of a shared left/right-turn lane.

The intersection of **Lone Cactus Drive and Mayo Boulevard** operates as a four-legged intersection with stop control in the northbound and southbound approaches. The northbound and southbound approach consist of a shared left/through/right-turn lane. The eastbound and westbound consist of an exclusive left-turn lane, one (1) through lane, a shared through/right-turn lane, and a bike lane. A designated crosswalk is provided at the north, east, and west legs of the intersection.

The intersection of **Aviano Way and Deer Valley Drive** operates as a four-legged intersection with stop control in the northbound and southbound approaches. The northbound and southbound approaches consist of an exclusive left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches consist of an exclusive left-turn lane, two (2) through lanes, a shared through/right-turn lane, and a bike lane. A designated crosswalk is provided at all legs of the intersection.

The intersection of **40<sup>th</sup> Street and Mayo Boulevard** operates as a “T” intersection with stop control in the eastbound approach. The northbound approach consists of an exclusive left-turn lane, a 29-foot carot, and one (1) through lane. The southbound approach consists of one (1) through lane, a bike lane, and an exclusive right-turn lane. The eastbound approach consists of an exclusive left-turn lane,

an 8-foot carot, a bike lane, and an exclusive right-turn lane. A designated crosswalk is provided at all legs of the intersection.

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

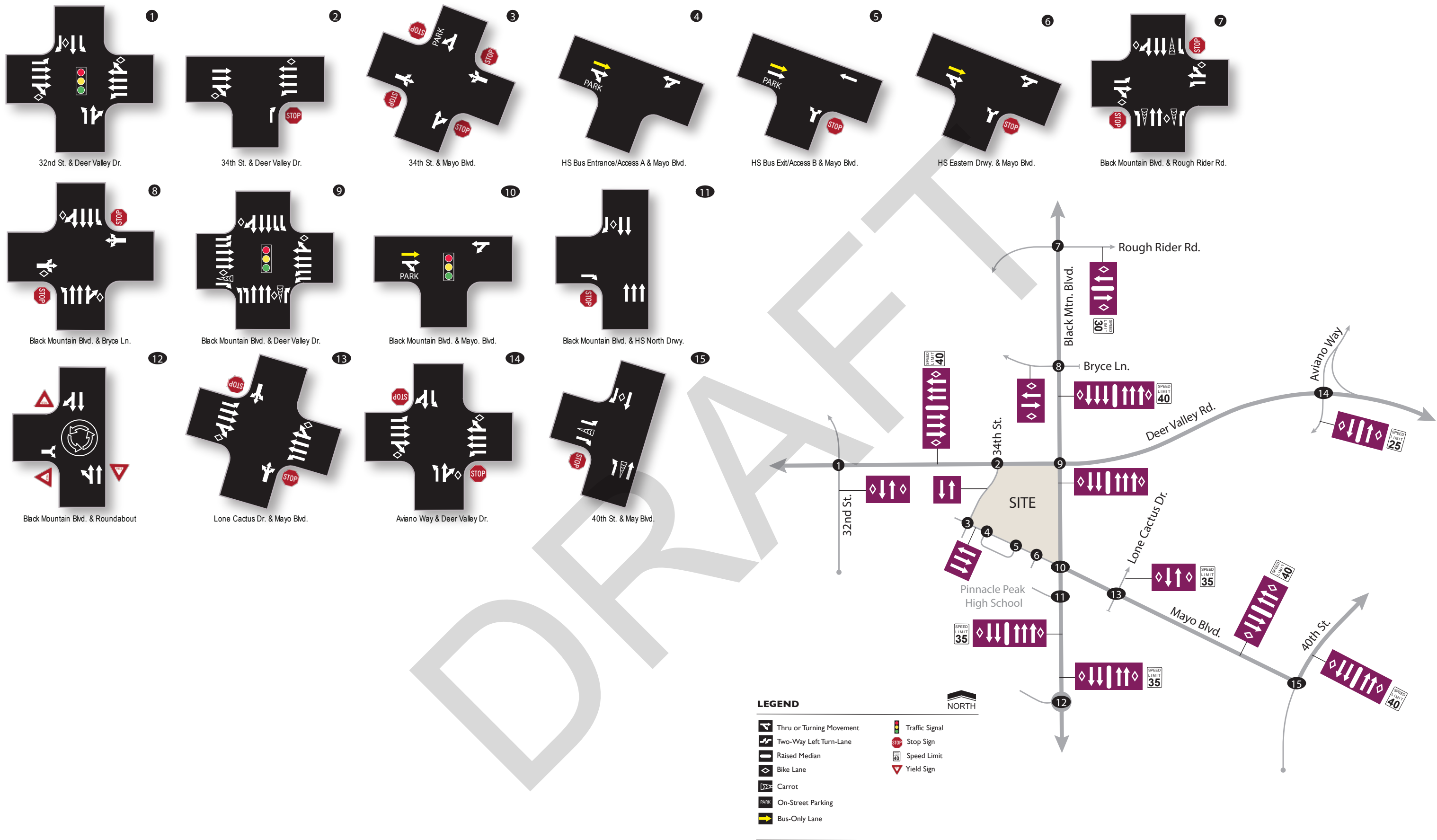
## TRAFFIC VOLUMES

CivTech engaged Field Data Services of Arizona, Inc. to record traffic volumes at fifteen (15) study intersections within the project vicinity. Peak hour volume turning movement counts were performed from 7:00-9:00 AM and 2:00-6:00 PM on Tuesday, August 16, 2022 to account for the school traffic. Peak hour turning movement counts were conducted at the following study intersections:

- 32<sup>nd</sup> St. & Deer Valley Dr.
- 34<sup>th</sup> St. & Mayo Blvd.
- HS Bus Exit & Mayo Blvd.
- Black Mountain Blvd. & Rough Rider Rd.
- Black Mountain Blvd. & Deer Valley Dr.
- Black Mountain Blvd. & HS Parking Drwy.
- Lone Cactus Dr. & Mayo Blvd.
- 40<sup>th</sup> Street and Mayo Boulevard
- 34<sup>th</sup> Street & Deer Valley Drive
- HS Bus Entrance & Mayo Boulevard
- HS Eastern Driveway and Mayo Boulevard
- Black Mountain Boulevard & Bryce Lane
- Black Mountain Boulevard & Mayo Boulevard
- Black Mountain Boulevard & Roundabout
- Aviano Way and Deer Valley Road

Due to the close vicinity of the Pinnacle High School, this TIA will also analyze the school peak hour. Based on the counts collected, the peak hour being analyzed will be typical AM peak hour, PM peak hour from 3:15-4:15 PM, and school peak hour from 2:00-3:00 PM at all study intersections.

The existing traffic volumes observed for this study are presented in **Figure 3** for the weekday AM, PM, and School PM peak hours. Traffic volume data obtained for this study have been included in **Appendix B**.



**Figure 2: Existing Lane Configurations and Traffic Controls**



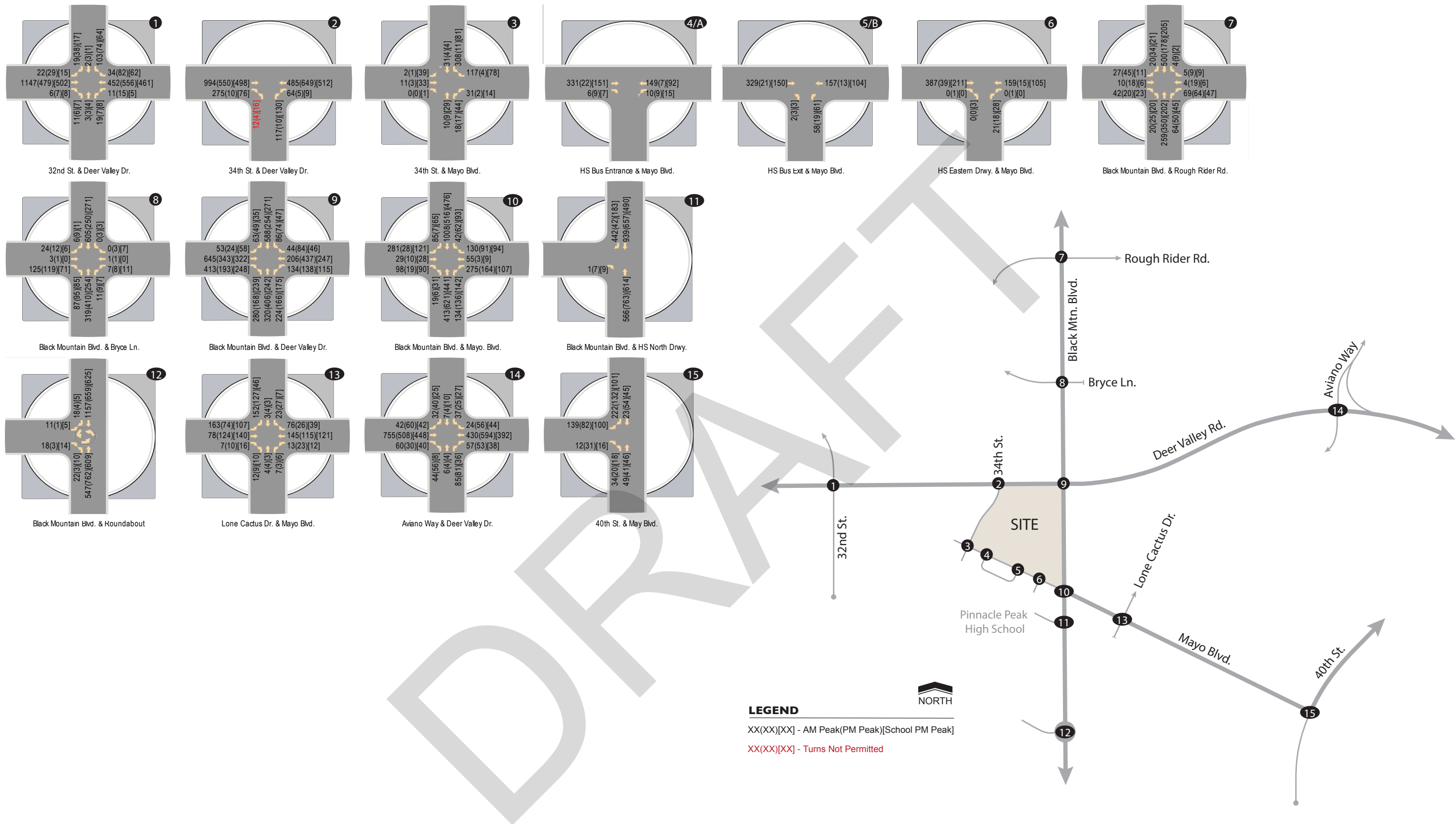


Figure 3: Existing Traffic Volumes

## 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)*, Updated 2016, *Special Report 209*, and using Synchro software, version 11.0 under the HCM 6<sup>th</sup> edition (2016) 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 within ranges of average control delay per vehicle, the number of seconds a vehicle can expect to wait due to the presence of a traffic control device. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

**Table 1 – Level of Service Criteria for Controlled Intersections**

| Level-of-Service | Signalized Control Delay (sec/veh) | Unsignalized Control Delay (sec/veh) |
|------------------|------------------------------------|--------------------------------------|
| A                | ≤ 10                               | ≤ 10                                 |
| B                | > 10-20                            | > 10-15                              |
| C                | > 20-35                            | > 15-25                              |
| D                | > 35-55                            | > 25-35                              |
| E                | > 55-80                            | > 35-50                              |
| F                | > 80 (or v/c > 1)                  | > 50 (or v/c > 1)                    |

*Source: Exhibits 19-8, 20-2, 21-8, and 22-8, Highway Capacity Manual, 6<sup>th</sup> Edition (2016)*

Synchro 11.0 software calculates the LOS per the HCM 6<sup>th</sup> edition (2016) methodology. The 6<sup>th</sup> 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. 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**.

Existing signal timing at the signalized intersections were provided by the City of Phoenix Traffic Engineer. Per the City's requirements, existing peak hour factor were based on existing counts based on the intersection peak hour being analyzed.

**Table 2 – Existing Peak Hour Levels of Service**

| ID | Intersection                            | Intersection Control | Approach/ Movement  | Existing LOS           |
|----|---|----------------------|---------------------|------------------------|
|    |   |                      |                     | AM (PM) [School PM]    |
| 1  | 32 <sup>nd</sup> St. & Deer Valley Dr.  | Signal               | NB                  | C (C) [C]              |
|    |   |                      | SB                  | C (C) [C]              |
|    |   |                      | EB                  | C (B) [B]              |
|    |   |                      | WB                  | A (C) [C]              |
|    |   |                      | <b>Overall</b>      | <b>B (C) [C]</b>       |
| 2  | 34 <sup>th</sup> St. & Deer Valley Dr.  | 1-Way Stop (NB)      | NB Right<br>WB Left | B (A) [B]<br>B (A) [B] |
| 3  | 34 <sup>th</sup> St. & Mayo Blvd.       | All-Way Stop         | NB                  | A (A) [B]              |
|    |   |                      | SB                  | D (A) [B]              |
|    |   |                      | EB                  | A (A) [B]              |
|    |   |                      | WB                  | B (A) [B]              |
|    |   |                      | <b>Overall</b>      | <b>D (A) [B]</b>       |
| 4  | HS Bus Entrance & Mayo Blvd.            | No-Stop control      | WB Shared           | A (A) [A]              |
| 5  | HS Bus Exit & Mayo Blvd.                | 1-Way Stop (NB)      | NB Shared           | B (A) [B]              |
| 6  | HS Eastern Drwy. & Mayo Blvd.           | 1-Way Stop (NB)      | NB Shared           | B (A) [B]              |
|    |   |                      | WB Shared           | A (A) [A]              |
| 7  | Black Mountain Blvd. & Rough Rider Rd.  | 2-Way Stop (EB/WB)   | NB Left             | B (A) [A]              |
|    |   |                      | SB Left             | A (A) [A]              |
|    |   |                      | EB Left             | C (C) [B]              |
|    |   |                      | EB Shared           | C (C) [B]              |
|    |   |                      | WB Left             | C (C) [B]              |
|    |   |                      | WB Shared           | C (C) [B]              |
| 8  | Black Mountain Blvd. & Bryce Ln.        | 2-Way Stop (EB/WB)   | NB Left             | B (B) [A]              |
|    |   |                      | SB Left             | A (B) [A]              |
|    |   |                      | EB Shared           | D (B) [B]              |
|    |   |                      | WB Shared           | D (C) [B]              |
| 9  | Black Mountain Blvd. & Deer Valley Dr.  | Signal               | NB                  | E (D) [F]              |
|    |   |                      | SB                  | D (D) [D]              |
|    |   |                      | EB                  | D (C) [C]              |
|    |   |                      | WB                  | C (C) [D]              |
|    |   |                      | <b>Overall</b>      | <b>D (C) [D]</b>       |
| 10 | Black Mountain Blvd. & Mayo Blvd.       | Signal               | NB                  | C (B) [C]              |
|    |   |                      | SB                  | C (B) [C]              |
|    |   |                      | EB                  | E (D) [C]              |
|    |   |                      | WB                  | D (D) [C]              |
|    |   |                      | <b>Overall</b>      | <b>D (C) [C]</b>       |
| 11 | Black Mountain Blvd. & HS Parking Drwy. | 1-Way Stop (EB)      | EB Right            | B (A) [A]              |
| 12 | Black Mountain Blvd. & Roundabout       | Roundabout           | NB                  | A (A) [A]              |
|    |   |                      | SB                  | A (A) [A]              |
|    |   |                      | EB                  | A (A) [A]              |
|    |   |                      | <b>Overall</b>      | <b>A (A) [A]</b>       |
| 13 | Lone Cactus Dr. & Mayo Blvd.            | 2-Way Stop (NB/SB)   | NB Shared           | C (B) [B]              |
|    |   |                      | SB Shared           | B (B) [B]              |
|    |   |                      | EB Left             | A (A) [A]              |
|    |   |                      | WB Left             | A (A) [A]              |
| 14 | Aviano Way and Deer Valley Rd.          | 2-Way Stop (NB/SB)   | NB Left             | F (E) [D]              |
|    |   |                      | NB Shared           | D (C) [C]              |
|    |   |                      | SB Left             | F (E) [D]              |

|    |                                     |                    |                                 |                                     |
|----|-------------------------------------|--------------------|---------------------------------|-------------------------------------|
|    |                                     |                    | SB Shared<br>EB Left<br>WB Left | D (C) [C]<br>B (B) [B]<br>C (B) [B] |
| 15 | 40 <sup>th</sup> St. and Mayo Blvd. | 1-Way Stop<br>(EB) | NB Left<br>EB Left<br>EB Right  | A (A) [A]<br>B (A) [B]<br>A (A) [A] |

The results of the existing conditions analysis summarized in **Table 2** indicate that all study intersections operate with acceptable levels of service (LOS D or better) with the exception of the northbound approach at the intersection of **Black Mountain Boulevard & Deer Valley Drive** and the northbound and southbound left at the intersection of **Aviano Way & Deer Valley Drive**.

The intersection of **Black Mountain Boulevard and Deer Valley Road** overall intersection is operating with acceptable levels of service (LOS D) during all three peak hours. However, the northbound approach is experiencing some delays during the AM and School PM peak hour. The northbound approach delays are 60.0 sec/veh and 81.4 sec/veh during the AM and School PM peak hour, respectively. It is expected that with signal timing adjustments by allocating more time to the northbound left movement will improve the delays and levels of service of the northbound approach.

The intersection of **Aviano Way and Deer Valley Drive** is experiencing some delays in the northbound left and southbound left approaches during both AM and PM peak hour due to the number of vehicles anticipated to make the left out onto the arterial roadway. During the AM peak hour, the northbound and southbound left delays are 146.8 sec/veh and 87.1 sec/veh, respectively. During the PM peak hour, the northbound and southbound left delays are 48.0 sec/veh and 44.1 sec/veh, respectively. Side streets delays along a major road during on street peak hour are not uncommon. Delays are typically due to the number through volumes which does not allow enough gaps for side street traffic to turn onto the major road.

**FUTURE ROADWAY IMPROVEMENTS**

Upon review of the City of Phoenix Capital Improvement Plans as well as the City of Phoenix Transportation website, there are no future roadway improvement plans within the study area.

**PROPOSED DEVELOPMENT**

**SITE LOCATION**

The Black Mountain Village proposes to rezone approximately 16-acres of undeveloped land from existing R-2 (residential) to C-2 (commercial) to consists of approximately 76,200 square feet (SF) of grocery supermarket, 41,500-SF of various commercial shops each under 40,000 SF, and 19,700-SF of fast-food restaurants with drive through window. The proposed developed is located on the southwest corner of Black Mountain Boulevard and Deer Valley Drive in the City of Phoenix, Arizona.

**SITE DENSITY/INTENSITY**

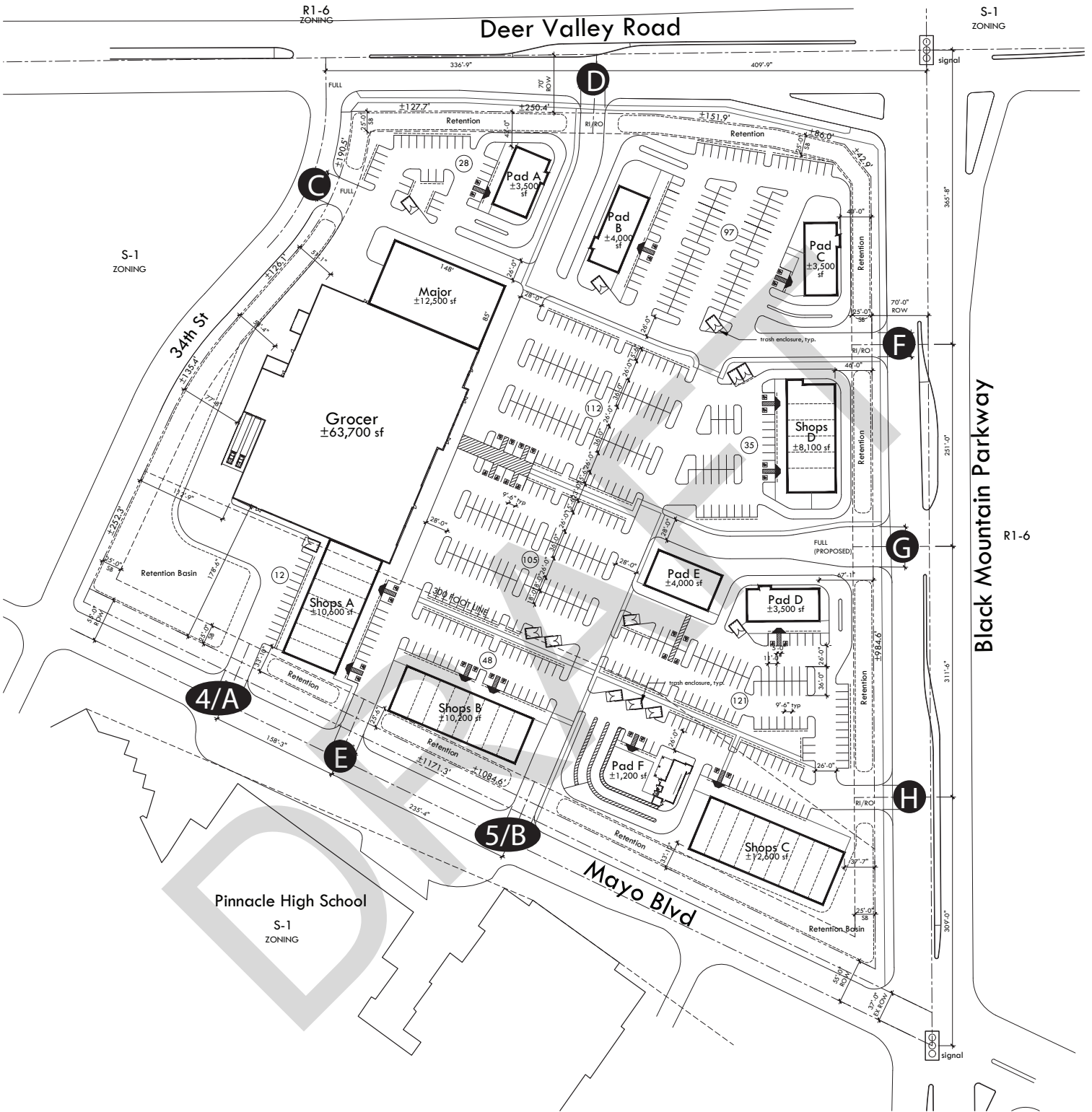
This development consists of approximately 76,200 square feet (SF) of grocery supermarket, 41,500-SF of various commercial shops each under 40,000 SF, and 19,700-SF of fast-food restaurants with drive through window. The mixed-use is comprised of the following buildings:

## SITE ACCESS

There are a total of eight (8) proposed access points.

- Access A – will be a full movement access and will be aligned with the Pinnacle Highschool Bus Entrance driveway on Mayo Boulevard.
- Access B – will be a full access movement and will be aligned with the Pinnacle Highschool Bus Exit driveway on Mayo Boulevard.
- Access C – is a full movement access located on 34<sup>th</sup> Street approximately 160-feet south of Deer Valley Drive.
- Access D – is a restricted right-in/right-out access located on Deer Valley Drive approximately 410-feet west of Black Mountain Boulevard.
- Access E – is a full movement access located on Mayo Boulevard approximately 160-feet east of Access A.
- Access F – is a restricted to right-in/right-out access located on Black Mountain Boulevard approximately 365-feet south of Deer Valley Drive.
- Access G – is a full movement access located on Black Mountain Boulevard approximately 250-feet south of access F.
- Access H – is a restricted to right-in/right-out access located on Black Mountain Boulevard approximately 310-feet south of Access G.

The proposed development site plans are 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, 11<sup>th</sup> Edition* and *Trip Generation Handbook, 3<sup>rd</sup> 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.

### INTERNAL CAPTURE

According to data presented in the Trip Generation Handbook, 3<sup>rd</sup> Edition, trips attracted to certain land uses are often shared. This means that a single trip (vehicle) to the proposed development may visit additional attractions within the site during the same visit, an occurrence known as internal capture. This is especially true for large mixed-use developments. An example of this would be a business person, who generated a trip on their drive to and home from work, who walks to the restaurant in their building for lunch. This restaurant trip is not a new trip on the roadway.

Internal capture in a mixed-use development describes the attraction of trips from one of the development's land use components by another and results in a trip that begins and ends onsite. The importance of internal capture in the qualification of traffic impact for a mixed-use development is that internally captured trips comprise a portion of the total development's trip generation without using the external road system. As a result, a mixed-use development will generally create less demand on the external road system (i.e., fewer external trips) than the sum of the trip generation potential of each of its use components when considered as single-use developments. The percentage of a mixed-use development's total trip generation that will be internally captured will depend on the strength of the attraction between its land use components. Guidance on selecting an appropriate internal capture percentage is provided in the *National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Using this resource, the following reductions were applied to the trip generation estimation for this mixed-use project:

- 13% of the Project daily trips.
- 5% of the Project AM peak hour trips.
- A cap of 20% of the Project PM peak hour trips.

Internal capture worksheets are included within **Appendix D**.

### PASS-BY AND DIVERTED LINK TRIPS

Based on the published ITE data, as found in *Trip Generation Handbook, 3<sup>rd</sup> Edition*, it could be estimated that some portion of the traffic entering and exiting a commercial development would come from traffic already on the external street system. The term 'pass-by' trips refers to traffic already traveling on a study roadway from an origin to a destination that stops into the commercial development on the way. This reduces the impact of double counting the same trip on the arterial roadway network. The anticipated to be pass-by trips percentages were determined based on the ITE Handbook percentages per each land use for the AM and PM peak hour. The daily peak hour percentage were based on an average of the AM and PM peak hour where it was assumed that 8%

the ADT are AM peak hour and 10% of the ADT are the PM peak hour. These trips are not included in the site generated traffic because they are already on the roadway in the background condition. They are added into the total volumes as turning movements into and out of the site access points (then subtracted from the through movements at those access points).

Note that the PM peak hour site generated trips are being used for the School PM peak hour.

The anticipated trip generation is summarized in **Table 3**. Detailed trip generation calculations are provided in **Appendix E**.

**Table 3 – Trip Generation**

| Land Use       | ITE Code | ITE Land Use Name                   | Quantity Units <sup>+</sup> | AM Distribution |     | PM Distribution |     |
|----------------|----------|-------------------------------------|-----------------------------|-----------------|-----|-----------------|-----|
|                |          |                                     |                             | In              | Out | In              | Out |
| Pad A          | 934      | Fast Food Rest. w/Drive Thru Window | 3.500 KSF                   | 51%             | 49% | 52%             | 48% |
| Pad B          | 934      | Fast Food Rest. w/Drive Thru Window | 4.000 KSF                   | 51%             | 49% | 52%             | 48% |
| Pad C          | 934      | Fast Food Rest. w/Drive Thru Window | 3.500 KSF                   | 51%             | 49% | 52%             | 48% |
| Pad D          | 934      | Fast Food Rest. w/Drive Thru Window | 3.500 KSF                   | 51%             | 49% | 52%             | 48% |
| Pad E          | 934      | Fast Food Rest. w/Drive Thru Window | 4.000 KSF                   | 51%             | 49% | 52%             | 48% |
| Pad F          | 934      | Fast Food Rest. w/Drive Thru Window | 1.200 KSF                   | 51%             | 49% | 52%             | 48% |
| Grocer + Major | 850      | Supermarket                         | 76.200 KSF                  | 59%             | 41% | 50%             | 50% |
| Shops A        | 822      | Strip Retail Plaza (<40k)           | 10.600 KSF                  | 60%             | 40% | 50%             | 50% |
| Shops B        | 822      | Strip Retail Plaza (<40k)           | 10.200 KSF                  | 60%             | 40% | 50%             | 50% |
| Shops C        | 822      | Strip Retail Plaza (<40k)           | 12.600 KSF                  | 60%             | 40% | 50%             | 50% |
| Shops D        | 822      | Strip Retail Plaza (<40k)           | 8.100 KSF                   | 60%             | 40% | 50%             | 50% |

| Land Use                | ADT        |                | AM Peak Hour |              |              | PM Peak Hour |            |              |              |              |
|-------------------------|------------|----------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|
|                         | Avg. Rate* | Total          | Avg. Rate*   | In           | Out          | Total        | Avg. Rate* | In           | Out          | Total        |
| Pad A                   | 467.48     | 1,636          | 44.61        | 80           | 76           | 156          | 33.03      | 60           | 56           | 116          |
| Pad B                   | 467.48     | 1,870          | 44.61        | 91           | 87           | 178          | 33.03      | 69           | 63           | 132          |
| Pad C                   | 467.48     | 1,636          | 44.61        | 80           | 76           | 156          | 33.03      | 60           | 56           | 116          |
| Pad D                   | 467.48     | 1,636          | 44.61        | 80           | 76           | 156          | 33.03      | 60           | 56           | 116          |
| Pad E                   | 467.48     | 1,870          | 44.61        | 91           | 87           | 178          | 33.03      | 69           | 63           | 132          |
| Pad F                   | 467.48     | 560            | 44.61        | 28           | 26           | 54           | 33.03      | 21           | 19           | 40           |
| Grocer + Major          | 90.47      | 6,894          | 2.86         | 129          | 89           | 218          | 8.14       | 310          | 310          | 620          |
| Shops A                 | 54.45      | 578            | 2.36         | 15           | 10           | 25           | 6.59       | 35           | 35           | 70           |
| Shops B                 | 54.45      | 556            | 2.36         | 14           | 10           | 24           | 6.59       | 34           | 33           | 67           |
| Shops C                 | 54.45      | 686            | 2.36         | 18           | 12           | 30           | 6.59       | 42           | 41           | 83           |
| Shops D                 | 54.45      | 442            | 2.36         | 11           | 8            | 19           | 6.59       | 27           | 26           | 53           |
| <b>Total</b>            |            | <b>18,364</b>  |              | <b>637</b>   | <b>557</b>   | <b>1,194</b> |            | <b>787</b>   | <b>758</b>   | <b>1,545</b> |
| <i>Internal Capture</i> |            |                |              | <i>(33)</i>  | <i>(28)</i>  | <i>(61)</i>  |            | <i>(157)</i> | <i>(151)</i> | <i>(308)</i> |
| <b>External Trips</b>   |            | <b>16,068</b>  |              | <b>604</b>   | <b>529</b>   | <b>1,133</b> |            | <b>630</b>   | <b>607</b>   | <b>1,237</b> |
| <i>Pass-by</i>          |            | <i>(5,408)</i> |              | <i>(202)</i> | <i>(202)</i> | <i>(404)</i> |            | <i>(257)</i> | <i>(257)</i> | <i>(514)</i> |
| <b>Net New Trips</b>    |            | <b>10,660</b>  |              | <b>402</b>   | <b>327</b>   | <b>729</b>   |            | <b>373</b>   | <b>350</b>   | <b>723</b>   |

The proposed development is anticipated to generate 10,660 weekday new daily trips, 729 new trips during the AM peak hour, and 723 new trips during the PM peak hour.



## VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the proposed development will generate trips based on future employment/population within a 10-mile radius of the site. Future total employment/population within a 7-mile radius of the site, as projected by the 2030 socio-economic data compiled by the Maricopa Association of Governments (MAG), was used as a basis to estimate trip distribution. The resulting trip distribution percentages for the study area are shown in **Table 4**. The trip distribution calculations are included in **Appendix F**.

**Table 4 – Site Trip Distribution**

| Direction (To/From)   | Percentage  |
|---|-------------|
| North on Black Mountain Boulevard (north of Rough Rider Road) | 8%          |
| East on Rough Rider Road (east of Deer Valley Drive)          | 1%          |
| West on Rough Rider Road (west of Deer Valley Drive)          | 1%          |
| South on Black Mountain Boulevard (south of Roundabout)       | 25%         |
| West on Deer Valley Road (west of 32 <sup>nd</sup> Street)    | 34%         |
| East on Deer Valley Road (east of Aviano Way)                 | 23%         |
| South on Black Mountain Boulevard (south of Roundabout)       | 35%         |
| North on Lone Cactus Drive (north of Mayo Boulevard)          | 1%          |
| North on Aviano Way (north of Deer Valley Drive)              | 1%          |
| North on 32 <sup>nd</sup> Street (north of Deer Valley Drive) | 1%          |
| North on 40 <sup>th</sup> Street (north of Mayo Boulevard)    | 3%          |
| South on 40 <sup>th</sup> Street (south of Mayo Boulevard)    | 2%          |
| <b>Total</b>  | <b>100%</b> |

**Figure 5** illustrates the trip distribution percentages noted in **Table 4** on the roadway network within 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. **Figure 6** presents the resulting site generated traffic for the proposed development.

Pass-by percentages were determined based on an average of the existing AM and PM peak hour approach volumes at the intersection of Black Mountain Boulevard and Deer Valley Drive. CivTech calculated the average AM and PM approach percentages and the result of the existing traffic volumes at the intersection indicated the following pass-by percentages:

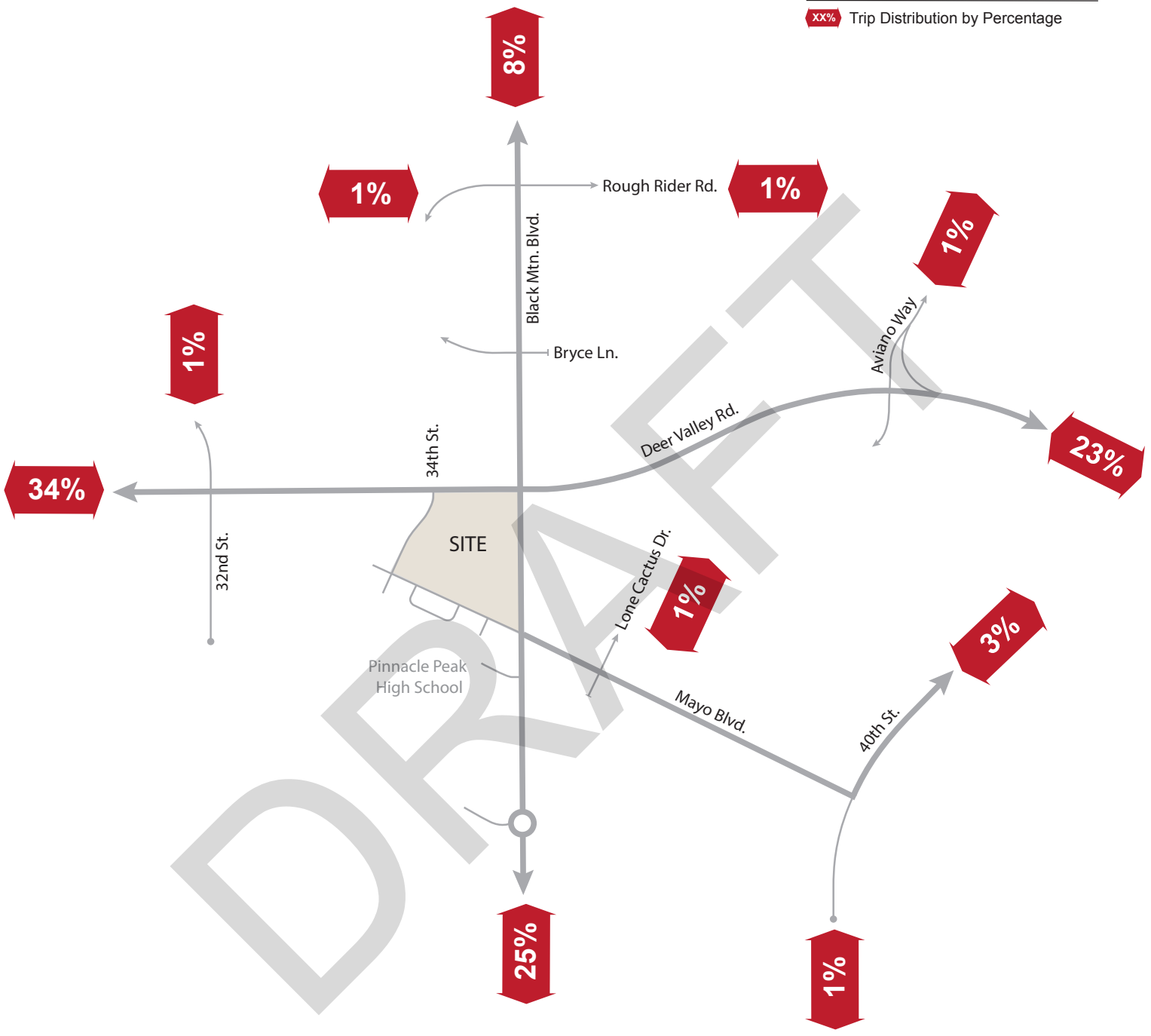
- 20% from the north on Black Mountain Village Boulevard
- 30% from the south on Black Mountain Village Boulevard
- 20% from the east on Deer Valley Drive
- 30% from the west on Deer Valley Drive

**Figure 7** present the resulting pass-by trips.

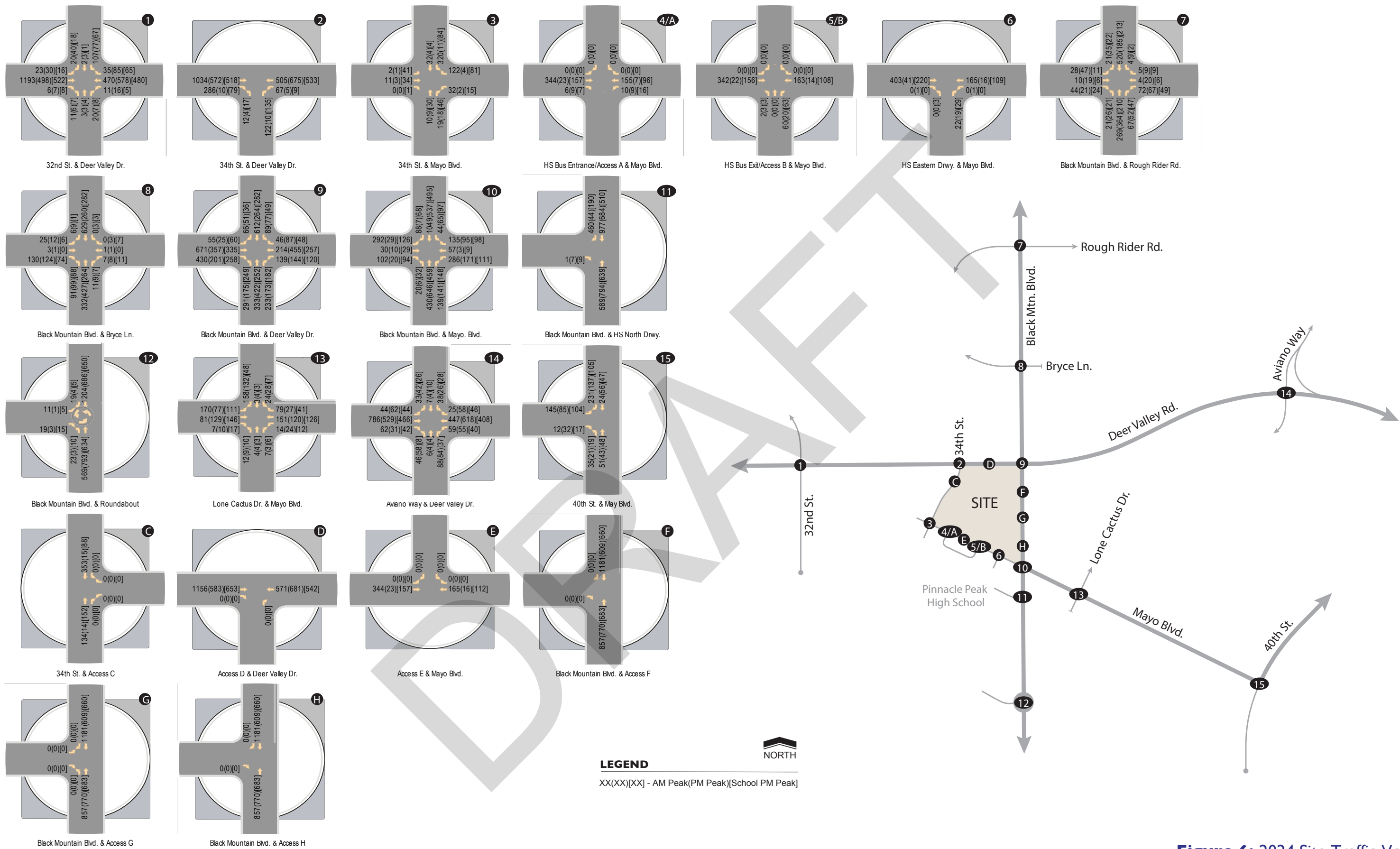


**LEGEND**

XX% Trip Distribution by Percentage



**Figure 5: Trip Distribution**



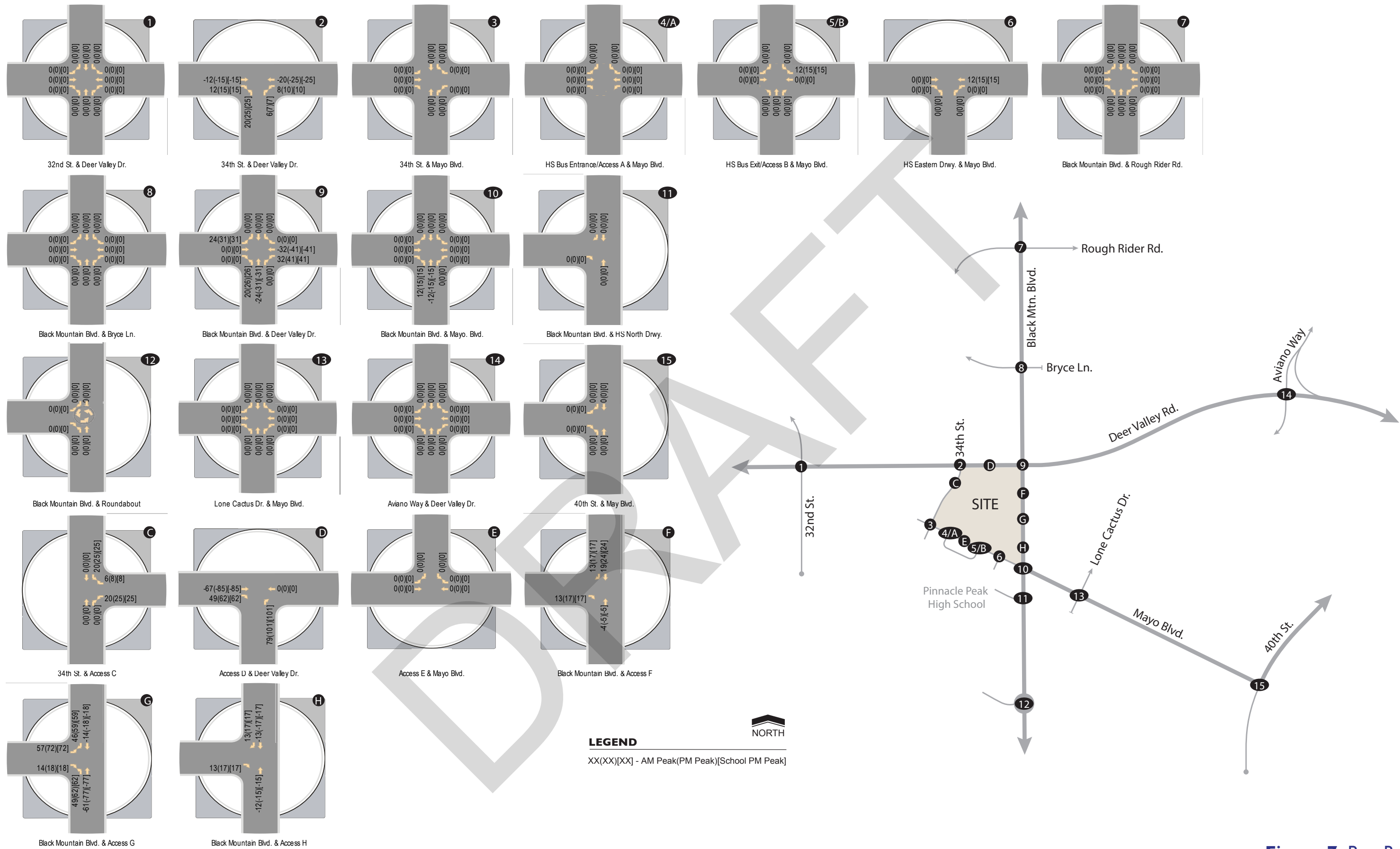


Figure 7: Pass-By Trips

## FUTURE BACKGROUND TRAFFIC

CivTech took historical daily traffic volumes from the City of Phoenix website Traffic Volume Map to estimate an average annual growth rate. Given that there were no recent daily traffic counts within the vicinity of the site to compare the City of Phoenix's 2015 counts, CivTech assumed a conservative growth rate of 2% per year based on the location of the site. Therefore, an expansion factor of 1.0404 ( $=1.02^2$ ) and 1.1487 ( $=1.02^7$ ) were applied to the 2022 existing counts to obtain the 2024 and 2029 background traffic volumes, respectively.

The background volumes for the opening year of 2024 are presented in **Figure 8**. The background volumes for the opening year of 2028 are presented in **Figure 9**. Background traffic calculations are located within **Appendix G**.

## TOTAL TRAFFIC

Total traffic was determined by adding the site generated traffic and pass-by trips to the estimated projected background traffic. Total peak hour traffic volumes for the opening year of 2024 are shown in **Figure 10**. Total peak hour traffic volumes for the horizon year of 2029 are shown in **Figure 11**.

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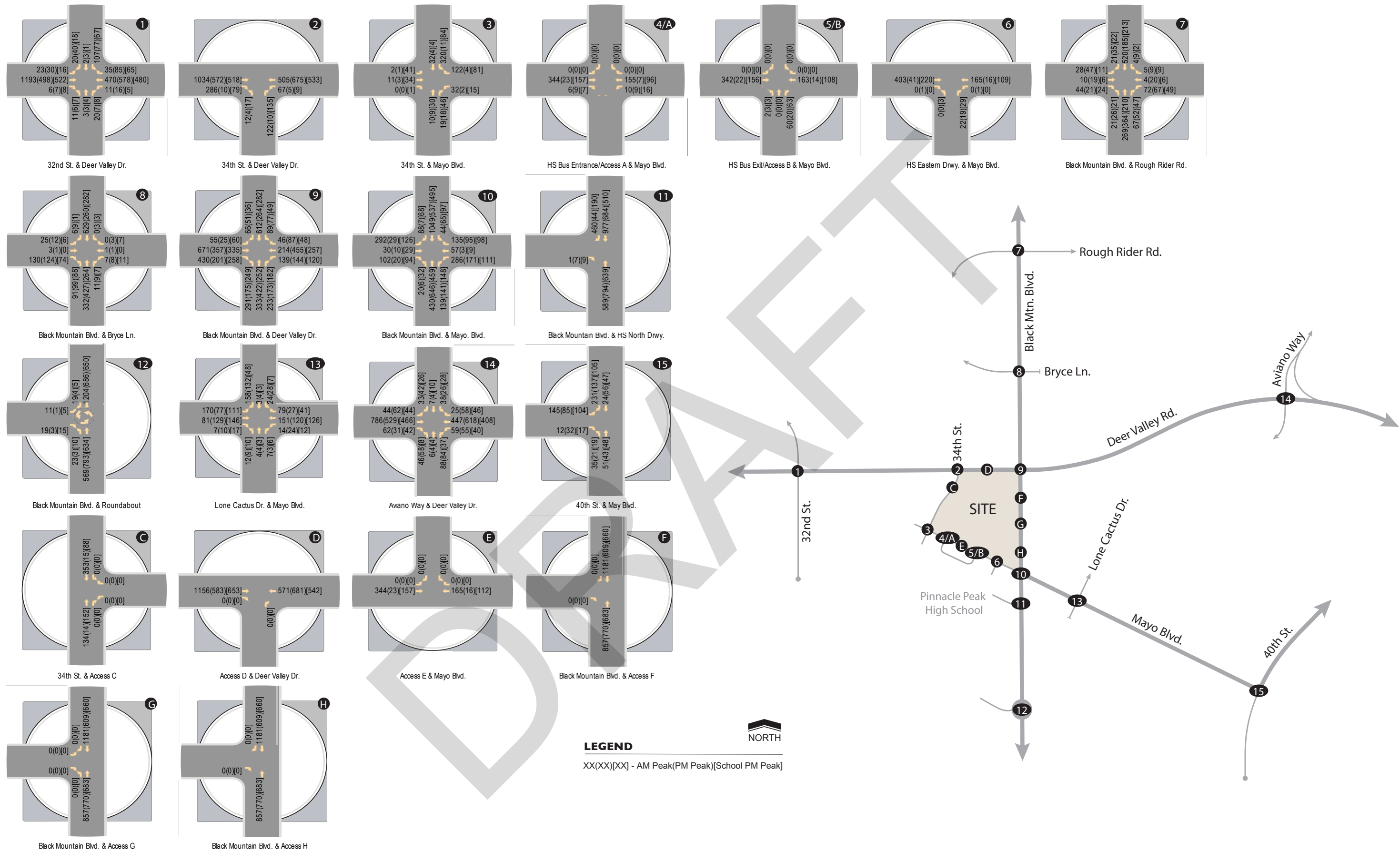


Figure 8: 2024 Background Traffic Volumes

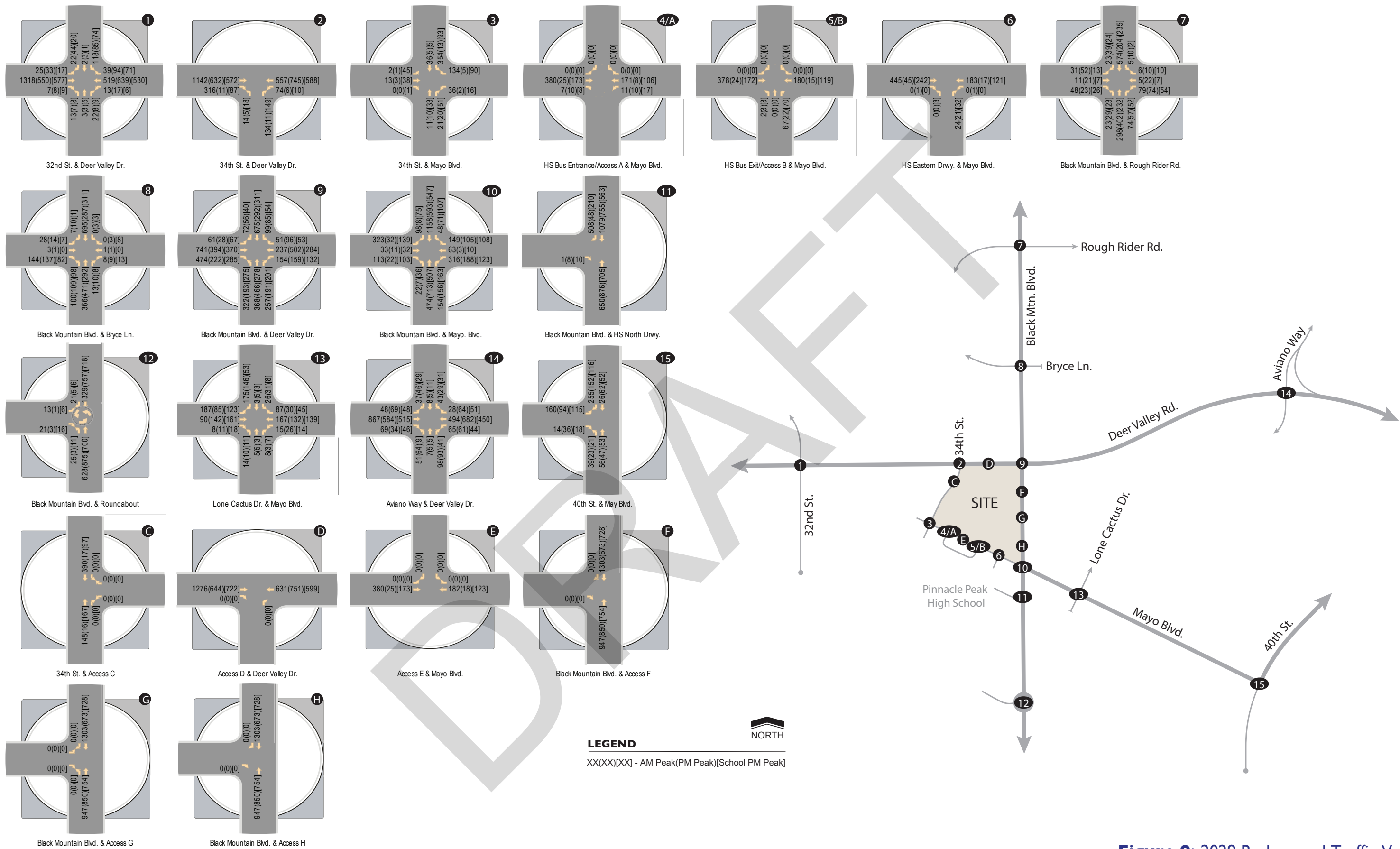


Figure 9: 2029 Background Traffic Volumes

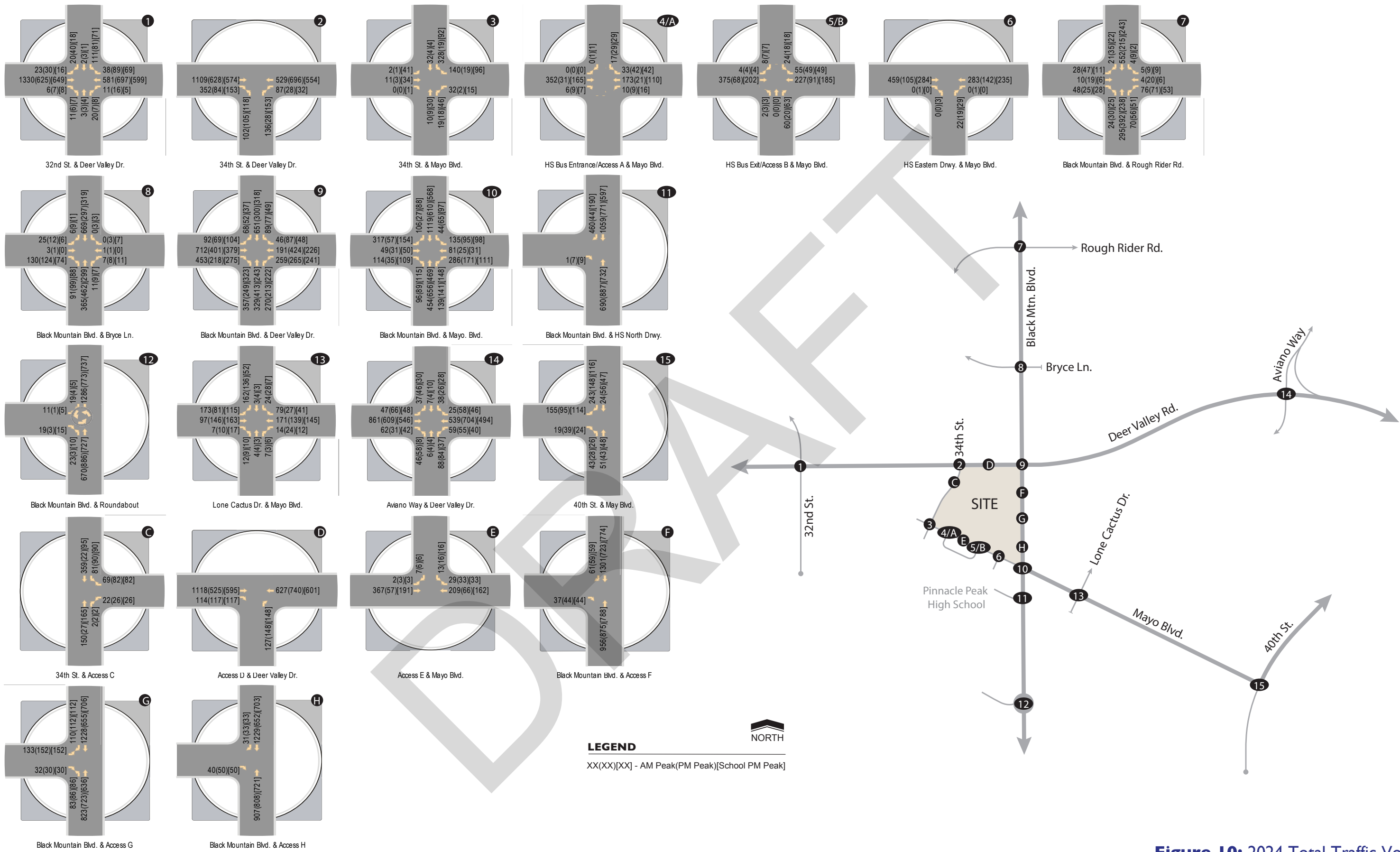


Figure 10: 2024 Total Traffic Volumes



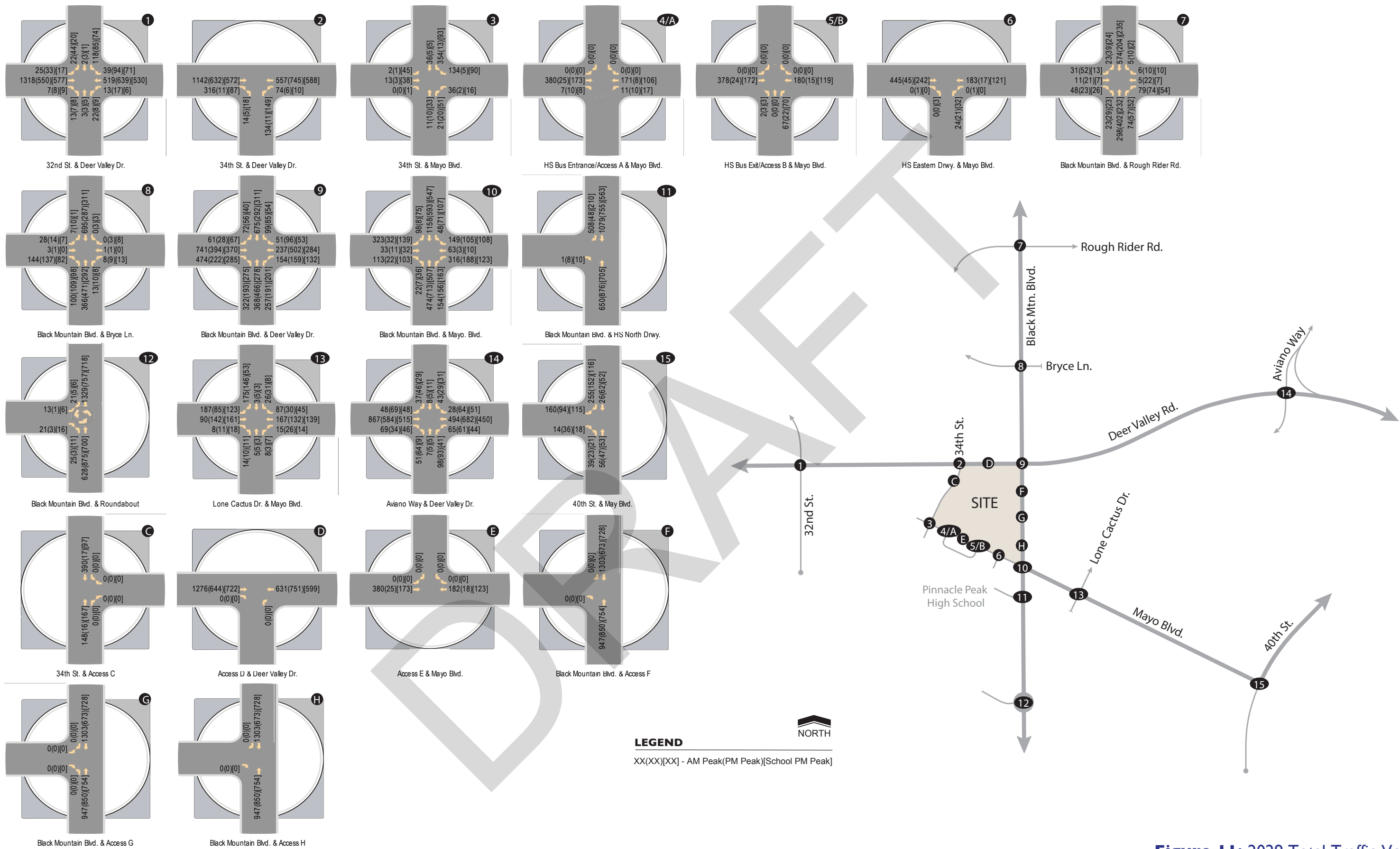


Figure 11: 2029 Total Traffic Volumes

## TRAFFIC AND IMPROVEMENT ANALYSIS

The overall intersection and approach levels of service are summarized in **Table 5** for the 2024 and 2029 background and total traffic conditions. Detailed analysis worksheets for the 2024 background analysis can be found in **Appendix H**, worksheets for the 2029 background analysis can be found in **Appendix I**, worksheets for the 2024 total traffic analysis can be found in **Appendix J**, worksheets for the 2029 total traffic analysis can be found in **Appendix K**, and mitigation analysis can be found in **Appendix L**.

**Table 5 – Peak Hour Levels of Service AM(PM)[School PM]**

| ID | Intersection                              | Control                               | Approach/<br>Movement | 2024             |                        | 2029             |                           |
|----|---|---------------------------------------|-----------------------|------------------|------------------------|------------------|---------------------------|
|    |   |                                       |                       | No Build         | Build                  | No Build         | Build                     |
| 1  | 32 <sup>nd</sup> Street & Deer Valley Dr. | Signal                                | NB                    | C (C) [C]        | C (C) [C]              | C (C) [C]        | C (C) [C]                 |
|    |   |                                       | SB                    | C (C) [C]        | C (C) [C]              | C (C) [C]        | C (C) [C]                 |
|    |   |                                       | EB                    | C (B) [B]        | C (C) [C]              | C (B) [B]        | C (B) [C]                 |
|    |   |                                       | WB                    | A (C) [C]        | A (B) [C]              | B (B) [C]        | B (B) [C]                 |
|    |   |                                       | <b>Overall</b>        | <b>B (C) [C]</b> | <b>B (C) [C]</b>       | <b>C (B) [C]</b> | <b>C (B) [C]</b>          |
| 2  | 34 <sup>th</sup> St. & Deer Valley Dr.    | 1-Way Stop (NB)                       | NB Left               | B (B) [C]        | C (B) [F]              | B (B) [C]        | C (B) [E]                 |
|    |   |                                       | NB Right              | B (A) [B]        | B (A) [B]              | B (A) [B]        | B (B) [B]                 |
|    |   |                                       | WB Left               | B (A) [B]        | B (A) [B]              | B (A) [B]        | C (A) [B]                 |
|    |   | <i>Mitigation at Up Stream Signal</i> | NB Left               |                  | C (B) [D]              |                  | C (B) [ <sup>(1)</sup> E] |
|    |   |                                       | NB Right<br>WB Left   |                  | B (A) [B]<br>B (A) [B] |                  | B (B) [B]<br>C (A) [B]    |
| 3  | 34 <sup>th</sup> St. & Mayo Blvd.         | All-Way Stop                          | NB                    | A (A) [B]        | A (A) [B]              | A (A) [B]        | A (A) [B]                 |
|    |   |                                       | SB                    | B (A) [B]        | B (A) [B]              | B (A) [B]        | B (A) [C]                 |
|    |   |                                       | EB                    | A (A) [B]        | A (A) [B]              | A (A) [B]        | A (A) [B]                 |
|    |   |                                       | WB                    | A (A) [B]        | A (A) [B]              | A (A) [B]        | A (A) [B]                 |
|    |   |                                       | <b>Overall</b>        | <b>B (A) [B]</b> | <b>B (A) [B]</b>       | <b>B (A) [B]</b> | <b>B (A) [B]</b>          |
| 4  | HS Bus Entrance & Mayo Blvd.              | No-Stop control                       | SB Shared             |                  | B (A) [B]              |                  | B (A) [C]                 |
|    |   |                                       | EB Shared             |                  | A (A) [A]              |                  | A (A) [A]                 |
|    |   |                                       | WB Shared             | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]                 |
| 5  | HS Bus Exit & Mayo Blvd.                  | 1-Way Stop (NB)                       | NB Shared             | A (A) [B]        | B (A) [B]              | B (A) [B]        | B (A) [B]                 |
|    |   |                                       | SB Shared             |                  | A (A) [B]              |                  | A (A) [B]                 |
|    |   |                                       | EB Shared             |                  | A (A) [A]              |                  | A (A) [A]                 |
| 6  | HS Eastern Drwy. & Mayo Blvd.             | 1-Way Stop (NB)                       | NB Shared             | A (A) [B]        | B (A) [B]              | B (A) [B]        | B (A) [B]                 |
|    |   |                                       | WB Shared             | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]                 |
| 7  | Black Mountain Blvd. & Rough Rider Rd.    | 2-Way Stop (EB/WB)                    | NB Left               | B (A) [A]        | B (A) [A]              | B (A) [A]        | B (A) [A]                 |
|    |   |                                       | SB Left               | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]                 |
|    |   |                                       | EB Left               | C (C) [A]        | C (C) [B]              | B (B) [B]        | C (B) [B]                 |
|    |   |                                       | EB Shared             | B (C) [B]        | B (C) [B]              | B (B) [B]        | B (B) [B]                 |
|    |   |                                       | WB Left               | C (C) [A]        | C (D) [B]              | B (B) [B]        | B (B) [B]                 |
|    |   |                                       | WB Shared             | B (C) [A]        | B (C) [A]              | B (B) [A]        | B (B) [B]                 |
| 8  | Black Mountain Blvd. & Bryce Ln.          | 2-Way Stop (EB/WB)                    | NB Left               | B (B) [A]        | B (B) [B]              | B (B) [B]        | B (B) [B]                 |
|    |   |                                       | SB Left               | A (B) [A]        | A (B) [A]              | A (A) [A]        | A (A) [A]                 |
|    |   |                                       | EB Shared             | C (B) [B]        | C (B) [B]              | C (B) [B]        | C (B) [B]                 |
|    |   |                                       | WB Shared             | D (D) [B]        | D (D) [B]              | C (C) [B]        | D (C) [B]                 |
|    |   |                                       |                       |                  |                        |                  |                           |

**Table 5 – Peak Hour Levels of Service AM(PM)[School PM]**

| ID | Intersection                            | Control                         | Approach/<br>Movement  | 2024             |                        | 2029             |                        |                  |
|----|---|---------------------------------|------------------------|------------------|------------------------|------------------|------------------------|------------------|
|    |   |                                 |                        | No Build         | Build                  | No Build         | Build                  |                  |
| 9  | Black Mountain Blvd. & Deer Valley Dr.  | Signal                          | NB                     | E (D) [C]        | F (D) [C]              | B (B) [D]        | C (D) [D]              |                  |
|    |   |                                 | SB                     | D (D) [D]        | D (D) [D]              | D (C) [D]        | D (C) [D]              |                  |
|    |   |                                 | EB                     | D (C) [D]        | D (C) [D]              | D (E) [D]        | E (E) [D]              |                  |
|    |   |                                 | WB                     | C (C) [D]        | D (D) [E]              | D (D) [D]        | D (D) [E]              |                  |
|    |   |                                 |                        | <b>Overall</b>   | <b>D (C) [D]</b>       | <b>D (D) [D]</b> | <b>D (D) [D]</b>       | <b>D (D) [D]</b> |
|    |   | <i>Signal Timing Adjustment</i> | NB                     |                  |                        | C (D) [D]        |                        | C (D) [D]        |
|    |   |                                 | SB                     |                  |                        | D (D) [D]        |                        | D (C) [D]        |
|    |   |                                 | EB                     |                  |                        | D (D) [D]        |                        | D (D) [D]        |
| WB |   |                                 |                        | D (D) [D]        |                        | D (D) [D]        |                        |                  |
|    |   | <b>Overall</b>                  |                        | <b>D (D) [D]</b> |                        | <b>D (D) [D]</b> |                        |                  |
| 10 | Black Mountain Blvd. & Mayo Blvd.       | Signal                          | NB                     | C (C) [D]        | C (C) [D]              | C (C) [C]        | C (C) [C]              |                  |
|    |   |                                 | SB                     | C (C) [C]        | D (C) [D]              | D (B) [D]        | E (B) [D]              |                  |
|    |   |                                 | EB                     | D (D) [C]        | D (D) [C]              | D (D) [C]        | D (C) [C]              |                  |
|    |   |                                 | WB                     | D (D) [C]        | D (D) [C]              | D (C) [C]        | D (C) [C]              |                  |
|    |   |                                 |                        | <b>Overall</b>   | <b>C (C) [C]</b>       | <b>D (C) [D]</b> | <b>D (C) [C]</b>       | <b>D (C) [D]</b> |
|    |   | <i>Signal Timing Adjustment</i> | NB                     |                  |                        |                  |                        | C (C) [C]        |
|    |   |                                 | SB                     |                  |                        |                  |                        | D (D) [D]        |
|    |   |                                 | EB                     |                  |                        |                  |                        | D (C) [C]        |
| WB |   |                                 |                        |                  |                        | D (C) [C]        |                        |                  |
|    |   | <b>Overall</b>                  |                        |                  |                        | <b>D (C) [D]</b> |                        |                  |
| 11 | Black Mountain Blvd. & HS Parking Drwy. | 1-Way Stop (EB)                 | EB Shared              | B (A) [A]        | B (A) [A]              | B (A) [A]        | B (A) [A]              |                  |
| 12 | Black Mountain Blvd. & Roundabout       | Roundabout                      | NB                     | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]              |                  |
|    |   |                                 | SB                     | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]              |                  |
|    |   |                                 | EB                     | A (A) [A]        | A (A) [A]              | B (A) [A]        | B (A) [A]              |                  |
|    |   |                                 | <b>Overall</b>         | <b>A (A) [A]</b> | <b>A (A) [A]</b>       | <b>A (A) [A]</b> | <b>A (A) [A]</b>       |                  |
| 13 | Lone Cactus Dr. & Mayo Blvd.            | 2-Way Stop (NB/SB)              | NB Shared              | C (B) [B]        | C (C) [B]              | C (C) [B]        | C (C) [B]              |                  |
|    |   |                                 | SB Shared              | B (B) [B]        | B (B) [B]              | B (B) [B]        | B (B) [B]              |                  |
|    |   |                                 | EB Left                | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]              |                  |
|    |   |                                 | WB Left                | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]              |                  |
| 14 | Aviano Way & Deer Valley Rd.            | 2-Way Stop (NB/SB)              | NB Left                | F (F) [D]        | F (F) [E]              | F (F) [E]        | F (F) [F]              |                  |
|    |   |                                 | NB Shared              | C (C) [C]        | C (C) [C]              | D (C) [C]        | D (C) [C]              |                  |
|    |   |                                 | SB Left                | E (E) [D]        | F (F) [E]              | F (F) [E]        | F (F) [F]              |                  |
|    |   |                                 | SB Shared              | C (C) [C]        | D (C) [D]              | D (C) [D]        | D (D) [E]              |                  |
|    |   |                                 | EB Left                | B (B) [B]        | B (B) [B]              | B (B) [B]        | B (C) [B]              |                  |
|    |   |                                 | WB Left                | C (B) [B]        | C (B) [B]              | C (B) [B]        | C (B) [B]              |                  |
| 15 | 40 <sup>th</sup> St. & Mayo Blvd.       | 1-Way Stop (EB)                 | NB Left                | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]              |                  |
|    |   |                                 | EB Left                | B (B) [B]        | B (B) [B]              | B (B) [B]        | B (B) [B]              |                  |
|    |   |                                 | EB Right               | A (A) [A]        | A (A) [A]              | A (A) [A]        | A (A) [A]              |                  |
| C  | 34 <sup>th</sup> St. & Access C         | 1-Way Stop (WB)                 | SB Shared<br>WB Shared |                  | A (A) [A]<br>B (A) [B] |                  | A (A) [A]<br>B (A) [B] |                  |
| D  | Access D & Deer Valley Dr.              | 1-Way Stop (NB)                 | NB Right               |                  | C (B) [B]              |                  | C (B) [B]              |                  |

**Table 5 – Peak Hour Levels of Service AM(PM)[School PM]**

| ID | Intersection                    | Control                                 | Approach/<br>Movement          | 2024     |                                     | 2029     |                                     |
|----|---------------------------------|---|--------------------------------|----------|-------------------------------------|----------|-------------------------------------|
|    |                                 |   |                                | No Build | Build                               | No Build | Build                               |
| E  | Mayo Blvd. & Access E           | 1-Way Stop (SB)                         | SB Shared<br>EB Shared         |          | B (A) [A]<br>A (A) [A]              |          | B (A) [A]<br>A (A) [A]              |
| F  | Black Mountain Pkwy. & Access F | 1-Way Stop (EB)                         | EB Right                       |          | B (B) [B]                           |          | B (B) [B]                           |
| G  | Black Mountain Pkwy. & Access G | 1-Way Stop (EB)                         | NB Left<br>EB Left<br>EB Right |          | B (B) [A]<br>F (F) [F]<br>B (A) [B] |          | B (B) [A]<br>C (C) [C]<br>B (B) [B] |
|    |                                 | <i>Mitigation at Down Stream Signal</i> | NB Left<br>EB Left<br>EB Right |          | B (B) [A]<br>C (B) [C]<br>B (A) [B] |          | B (B) [A]<br>C (C) [C]<br>B (B) [B] |
| H  | Black Mountain Pkwy. & Access H | 1-Way Stop (EB)                         | EB Right                       |          | B (A) [A]                           |          | B (A) [B]                           |

(1) Delay is 35.6 sec/veh, less than one second away from LOS D.

The results of the Synchro analysis summarized in **Table 5** indicate that all study intersections operate with overall acceptable levels of service (LOS D or better), with the exception of the following:

2024 OPENING YEAR

The intersection of **34<sup>th</sup> Street & Deer Valley Drive** is expected to operate with a delay in the northbound left during the School PM peak hour. The delay is due to not enough gaps from downstream signal to allow vehicles enough time to clear the intersection. Mitigation of 2-vehicles storage for the northbound approach was applied at the intersection. In addition, signal timing adjustment to the intersection of 32<sup>nd</sup> Street & Deer Valley Drive was implemented for the intersection to function as an actuated-coordinated along the east-west approaches. With the mitigation of the signalized intersection, the School PM peak hour northbound left approach improved from a LOS F to a LOS D.

The intersection of **Aviano Way & Deer Valley Drive** is experiencing some delays in the northbound left and southbound left movements during the AM, PM, and School PM peak hour without and with the Project. Side street delays along a major arterial roadway during on street peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.

The intersection of **Black Mountain Boulevard & Access G** is experiencing a delay of LOS F in the eastbound left approach during the AM, PM, and School PM peak hour. The delays are due to not enough gaps from downstream signal to allow vehicles enough time to clear the intersection. Mitigation signal timing adjustment to the intersection of Black Mountain Boulevard & Mayo Boulevard was implemented for the intersection to function as an actuated-coordinated along the east-west approaches. With the mitigation of the signalized intersection, the AM peak hour eastbound left approach improved to a delay of LOS C, the PM peak hour eastbound left approach improved to a delay of LOS B, and the School PM peak hour eastbound left approach improved to a delay of LOS C.

*\*Note that intersection along the east and west of the two intersections (32<sup>nd</sup> Street & Deer Valley Drive and Black Mountain Boulevard & Mayo Boulevard) improved in delays due to the signal timing adjustments. \**

### 2029 OPENING YEAR

The intersection of **34<sup>th</sup> Street & Deer Valley Drive** is expected to operate with a delay of 35.6 sec/veh (LOS E) in the northbound left during the School PM peak hour. The delay is less than one second greater than LOS D. Side street delays along a major arterial roadway during on street peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.

The intersection of **Black Mountain Boulevard & Deer Valley Drive** is operating with some delays in the eastbound during the AM and PM peak hour and delay in the westbound approach during the School PM peak hour. The eastbound approach is experiencing a delay of LOS E during the AM, PM , and peak hour. The westbound approach is anticipated to experience a delay of LOS E during the School PM peak hour. Signal timing adjustment were made to provide additional initial green time to the eastbound left phase during the AM and PM peak hour to improve the delay to LOS D. Signal timing adjustments were made to provide additional initial green time to the westbound left phase during the School PM peak hour improving the delay to LOS D.

The intersection of **Black Mountain Boulevard & Mayo Boulevard** is experiencing a delay of LOS E the southbound approach during the AM peak hour. Signal timing adjustments of allocating an additional green time to the southbound approach was made to improve the southbound approach delay to LOS D.

The intersection of **Aviano Way & Deer Valley Drive** is experiencing some delays in the northbound left and southbound left movements during all three peak hours without and with the Project. Side street delays along a major arterial roadway during on street peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.

## **TURN LANE WARRANTING AND QUEUE LENGTH ANALYSIS**

### LEFT-TURN DECELERATION LANES

The City of Phoenix does not have specific warrants for the installation of dedicated right-turn lanes. However, median breaks will be provided at the full access intersections on Deer Valley Drive and Black Mountain Boulevard to provide dedicated left-turn movements.

### QUEUE STORAGE

Adequate turn storage should be supplied on any approach where turn lanes are permitted and/or warranted. A queuing analysis was prepared according to the methodology documented in *AASHTO's A Policy on Geometric Design of Highways and Streets*. The study intersections were analyzed to determine the left-turn and right-turn storage needed to accommodate the expected traffic volumes in the 2029 horizon year.

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 to two signal cycles, where signalized.<sup>1</sup> The equations used for the calculations are shown below, and the resulting turn lane storage requirements for the study intersections are summarized in **Table 6**. Detailed queue storage calculation worksheets using the AASHTO method are included in **Appendix M**.

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

$$\text{Storage Length} = \left[ \frac{1.5 \times (\text{veh/hr})}{(\text{cycles/hr})} \right] \times 25 \text{ feet}$$

For unsignalized intersections, the storage length for a left-turn lane is determined by the following equation:

$$\text{Storage Length} = \left\{ \frac{\ln[P(n>N)]}{\ln \frac{v}{c}} - 1 \right\} \times 25 \text{ feet}$$

where:

$$c = \frac{V_0 e^{-V_0 t_c / 3600}}{1 - e^{-V_0 t_c / 3600}}$$

as defined in *AASHTO's A Policy on Geometric Design of Highways and Streets Equations 9-3 and 9-4*.

<sup>1</sup> The American Association of Highway and Transportation Officials, under Section 9.7.2.2 (page 9-96) of the latest (7<sup>th</sup>) edition of its publication, *A Policy on Geometric Design of Highways and Streets* (the AASHTO "Green Book"), indicates that storage length for a turn lane, exclusive of taper, "should usually be based on 1.5 to 2 times the average number of vehicles that would need to be stored per signal cycle" at a signalized intersection.

**Table 6 – Queue Storage Lengths**

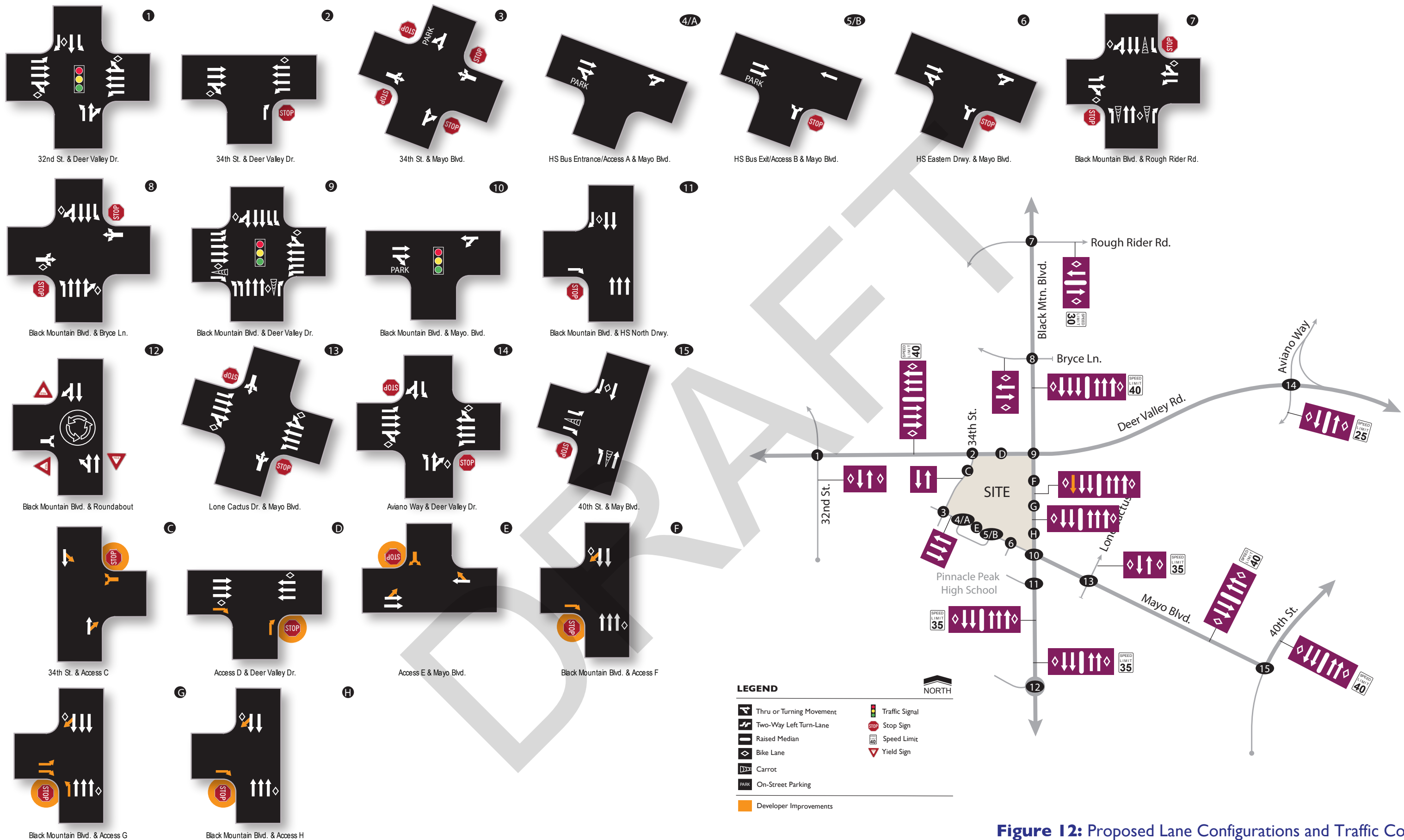
| ID | Intersection                              | Intersection Control | Movement | Queue Storage           |        |                    |                     |
|----|---|----------------------|----------|-------------------------|--------|--------------------|---------------------|
|    |   |                      |          | <sup>(1)</sup> Existing | AASHTO | <sup>(2)</sup> HCM | Recommended         |
| 1  | 32 <sup>nd</sup> Street & Deer Valley Dr. | Signal               | NB Left  | 140'                    | 25'    | 25'                | No Change           |
|    |   |                      | SB Left  | 110'                    | 225'   | 125'               | No Change           |
|    |   |                      | EB Left  | 150'                    | 75'    | 25'                | No Change           |
|    |   |                      | WB Left  | 160'                    | 50'    | 25'                | No Change           |
|    |   |                      | SB Right | 110'                    | 75'    | 25'                | No Change           |
| 2  | 34 <sup>th</sup> St. & Deer Valley Dr.    | 1-Way Stop (NB)      | NB Left  | Drop Lane               | 100'   | 105'               | No Change           |
|    |   |                      | WB Left  | Drop Lane               | 100'   | 25'                | No Change           |
|    |   |                      | NB Right | 125'                    | 150'   | 40'                | No Change           |
| 7  | Black Mountain Blvd. & Rough Rider Rd.    | 2-Way Stop (EB/WB)   | NB Left  | 175'                    | 25'    | 25'                | No Change           |
|    |   |                      | SB Left  | 160'                    | 25'    | <25'               | No Change           |
|    |   |                      | EB Left  | 160'                    | 25'    | 25'                | No Change           |
|    |   |                      | WB Left  | 150'                    | 25'    | 25'                | No Change           |
| 8  | Black Mountain Blvd. & Bryce Ln.          | 2-Way Stop (EB/WB)   | NB Left  | 160'                    | 25'    | 25'                | No Change           |
|    |   |                      | SB Left  | 180'                    | 25'    | 25'                | No Change           |
| 9  | Black Mountain Blvd. & Deer Valley Dr.    | Signal               | NB Left  | <sup>(3)</sup> 510'     | 650'   | 320'               | No Change           |
|    |   |                      | SB Left  | <sup>(3)</sup> 480'     | 175'   | 75'                | No Change           |
|    |   |                      | EB Left  | <sup>(3)</sup> 460'     | 200'   | 110'               | No Change           |
|    |   |                      | WB Left  | <sup>(3)</sup> 480'     | 475'   | 265'               | No Change           |
|    |   |                      | NB Right | <sup>(4)</sup> 170'     | 500'   | <25'               | No Change           |
|    |   |                      | EB Right | <sup>(4)</sup> 260'     | 850'   | <25'               | No Change           |
| 10 | Black Mountain Blvd. & Mayo Blvd.         | Signal               | NB Left  | 220'                    | 200'   | 145'               | No Change           |
|    |   |                      | SB Left  | 240'                    | 200'   | 135'               | No Change           |
|    |   |                      | EB Left  | 150'                    | 600'   | 325'               | No Change           |
|    |   |                      | WB Left  | 205'                    | 550'   | 295'               | No Change           |
|    |   |                      | NB Right | <sup>(4)</sup> 55'      | 275'   | <25'               | No Change           |
|    |   |                      | SB Right | 245'                    | 200'   | 90'                | No Change           |
|    |   |                      | WB Right | Drop Lane               | 250'   | 90'                | No Change           |
| 11 | Black Mountain Blvd. & HS Parking Drwy.   | 1-Way Stop (EB)      | SB Right | Drop Lane               | 425'   | <25'               | No Change           |
| 13 | Lone Cactus Dr. & Mayo Blvd.              | 2-Way Stop (NB/SB)   | EB Left  | 150'                    | 50'    | 25'                | No Change           |
|    |   |                      | WB Left  | 150'                    | 25'    | 25'                | No Change           |
| 14 | Aviano Way & Deer Valley Rd.              | 2-Way Stop (NB/SB)   | NB Left  | 180'                    | 25'    | 135'               | No Change           |
|    |   |                      | SB Left  | 75'                     | 25'    | 70'                | No Change           |
|    |   |                      | EB Left  | 130'                    | 50'    | 25'                | No Change           |
|    |   |                      | WB Left  | 125'                    | 50'    | 25'                | No Change           |
| 15 | 40 <sup>th</sup> St. & Mayo Blvd.         | 1-Way Stop (EB)      | NB Left  | 165'                    | 25'    | 25'                | No Change           |
|    |   |                      | EB Left  | 130'                    | 150'   | 25'                | No Change           |
| D  | Access D & Deer Valley Dr.                | 1-Way Stop (NB)      | EB right |                         | 100'   | <25'               | <sup>(6)</sup> 105' |
| G  | Black Mountain Pkwy. & Access G           | 1-Way Stop (EB)      | NB Left  |                         | 50'    | 25'                | <sup>(6)</sup> 105' |

- 
- (1) Measured from beginning of stop bar
  - (2) HCM 95<sup>th</sup> percentile queue reported in vehicles/lane, assuming 1 vehicle ~ 25 feet.
  - (3) Storage length is the sum of dual lanes.
  - (4) Yield channelized right-turn lane.
  - (5) Right-turn driveway falls within the upstream right-turn lane storage.
  - (6) Proposed site plan indicates approximately 105' of storage length.

The recommended storage lengths in **Table 6** are provided for study horizon year 2029 using the total traffic projections. Proposed lane configurations are shown in **Figure 12**.

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**Figure 12: Proposed Lane Configurations and Traffic Controls**

## 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 City of Phoenix maintains sight distance requirements within their City Code, standard details and development services guidelines. The City of Phoenix measures sight distance using AASHTO methodology except that the sight triangle from the driveway is measured from the center of the egress lane, 8 feet back from the curb return line. Sight distance calculations according to AASHTO guidelines are summarized in **Table 7**.

**Table 7 – AASHTO Sight Distance Requirements**

| Access   | Posted Speed Limit/<br>Design Speed (mph) | Sight Distance Along Roadway     |                                |                           |
|----------|---|----------------------------------|--------------------------------|---------------------------|
|          |   | Left of Driveway<br>(Case B2/B3) | Right of Driveway<br>(Case B1) | On Major Road<br>(Case F) |
| Access A | 15/20                                     | 195'                             | 225'                           | 165'                      |
| Access B | 15/20                                     | 195'                             | 225'                           | 165'                      |
| Access C | 15/20                                     | 195'                             | 225'                           | 165'                      |
| Access D | 40/50                                     | 590'                             | Restricted                     | Restricted                |
| Access E | 15/20                                     | 195'                             | 225'                           | 165'                      |
| Access F | 40/50                                     | 590'                             | Restricted                     | Restricted                |
| Access G | 40/45                                     | 590'                             | 665'                           | 515'                      |
| Access H | 40/50                                     | 555'                             | Restricted                     | Restricted                |

The City Code also states, “On all corner lots at public street intersections in any area zoned as residential there shall be no fence, wall, hedge or other landscaping higher than three feet, nor any obstruction to vision other than a post, column or tree not exceeding one foot in its greatest cross-sectional dimension between a height of three feet and a height of ten feet above the established grade of either street within that triangular area (unobstructed sight triangle) formed by the lot lines on the street side of such lot and a diagonal line joining points located at distances from the point of their intersection as enumerated in the [previous] table.”

Sight visibility should be provided at all driveways according to the distances shown in **Table 7** and that sight triangles at public intersections are maintained according to Section 31-13 of the City Code. All vegetation and trees should be maintained according to City of Phoenix regulations. Sight distance worksheets and Section 31-13 of the City Code have been included within **Appendix N**.

## CONCLUSIONS

The following conclusions and recommendations have been documented in this study:

### GENERAL

- The proposed development is anticipated to generate 10,660 weekday new daily trips, 729 new trips during the AM peak hour, and 723 new trips during the PM peak hour.

### EXISTING

- The results of the existing conditions analysis indicate that all study intersections operate with acceptable levels of service (LOS D or better) with the exception of the northbound approach at the intersection of **Black Mountain Boulevard & Deer Valley Drive** and the northbound and southbound left at the intersection of **Aviano Way & Deer Valley Drive**.
- The intersection of **Black Mountain Boulevard and Deer Valley Road** overall intersection is operating with acceptable levels of service (LOS D) during all three peak hours. However, the northbound approach is experiencing some delays during the AM and School PM peak hour. The northbound approach delays are 60.0 sec/veh and 81.4 sec/veh during the AM and School PM peak hour, respectively. It is expected that with signal timing adjustments by allocating more time to the northbound left movement will improve the delays and levels of service of the northbound approach.
- The intersection of **Aviano Way and Deer Valley Drive** is experiencing some delays in the northbound left and southbound left approaches during both AM and PM peak hour due to the number of vehicles anticipated to make the left out onto the arterial roadway. During the AM peak hour, the northbound and southbound left delays are 146.8 sec/veh and 87.1 sec/veh, respectively. During the PM peak hour, the northbound and southbound left delays are 48.0 sec/veh and 44.1 sec/veh, respectively. Side streets delays along a major road during on street peak hour are not uncommon. Delays are typically due to the number through volumes which does not allow enough gaps for side street traffic to turn onto the major road.

### 2024 OPENING YEAR

- The intersection of **34<sup>th</sup> Street & Deer Valley Drive** is expected to operate with a delay in the northbound left during the School PM peak hour. The delay is due to not enough gaps from downstream signal to allow vehicles enough time to clear the intersection. Mitigation of 2-vehicles storage for the northbound approach was applied at the intersection. In addition, signal timing adjustment to the intersection of 32<sup>nd</sup> Street & Deer Valley Drive was implemented for the intersection to function as an actuated-coordinated along the east-west approaches. With the mitigation of the signalized intersection, the School PM peak hour northbound left approach improved from a LOS F to a LOS D.
- The intersection of **Aviano Way & Deer Valley Drive** is experiencing some delays in the northbound left and southbound left movements during the AM, PM, and School PM peak hour without and with the Project. Side street delays along a major arterial roadway during on street

peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.

- The intersection of **Black Mountain Boulevard & Access G** is experiencing a delay of LOS F in the eastbound left approach during the AM, PM, and School PM peak hour. The delays are due to not enough gaps from downstream signal to allow vehicles enough time to clear the intersection. Mitigation signal timing adjustment to the intersection of Black Mountain Boulevard & Mayo Boulevard was implemented for the intersection to function as an actuated-coordinated along the east-west approaches. With the mitigation of the signalized intersection, the AM peak hour eastbound left approach improved to a delay of LOS C, the PM peak hour eastbound left approach improved to a delay of LOS B, and the School PM peak hour eastbound left approach improved to a delay of LOS C.

#### 2029 OPENING YEAR

- The intersection of **34<sup>th</sup> Street & Deer Valley Drive** is expected to operate with a delay of 35.6 sec/veh (LOS E) in the northbound left during the School PM peak hour. The delay is less than one second greater than LOS D. Side street delays along a major arterial roadway during on street peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.
- The intersection of **Black Mountain Boulevard & Deer Valley Drive** is operating with some delays in the eastbound during the AM and PM peak hour and delay in the westbound approach during the School PM peak hour. The eastbound approach is experiencing a delay of LOS E during the AM, PM, and peak hour. The westbound approach is anticipated to experience a delay of LOS E during the School PM peak hour. Signal timing adjustment were made to provide additional initial green time to the eastbound left phase during the AM and PM peak hour to improve the delay to LOS D. Signal timing adjustments were made to provide additional initial green time to the westbound left phase during the School PM peak hour improving the delay to LOS D.
- The intersection of **Black Mountain Boulevard & Mayo Boulevard** is experiencing a delay of LOS E the southbound approach during the AM peak hour. Signal timing adjustments of allocating an additional green time to the southbound approach was made to improve the southbound approach delay to LOS D.
- The intersection of **Aviano Way & Deer Valley Drive** is experiencing some delays in the northbound left and southbound left movements during all three peak hours without and with the Project. Side street delays along a major arterial roadway during on street peak hour is not uncommon. Delays are typically due to not enough gaps for side street traffic to turn onto the major road.
- Delays are typically due to not enough gaps for side street traffic to turn onto the major road.

QUEUE STORAGE

- The recommended storage lengths are provided for study horizon year 2029 using the total traffic projections.

SIGHT DISTANCE

- Sight visibility should be provided at all driveways according to the distances calculated and that sight triangles at public intersections are maintained according to Section 31-13 of the City Code. All vegetation and trees should be maintained according to City of Phoenix regulations.

DRAFT

## LIST OF REFERENCES

*Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis.* Transportation Research Board, Washington, D.C., 2018.

*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, 11th Edition,* Institute of Transportation Engineers, Washington, D.C., 2021.

*Trip Generation Handbook, 3rd Edition, Institute of Transportation Engineers,* Washington, D.C., 2014.

*City of Phoenix Ordinance Section 31-13,* City of Phoenix, Arizona, November 2010.

*Street Planning and Design Guidelines, 12.1.2 Traffic Impact Studies,* City of Phoenix, Arizona, December 2009.

## TECHNICAL APPENDICES

|                    |   |
|--------------------|---|
| <b>APPENDIX A:</b> | <b>REVIEW COMMENTS AND RESPONSES (RESERVED)</b> |
| <b>APPENDIX B:</b> | <b>EXISTING TRAFFIC COUNTS</b>                  |
| <b>APPENDIX C:</b> | <b>EXISTING PEAK HOUR ANALYSIS</b>              |
| <b>APPENDIX D:</b> | <b>INTERNAL CAPTURE CALCULATIONS</b>            |
| <b>APPENDIX E:</b> | <b>TRIP GENERATION CALCULATIONS</b>             |
| <b>APPENDIX F:</b> | <b>TRIP DISTRIBUTION CALCULATIONS</b>           |
| <b>APPENDIX G:</b> | <b>BACKGROUND GROWTH CALCULATIONS</b>           |
| <b>APPENDIX H:</b> | <b>2024 NO BUILD PEAK HOUR ANALYSIS</b>         |
| <b>APPENDIX I:</b> | <b>2029 NO BUILD PEAK HOUR ANALYSIS</b>         |
| <b>APPENDIX J:</b> | <b>2024 BUILD PEAK HOUR ANALYSIS</b>            |
| <b>APPENDIX K:</b> | <b>2029 BUILD PEAK HOUR ANALYSIS</b>            |
| <b>APPENDIX L:</b> | <b>MITIGATION PEAK HOUR ANALYSIS</b>            |
| <b>APPENDIX M:</b> | <b>QUEUE STORAGE ANALYSIS</b>                   |
| <b>APPENDIX N:</b> | <b>SIGHT DISTANCE ANALYSIS</b>                  |

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**APPENDIX A**

**REVIEW COMMENTS AND RESPONSES (Reserved)**



**APPENDIX B**

**EXISTING TRAFFIC COUNTS**

DRAFT

### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 32nd St DATE: 08/16/22 LOCATION: Phoenix  
E-W STREET: Deer Valley Dr DAY: TUESDAY PROJECT#: 22-1469-011

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 7:00 AM  | 6          | 1  | 8  | 39         | 1  | 3  | 2         | 303 | 2  | 4         | 132 | 7  | 508   |
| 7:15 AM  | 3          | 0  | 5  | 18         | 0  | 6  | 8         | 290 | 1  | 3         | 150 | 11 | 495   |
| 7:30 AM  | 1          | 2  | 5  | 26         | 1  | 10 | 6         | 235 | 2  | 1         | 105 | 6  | 400   |
| 7:45 AM  | 1          | 0  | 1  | 20         | 0  | 0  | 6         | 319 | 1  | 3         | 65  | 10 | 426   |
| 8:00 AM  | 3          | 0  | 3  | 33         | 0  | 9  | 11        | 264 | 2  | 2         | 57  | 7  | 391   |
| 8:15 AM  | 1          | 0  | 5  | 30         | 0  | 8  | 8         | 292 | 3  | 2         | 72  | 11 | 432   |
| 8:30 AM  | 3          | 1  | 7  | 28         | 1  | 10 | 10        | 237 | 2  | 2         | 161 | 10 | 472   |
| 8:45 AM  | 0          | 1  | 1  | 19         | 0  | 7  | 7         | 196 | 3  | 0         | 97  | 16 | 347   |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|------|-------|
| Volumes    | 18    | 5    | 35    | 213   | 3    | 53    | 58   | 2136  | 16   | 17   | 839   | 78   | 3471  |
| Approach % | 31.03 | 8.62 | 60.34 | 79.18 | 1.12 | 19.70 | 2.62 | 96.65 | 0.72 | 1.82 | 89.83 | 8.35 |       |
| App/Depart | 58    | /    | 141   | 269   | /    | 36    | 2210 | /     | 2384 | 934  | /     | 910  |       |

AM Peak Hr Begins at: 700 AM

| PEAK    | Volumes                                   | Approach %  |
|---------|---|---|
| Volumes | 11 3 19 103 2 19 22 1147 6 11 452 34 1829 | 33.33 9.09 57.58 83.06 1.61 15.32 1.87 97.62 0.51 2.21 90.95 6.84 |

| PEAK HR. FACTOR:              |
|-------------------------------|
| 0.550 0.721 0.901 0.758 0.900 |

CONTROL: Signal  
COMMENT 1: 33.684117, -112.013837  
GPS:

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 32nd St DATE: 08/16/22 LOCATION: Phoenix  
E-W STREET: Deer Valley Dr DAY: TUESDAY PROJECT#: 22-1469-011

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM | 1          | 0  | 2  | 12         | 0  | 4  | 2         | 129 | 2  | 1         | 57  | 13 | 223   |
| 2:15 PM | 3          | 2  | 3  | 15         | 1  | 3  | 2         | 163 | 4  | 2         | 208 | 23 | 429   |
| 2:30 PM | 1          | 1  | 1  | 15         | 0  | 5  | 2         | 93  | 1  | 0         | 94  | 11 | 224   |
| 2:45 PM | 2          | 1  | 2  | 22         | 0  | 5  | 9         | 117 | 1  | 2         | 102 | 15 | 278   |
| 3:00 PM | 1          | 2  | 5  | 21         | 1  | 10 | 8         | 105 | 1  | 2         | 85  | 17 | 258   |
| 3:15 PM | 2          | 0  | 1  | 24         | 2  | 15 | 7         | 114 | 2  | 5         | 152 | 22 | 346   |
| 3:30 PM | 2          | 0  | 3  | 20         | 1  | 10 | 7         | 99  | 0  | 5         | 142 | 19 | 308   |
| 3:45 PM | 1          | 1  | 1  | 14         | 0  | 5  | 10        | 140 | 2  | 3         | 140 | 22 | 339   |
| 4:00 PM | 1          | 2  | 2  | 16         | 0  | 8  | 5         | 126 | 3  | 2         | 122 | 19 | 306   |
| 4:15 PM | 0          | 0  | 0  | 14         | 1  | 8  | 3         | 130 | 1  | 2         | 145 | 20 | 324   |
| 4:30 PM | 1          | 1  | 0  | 10         | 0  | 6  | 7         | 116 | 1  | 2         | 126 | 12 | 282   |
| 4:45 PM | 0          | 0  | 2  | 15         | 0  | 8  | 6         | 130 | 1  | 4         | 141 | 24 | 331   |
| 5:00 PM | 1          | 0  | 2  | 14         | 0  | 9  | 12        | 144 | 2  | 4         | 127 | 17 | 332   |
| 5:15 PM | 0          | 0  | 4  | 6          | 1  | 3  | 10        | 134 | 0  | 2         | 148 | 24 | 332   |
| 5:30 PM | 0          | 0  | 3  | 9          | 0  | 4  | 4         | 122 | 1  | 6         | 137 | 21 | 307   |
| 5:45 PM | 1          | 0  | 3  | 8          | 0  | 5  | 14        | 108 | 2  | 1         | 118 | 27 | 287   |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|------|-------|------|------|-------|-------|-------|
| Volumes    | 17    | 10    | 34    | 235   | 7    | 108   | 108  | 1970  | 24   | 43   | 2044  | 306   | 4906  |
| Approach % | 27.87 | 16.39 | 55.74 | 67.14 | 2.00 | 30.86 | 5.14 | 93.72 | 1.14 | 1.80 | 85.42 | 12.79 |       |
| App/Depart | 61    | /     | 424   | 350   | /    | 74    | 2102 | /     | 2239 | 2393 | /     | 2169  |       |

PM Peak Hr Begins at: 315 PM

| PEAK    | Volumes                               | Approach %  |
|---------|---------------------------------------|---|
| Volumes | 6 3 7 74 3 38 29 479 7 15 556 82 1299 | 37.50 18.75 43.75 64.35 2.61 33.04 5.63 93.01 1.36 2.30 85.15 12.56 |

| PEAK HR. FACTOR:              |
|-------------------------------|
| 0.800 0.701 0.847 0.912 0.939 |

CONTROL: Signal  
COMMENT 1: 33.684117, -112.013837  
GPS:

## Intersection Turning Movement



N-S STREET: 32nd St      DATE: 08/16/22      LOCATION: Phoenix  
 E-W STREET: Deer Valley Dr      DAY: TUESDAY      PROJECT# 22-1469-011

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 1  | 0  | 1          | 1  | 1  | 1         | 3   | 0  | 1         | 3   | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM | 1          | 0  | 2  | 12         | 0  | 4  | 2         | 129 | 2  | 1         | 57  | 13 | 223   |
| 2:15 PM | 3          | 2  | 3  | 15         | 1  | 3  | 2         | 163 | 4  | 2         | 208 | 23 | 429   |
| 2:30 PM | 1          | 1  | 1  | 15         | 0  | 5  | 2         | 93  | 1  | 0         | 94  | 11 | 224   |
| 2:45 PM | 2          | 1  | 2  | 22         | 0  | 5  | 9         | 117 | 1  | 2         | 102 | 15 | 278   |
| 3:00 PM | 1          | 2  | 5  | 21         | 1  | 10 | 8         | 105 | 1  | 2         | 85  | 17 | 258   |
| 3:15 PM | 2          | 0  | 1  | 24         | 2  | 15 | 7         | 114 | 2  | 5         | 152 | 22 | 346   |
| 3:30 PM | 2          | 0  | 3  | 20         | 1  | 10 | 7         | 99  | 0  | 5         | 142 | 19 | 308   |
| 3:45 PM | 1          | 1  | 1  | 14         | 0  | 5  | 10        | 140 | 2  | 3         | 140 | 22 | 339   |
| 4:00 PM | 1          | 2  | 2  | 16         | 0  | 8  | 5         | 126 | 3  | 2         | 122 | 19 | 306   |
| 4:15 PM | 0          | 0  | 0  | 14         | 1  | 8  | 3         | 130 | 1  | 2         | 145 | 20 | 324   |
| 4:30 PM | 1          | 1  | 0  | 10         | 0  | 6  | 7         | 116 | 1  | 2         | 126 | 12 | 282   |
| 4:45 PM | 0          | 0  | 2  | 15         | 0  | 8  | 6         | 130 | 1  | 4         | 141 | 24 | 331   |
| 5:00 PM | 1          | 0  | 2  | 14         | 0  | 9  | 12        | 144 | 2  | 4         | 127 | 17 | 332   |
| 5:15 PM | 0          | 0  | 4  | 6          | 1  | 3  | 10        | 134 | 0  | 2         | 148 | 24 | 332   |
| 5:30 PM | 0          | 0  | 3  | 9          | 0  | 4  | 4         | 122 | 1  | 6         | 137 | 21 | 307   |
| 5:45 PM | 1          | 0  | 3  | 8          | 0  | 5  | 14        | 108 | 2  | 1         | 118 | 27 | 287   |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|------|-------|------|------|-------|-------|-------|
| Volumes    | 17    | 10    | 34    | 235   | 7    | 108   | 108  | 1970  | 24   | 43   | 2044  | 306   | 4906  |
| Approach % | 27.87 | 16.39 | 55.74 | 67.14 | 2.00 | 30.86 | 5.14 | 93.72 | 1.14 | 1.80 | 85.42 | 12.79 |       |
| App/Depart | 61    | /     | 424   | 350   | /    | 74    | 2102 | /     | 2239 | 2393 | /     | 2169  |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |       |       |       |       |      |       |      |       |      |      |       |       |      |
|------------|-------|-------|-------|-------|------|-------|------|-------|------|------|-------|-------|------|
| Volumes    | 7     | 4     | 8     | 64    | 1    | 17    | 15   | 502   | 8    | 5    | 461   | 62    | 1154 |
| Approach % | 36.84 | 21.05 | 42.11 | 78.05 | 1.22 | 20.73 | 2.86 | 95.62 | 1.52 | 0.95 | 87.31 | 11.74 |      |

PEAK HR. FACTOR:

|  |       |  |       |  |       |  |       |  |       |
|--|-------|--|-------|--|-------|--|-------|--|-------|
|  | 0.594 |  | 0.759 |  | 0.777 |  | 0.567 |  | 0.672 |
|--|-------|--|-------|--|-------|--|-------|--|-------|

CONTROL: Signal  
 COMMENT 1: 0  
 GPS: 33.684117, -112.013837

### Intersection Turning Movement Prepared by:



N-S STREET: **34th St**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Deer Valley Dr**      DAY: **TUESDAY**      PROJECT# **22-1469-001**

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |     | WESTBOUND |     |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|-----|-----------|-----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER  | WL        | WT  | WR |       |
| 6:00 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0   | 0   | 0         | 0   | 0  | 0     |
| 6:15 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0   | 0   | 0         | 0   | 0  | 0     |
| 6:30 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0   | 0   | 0         | 0   | 0  | 0     |
| 6:45 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 0   | 0   | 0         | 0   | 0  | 0     |
| 7:00 AM  | 0          | 0  | 28 | 0          | 0  | 0  | 0         | 199 | 151 | 44        | 143 | 0  | 565   |
| 7:15 AM  | 11         | 0  | 80 | 0          | 0  | 0  | 0         | 203 | 110 | 18        | 153 | 0  | 575   |
| 7:30 AM  | 1          | 0  | 9  | 0          | 0  | 0  | 0         | 256 | 10  | 2         | 111 | 0  | 389   |
| 7:45 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 336 | 4   | 0         | 78  | 0  | 418   |
| 8:00 AM  | 0          | 0  | 1  | 0          | 0  | 0  | 0         | 296 | 4   | 2         | 66  | 0  | 369   |
| 8:15 AM  | 0          | 0  | 4  | 0          | 0  | 0  | 0         | 324 | 3   | 4         | 85  | 0  | 420   |
| 8:30 AM  | 1          | 0  | 1  | 0          | 0  | 0  | 0         | 272 | 0   | 1         | 172 | 0  | 447   |
| 8:45 AM  | 0          | 0  | 1  | 0          | 0  | 0  | 0         | 211 | 5   | 2         | 113 | 0  | 332   |
| 9:00 AM  |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |     |           |     |    |       |

| TOTAL      | NL   | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|------|------|------|------|-------|-------|------|-------|------|-------|
| Volumes    | 13   | 0    | 124   | 0    | 0    | 0    | 0    | 2097  | 287   | 73   | 921   | 0    | 3515  |
| Approach % | 9.49 | 0.00 | 90.51 | #### | #### | #### | 0.00 | 87.96 | 12.04 | 7.34 | 92.66 | 0.00 |       |
| App/Depart | 137  | /    | 0     | 0    | /    | 360  | 2384 | /     | 2221  | 994  | /     | 934  |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | Volumes                                  | Approach %                                  |
|------------|--|---|
| Volumes    | 12   0   117   0   0   0   0             | 994   275   64   485   0                    |
| Approach % | 9.30   0.00   90.70   ####   ####   #### | 0.00   78.33   21.67   11.66   88.34   0.00 |

| PEAK HR. FACTOR:  |
|---|
| 0.354                   0.000                   0.906                   0.734                   0.847 |

CONTROL: 1-Way Stop (NB)  
 COMMENT 1: 33.684150, -112.007566  
 GPS:

### Intersection Turning Movement



N-S STREET: **34th St**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Deer Valley Dr**      DAY: **TUESDAY**      PROJECT# **22-1469-001**

| LANES:  | NORTHBOUND |    |     | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|-----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR  | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 0   | 0  | 0         | 0   | 0  | 0     |
| 1:15 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 0   | 0  | 0         | 0   | 0  | 0     |
| 1:30 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 0   | 0  | 0         | 0   | 0  | 0     |
| 1:45 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 0   | 0  | 0         | 0   | 0  | 0     |
| 2:00 PM | 1          | 0  | 17  | 0          | 0  | 0  | 0         | 131 | 12 | 1         | 70  | 0  | 232   |
| 2:15 PM | 5          | 0  | 101 | 0          | 0  | 0  | 0         | 129 | 52 | 6         | 228 | 0  | 521   |
| 2:30 PM | 5          | 0  | 9   | 0          | 0  | 0  | 0         | 102 | 7  | 1         | 100 | 0  | 224   |
| 2:45 PM | 5          | 0  | 3   | 0          | 0  | 0  | 0         | 136 | 5  | 1         | 114 | 0  | 264   |
| 3:00 PM | 2          | 0  | 6   | 0          | 0  | 0  | 0         | 130 | 1  | 3         | 102 | 0  | 244   |
| 3:15 PM | 2          | 0  | 4   | 0          | 0  | 0  | 0         | 134 | 5  | 3         | 177 | 0  | 325   |
| 3:30 PM | 2          | 0  | 2   | 0          | 0  | 0  | 0         | 120 | 2  | 2         | 164 | 0  | 292   |
| 3:45 PM | 0          | 0  | 1   | 0          | 0  | 0  | 0         | 152 | 3  | 0         | 165 | 0  | 321   |
| 4:00 PM | 0          | 0  | 3   | 0          | 0  | 0  | 0         | 144 | 0  | 0         | 143 | 0  | 290   |
| 4:15 PM | 5          | 0  | 1   | 0          | 0  | 0  | 0         | 143 | 1  | 3         | 162 | 0  | 315   |
| 4:30 PM | 0          | 0  | 2   | 0          | 0  | 0  | 0         | 123 | 3  | 2         | 140 | 0  | 270   |
| 4:45 PM | 0          | 0  | 1   | 0          | 0  | 0  | 0         | 142 | 5  | 1         | 169 | 0  | 318   |
| 5:00 PM | 1          | 0  | 2   | 0          | 0  | 0  | 0         | 156 | 4  | 0         | 147 | 0  | 310   |
| 5:15 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 140 | 4  | 1         | 174 | 0  | 319   |
| 5:30 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 131 | 3  | 2         | 164 | 0  | 300   |
| 5:45 PM | 2          | 0  | 0   | 0          | 0  | 0  | 0         | 115 | 4  | 0         | 144 | 0  | 265   |
| 6:00 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 30    | 0    | 152   | 0    | 0    | 0    | 0    | 2128  | 111  | 26   | 2363  | 0    | 4810  |
| Approach % | 16.48 | 0.00 | 83.52 | #### | #### | #### | 0.00 | 95.04 | 4.96 | 1.09 | 98.91 | 0.00 |       |
| App/Depart | 182   | /    | 0     | 0    | /    | 137  | 2239 | /     | 2280 | 2389 | /     | 2393 |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | Volumes                                   | Approach %                                |
|------------|---|---|
| Volumes    | 4   0   10   0   0   0   0                | 550   10   5   649   0                    |
| Approach % | 28.57   0.00   71.43   ####   ####   #### | 0.00   98.21   1.79   0.76   99.24   0.00 |

| PEAK HR. FACTOR:  |
|---|
| 0.583                   0.000                   0.903                   0.908                   0.945 |

CONTROL: 1-Way Stop (NB)  
 COMMENT 1: 33.684150, -112.007566  
 GPS:

## Intersection Turning Movement



N-S STREET: 34th St      DATE: 08/16/22      LOCATION: Phoenix  
 E-W STREET: Deer Valley Dr      DAY: TUESDAY      PROJECT# 22-1469-001

| LANES:  | NORTHBOUND |    |     | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|-----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR  | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 1  | 0   | 0          | 0  | 0  | 0         | 3   | 0  | 1         | 3   | 0  |       |
| 1:15 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM | 1          | 0  | 17  | 0          | 0  | 0  | 0         | 131 | 12 | 1         | 70  | 0  | 232   |
| 2:15 PM | 5          | 0  | 101 | 0          | 0  | 0  | 0         | 129 | 52 | 6         | 228 | 0  | 521   |
| 2:30 PM | 5          | 0  | 9   | 0          | 0  | 0  | 0         | 102 | 7  | 1         | 100 | 0  | 224   |
| 2:45 PM | 5          | 0  | 3   | 0          | 0  | 0  | 0         | 136 | 5  | 1         | 114 | 0  | 264   |
| 3:00 PM | 2          | 0  | 6   | 0          | 0  | 0  | 0         | 130 | 1  | 3         | 102 | 0  | 244   |
| 3:15 PM | 2          | 0  | 4   | 0          | 0  | 0  | 0         | 134 | 5  | 3         | 177 | 0  | 325   |
| 3:30 PM | 2          | 0  | 2   | 0          | 0  | 0  | 0         | 120 | 2  | 2         | 164 | 0  | 292   |
| 3:45 PM | 0          | 0  | 1   | 0          | 0  | 0  | 0         | 152 | 3  | 0         | 165 | 0  | 321   |
| 4:00 PM | 0          | 0  | 3   | 0          | 0  | 0  | 0         | 144 | 0  | 0         | 143 | 0  | 290   |
| 4:15 PM | 5          | 0  | 1   | 0          | 0  | 0  | 0         | 143 | 1  | 3         | 162 | 0  | 315   |
| 4:30 PM | 0          | 0  | 2   | 0          | 0  | 0  | 0         | 123 | 3  | 2         | 140 | 0  | 270   |
| 4:45 PM | 0          | 0  | 1   | 0          | 0  | 0  | 0         | 142 | 5  | 1         | 169 | 0  | 318   |
| 5:00 PM | 1          | 0  | 2   | 0          | 0  | 0  | 0         | 156 | 4  | 0         | 147 | 0  | 310   |
| 5:15 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 140 | 4  | 1         | 174 | 0  | 319   |
| 5:30 PM | 0          | 0  | 0   | 0          | 0  | 0  | 0         | 131 | 3  | 2         | 164 | 0  | 300   |
| 5:45 PM | 2          | 0  | 0   | 0          | 0  | 0  | 0         | 115 | 4  | 0         | 144 | 0  | 265   |
| 6:00 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |     |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 30    | 0    | 152   | 0    | 0    | 0    | 0    | 2128  | 111  | 26   | 2363  | 0    | 4810  |
| Approach % | 16.48 | 0.00 | 83.52 | #### | #### | #### | 0.00 | 95.04 | 4.96 | 1.09 | 98.91 | 0.00 |       |
| App/Depart | 182   | /    | 0     | 0    | /    | 137  | 2239 | /     | 2280 | 2389 | /     | 2393 |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |       |      |       |      |      |      |      |       |       |      |       |      |      |
|------------|-------|------|-------|------|------|------|------|-------|-------|------|-------|------|------|
| Volumes    | 16    | 0    | 130   | 0    | 0    | 0    | 0    | 498   | 76    | 9    | 512   | 0    | 1241 |
| Approach % | 10.96 | 0.00 | 89.04 | #### | #### | #### | 0.00 | 86.76 | 13.24 | 1.73 | 98.27 | 0.00 |      |

PEAK HR. FACTOR:      |      0.344      |      0.000      |      0.793      |      0.557      |      0.595      |

CONTROL: 1-Way Stop (NB)  
 COMMENT 1: 0  
 GPS: 33.684150, -112.007566

### Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.  
520.316.6745



veracitytrafficgroup

N-S STREET: 34th St DATE: 08/16/22 LOCATION: Phoenix  
E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-002

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 1  | 0  | 0         | 1  | 0  | 0         | 1  | 1  | 19    |
| 6:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 7:00 AM  | 0          | 2  | 3  | 180        | 15 | 0  | 1         | 7  | 0  | 12        | 0  | 25 | 245   |
| 7:15 AM  | 0          | 3  | 1  | 120        | 8  | 0  | 0         | 1  | 0  | 7         | 1  | 88 | 229   |
| 7:30 AM  | 0          | 5  | 13 | 7          | 5  | 0  | 1         | 0  | 0  | 10        | 0  | 4  | 45    |
| 7:45 AM  | 0          | 0  | 1  | 1          | 3  | 0  | 0         | 3  | 0  | 2         | 1  | 0  | 11    |
| 8:00 AM  | 0          | 1  | 6  | 1          | 5  | 0  | 0         | 0  | 0  | 5         | 0  | 0  | 18    |
| 8:15 AM  | 0          | 3  | 2  | 5          | 2  | 0  | 0         | 0  | 0  | 3         | 0  | 1  | 16    |
| 8:30 AM  | 0          | 2  | 1  | 0          | 1  | 0  | 0         | 1  | 0  | 4         | 0  | 0  | 9     |
| 8:45 AM  | 0          | 1  | 4  | 4          | 3  | 0  | 0         | 0  | 0  | 7         | 0  | 0  | 19    |
| 9:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL    | ST    | SR   | EL    | ET    | ER   | WL    | WT   | WR    | TOTAL |
|------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|------|-------|-------|
| Volumes    | 0    | 17    | 31    | 318   | 42    | 0    | 2     | 12    | 0    | 50    | 2    | 118   | 592   |
| Approach % | 0.00 | 35.42 | 64.58 | 88.33 | 11.67 | 0.00 | 14.29 | 85.71 | 0.00 | 29.41 | 1.18 | 69.41 |       |
| App/Depart | 48   | /     | 137   | 360   | /     | 92   | 14    | /     | 361  | 170   | /    | 2     |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL   | NT    | NR    | SL    | ST   | SR   | EL    | ET    | ER   | WL    | WT   | WR    | TOTAL |
|------------|------|-------|-------|-------|------|------|-------|-------|------|-------|------|-------|-------|
| Volumes    | 0    | 10    | 18    | 308   | 31   | 0    | 2     | 11    | 0    | 31    | 2    | 117   | 530   |
| Approach % | 0.00 | 35.71 | 64.29 | 90.86 | 9.14 | 0.00 | 15.38 | 84.62 | 0.00 | 20.67 | 1.33 | 78.00 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL    | ST | SR    | EL | ET    | ER | WL    | WT | WR | TOTAL |
|------------------|----|-------|----|-------|----|-------|----|-------|----|-------|----|----|-------|
|                  |    | 0.389 |    | 0.435 |    | 0.406 |    | 0.391 |    | 0.541 |    |    |       |

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1: 33.682227, -112.008737  
GPS:

### Intersection Turning Movement



FIELD DATA SERVICES OF ARIZONA, INC.  
520.316.6745



veracitytrafficgroup

N-S STREET: 34th St DATE: 08/16/22 LOCATION: Phoenix  
E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-002

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 0          | 6  | 7  | 11         | 2  | 0  | 1         | 2  | 1  | 3         | 0  | 11 | 44    |
| 2:15 PM | 0          | 8  | 18 | 57         | 1  | 0  | 37        | 29 | 0  | 6         | 0  | 61 | 217   |
| 2:30 PM | 0          | 8  | 8  | 8          | 0  | 0  | 0         | 2  | 0  | 2         | 0  | 6  | 34    |
| 2:45 PM | 1          | 7  | 11 | 5          | 1  | 0  | 1         | 0  | 0  | 3         | 0  | 0  | 29    |
| 3:00 PM | 0          | 6  | 11 | 4          | 0  | 0  | 2         | 1  | 0  | 1         | 0  | 0  | 25    |
| 3:15 PM | 0          | 3  | 3  | 5          | 3  | 0  | 0         | 2  | 0  | 0         | 0  | 3  | 19    |
| 3:30 PM | 0          | 3  | 6  | 4          | 0  | 0  | 0         | 1  | 0  | 1         | 1  | 1  | 17    |
| 3:45 PM | 0          | 1  | 6  | 2          | 1  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 10    |
| 4:00 PM | 0          | 2  | 2  | 0          | 0  | 0  | 1         | 0  | 0  | 1         | 0  | 0  | 6     |
| 4:15 PM | 0          | 4  | 1  | 2          | 2  | 0  | 0         | 1  | 0  | 3         | 0  | 2  | 15    |
| 4:30 PM | 0          | 1  | 1  | 4          | 1  | 0  | 1         | 1  | 0  | 1         | 0  | 0  | 10    |
| 4:45 PM | 0          | 0  | 8  | 6          | 0  | 0  | 0         | 1  | 0  | 1         | 0  | 1  | 17    |
| 5:00 PM | 0          | 2  | 5  | 4          | 0  | 0  | 1         | 0  | 0  | 0         | 0  | 0  | 12    |
| 5:15 PM | 0          | 0  | 0  | 4          | 1  | 0  | 0         | 0  | 0  | 1         | 0  | 0  | 6     |
| 5:30 PM | 0          | 0  | 0  | 5          | 0  | 0  | 0         | 1  | 0  | 1         | 0  | 0  | 7     |
| 5:45 PM | 0          | 1  | 2  | 3          | 1  | 0  | 1         | 0  | 0  | 1         | 0  | 0  | 9     |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL    | ST   | SR   | EL    | ET    | ER   | WL    | WT   | WR    | TOTAL |
|------------|------|-------|-------|-------|------|------|-------|-------|------|-------|------|-------|-------|
| Volumes    | 1    | 52    | 89    | 124   | 13   | 0    | 45    | 41    | 1    | 25    | 1    | 85    | 477   |
| Approach % | 0.70 | 36.62 | 62.68 | 90.51 | 9.49 | 0.00 | 51.72 | 47.13 | 1.15 | 22.52 | 0.90 | 76.58 |       |
| App/Depart | 142  | /     | 182   | 137   | /    | 39   | 87    | /     | 254  | 111   | /    | 2     |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL   | NT    | NR    | SL    | ST    | SR   | EL    | ET    | ER   | WL    | WT    | WR    | TOTAL |
|------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|
| Volumes    | 0    | 9     | 17    | 11    | 4     | 0    | 1     | 3     | 0    | 2     | 1     | 4     | 52    |
| Approach % | 0.00 | 34.62 | 65.38 | 73.33 | 26.67 | 0.00 | 25.00 | 75.00 | 0.00 | 28.57 | 14.29 | 57.14 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL    | ST | SR    | EL | ET    | ER | WL    | WT | WR | TOTAL |
|------------------|----|-------|----|-------|----|-------|----|-------|----|-------|----|----|-------|
|                  |    | 0.722 |    | 0.469 |    | 0.500 |    | 0.583 |    | 0.684 |    |    |       |

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1: 33.682227, -112.008737  
GPS:

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: 34th St      DATE: 08/16/22      LOCATION: Phoenix  
 E-W STREET: Mayo Blvd      DAY: TUESDAY      PROJECT#: 22-1469-002

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 1  | 0  | 0         | 1  | 0  | 0         | 1  | 1  |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 0          | 6  | 7  | 11         | 2  | 0  | 1         | 2  | 1  | 3         | 0  | 11 | 44    |
| 2:15 PM | 0          | 8  | 18 | 57         | 1  | 0  | 37        | 29 | 0  | 6         | 0  | 61 | 217   |
| 2:30 PM | 0          | 8  | 8  | 8          | 0  | 0  | 0         | 2  | 0  | 2         | 0  | 6  | 34    |
| 2:45 PM | 1          | 7  | 11 | 5          | 1  | 0  | 1         | 0  | 0  | 3         | 0  | 0  | 29    |
| 3:00 PM | 0          | 6  | 11 | 4          | 0  | 0  | 2         | 1  | 0  | 1         | 0  | 0  | 25    |
| 3:15 PM | 0          | 3  | 3  | 5          | 3  | 0  | 0         | 2  | 0  | 0         | 0  | 3  | 19    |
| 3:30 PM | 0          | 3  | 6  | 4          | 0  | 0  | 0         | 1  | 0  | 1         | 1  | 1  | 17    |
| 3:45 PM | 0          | 1  | 6  | 2          | 1  | 0  | 0         | 0  | 0  | 0         | 0  | 0  | 10    |
| 4:00 PM | 0          | 2  | 2  | 0          | 0  | 0  | 1         | 0  | 0  | 1         | 0  | 0  | 6     |
| 4:15 PM | 0          | 4  | 1  | 2          | 2  | 0  | 0         | 1  | 0  | 3         | 0  | 2  | 15    |
| 4:30 PM | 0          | 1  | 1  | 4          | 1  | 0  | 1         | 1  | 0  | 1         | 0  | 0  | 10    |
| 4:45 PM | 0          | 0  | 8  | 6          | 0  | 0  | 0         | 1  | 0  | 1         | 0  | 1  | 17    |
| 5:00 PM | 0          | 2  | 5  | 4          | 0  | 0  | 1         | 0  | 0  | 0         | 0  | 0  | 12    |
| 5:15 PM | 0          | 0  | 0  | 4          | 1  | 0  | 0         | 0  | 0  | 1         | 0  | 0  | 6     |
| 5:30 PM | 0          | 0  | 0  | 5          | 0  | 0  | 0         | 1  | 0  | 1         | 0  | 0  | 7     |
| 5:45 PM | 0          | 1  | 2  | 3          | 1  | 0  | 1         | 0  | 0  | 1         | 0  | 0  | 9     |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL    | ST   | SR   | EL    | ET    | ER   | WL    | WT   | WR    | TOTAL |
|------------|------|-------|-------|-------|------|------|-------|-------|------|-------|------|-------|-------|
| Volumes    | 1    | 52    | 89    | 124   | 13   | 0    | 45    | 41    | 1    | 25    | 1    | 85    | 477   |
| Approach % | 0.70 | 36.62 | 62.68 | 90.51 | 9.49 | 0.00 | 51.72 | 47.13 | 1.15 | 22.52 | 0.90 | 76.58 |       |
| App/Depart | 142  | /     | 182   | 137   | /    | 39   | 87    | /     | 254  | 111   | /    | 2     |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |      |       |       |       |      |      |       |       |      |       |      |       |     |
|------------|------|-------|-------|-------|------|------|-------|-------|------|-------|------|-------|-----|
| Volumes    | 1    | 29    | 44    | 81    | 4    | 0    | 39    | 33    | 1    | 14    | 0    | 78    | 324 |
| Approach % | 1.35 | 39.19 | 59.46 | 95.29 | 4.71 | 0.00 | 53.42 | 45.21 | 1.37 | 15.22 | 0.00 | 84.78 |     |

PEAK HR.

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| FACTOR: | 0.712 | 0.366 | 0.277 | 0.343 | 0.373 |
|---------|-------|-------|-------|-------|-------|

CONTROL: 2-Way Stop (NB & SB)  
 COMMENT 1: 0  
 GPS: 33.682227, -112.008737

**Intersection Turning Movement**  
Prepared by:



N-S STREET: HS Bus Entrance DATE: 08/16/22 LOCATION: Phoenix  
 E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-003

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 187 | 3  | 3         | 37 | 0  | 230   |
| 7:15 AM  | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 121 | 1  | 2         | 95 | 0  | 220   |
| 7:30 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 19  | 1  | 2         | 14 | 0  | 36    |
| 7:45 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 1  | 3         | 3  | 0  | 11    |
| 8:00 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 7   | 0  | 1         | 5  | 0  | 13    |
| 8:15 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 3   | 4  | 4         | 4  | 0  | 15    |
| 8:30 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 2   | 0  | 6         | 4  | 0  | 12    |
| 8:45 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 6   | 2  | 1         | 7  | 0  | 16    |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL     | NT   | NR   | SL   | ST   | SR   | EL   | ET    | ER   | WL    | WT    | WR   | TOTAL |
|------------|--------|------|------|------|------|------|------|-------|------|-------|-------|------|-------|
| Volumes    | 1      | 0    | 0    | 0    | 0    | 0    | 0    | 349   | 12   | 22    | 169   | 0    | 553   |
| Approach % | 100.00 | 0.00 | 0.00 | #### | #### | #### | 0.00 | 96.68 | 3.32 | 11.52 | 88.48 | 0.00 |       |
| App/Depart | 1      | /    | 0    | 0    | /    | 34   | 361  | /     | 349  | 191   | /     | 170  |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL     | NT   | NR   | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|--------|------|------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 1      | 0    | 0    | 0    | 0    | 0    | 0    | 331   | 6    | 10   | 149   | 0    | 497   |
| Approach % | 100.00 | 0.00 | 0.00 | #### | #### | #### | 0.00 | 98.22 | 1.78 | 6.29 | 93.71 | 0.00 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.250 |    |    | 0.000 |    |    | 0.443 |    |    | 0.410 |    | 0.540 |

CONTROL: No Controls  
 COMMENT 1:  
 GPS: 33.681960, -112.008062

**Intersection Turning Movement**



N-S STREET: HS Bus Entrance DATE: 08/16/22 LOCATION: Phoenix  
 E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-003

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 2:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 19  | 1  | 3         | 14 | 0  | 37    |
| 2:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 103 | 1  | 5         | 67 | 0  | 176   |
| 2:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 16  | 2  | 4         | 8  | 0  | 30    |
| 2:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 13  | 3  | 3         | 3  | 0  | 22    |
| 3:00 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 15  | 1  | 2         | 0  | 0  | 19    |
| 3:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 7   | 3  | 1         | 3  | 0  | 14    |
| 3:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 9   | 2  | 3         | 3  | 0  | 17    |
| 3:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 4  | 1         | 0  | 0  | 9     |
| 4:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 2   | 0  | 4         | 1  | 0  | 7     |
| 4:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 2   | 2  | 7         | 5  | 0  | 16    |
| 4:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 2  | 1         | 1  | 0  | 8     |
| 4:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 14  | 1  | 4         | 2  | 0  | 21    |
| 5:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 8   | 1  | 3         | 0  | 0  | 12    |
| 5:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 3   | 1  | 4         | 1  | 0  | 9     |
| 5:30 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 2  | 3         | 0  | 0  | 10    |
| 5:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 5   | 0  | 5         | 1  | 0  | 11    |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL     | NT   | NR   | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|--------|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 2      | 0    | 0    | 0    | 0    | 0    | 0    | 228   | 26    | 53    | 109   | 0    | 418   |
| Approach % | 100.00 | 0.00 | 0.00 | #### | #### | #### | 0.00 | 89.76 | 10.24 | 32.72 | 67.28 | 0.00 |       |
| App/Depart | 2      | /    | 0    | 0    | /    | 79   | 254  | /     | 228   | 162   | /     | 111  |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL   | NT   | NR   | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|------|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 22    | 9     | 9     | 7     | 0    | 47    |
| Approach % | #### | #### | #### | #### | #### | #### | 0.00 | 70.97 | 29.03 | 56.25 | 43.75 | 0.00 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.000 |    |    | 0.000 |    |    | 0.705 |    |    | 0.667 |    | 0.691 |

CONTROL: No Controls  
 COMMENT 1:  
 GPS: 33.681960, -112.008062



## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: HS Bus Entrance    DATE: 08/16/22    LOCATION: Phoenix  
 E-W STREET: Mayo Blvd    DAY: TUESDAY    PROJECT# 22-1469-003

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 2:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 19  | 1  | 3         | 14 | 0  | 37    |
| 2:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 103 | 1  | 5         | 67 | 0  | 176   |
| 2:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 16  | 2  | 4         | 8  | 0  | 30    |
| 2:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 13  | 3  | 3         | 3  | 0  | 22    |
| 3:00 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 15  | 1  | 2         | 0  | 0  | 19    |
| 3:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 7   | 3  | 1         | 3  | 0  | 14    |
| 3:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 9   | 2  | 3         | 3  | 0  | 17    |
| 3:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 4  | 1         | 0  | 0  | 9     |
| 4:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 2   | 0  | 4         | 1  | 0  | 7     |
| 4:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 2   | 2  | 7         | 5  | 0  | 16    |
| 4:30 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 2  | 1         | 1  | 0  | 8     |
| 4:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 14  | 1  | 4         | 2  | 0  | 21    |
| 5:00 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 8   | 1  | 3         | 0  | 0  | 12    |
| 5:15 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 3   | 1  | 4         | 1  | 0  | 9     |
| 5:30 PM | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 4   | 2  | 3         | 0  | 0  | 10    |
| 5:45 PM | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 5   | 0  | 5         | 1  | 0  | 11    |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL     | NT   | NR   | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|--------|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 2      | 0    | 0    | 0    | 0    | 0    | 0    | 228   | 26    | 53    | 109   | 0    | 418   |
| Approach % | 100.00 | 0.00 | 0.00 | #### | #### | #### | 0.00 | 89.76 | 10.24 | 32.72 | 67.28 | 0.00 |       |
| App/Depart | 2      | /    | 0    |      | /    | 79   | 254  | /     | 228   | 162   | /     | 111  |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |      |      |      |      |      |      |      |       |      |       |       |      |     |
|------------|------|------|------|------|------|------|------|-------|------|-------|-------|------|-----|
| Volumes    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 151   | 7    | 15    | 92    | 0    | 265 |
| Approach % | #### | #### | #### | #### | #### | #### | 0.00 | 95.57 | 4.43 | 14.02 | 85.98 | 0.00 |     |

PEAK HR.

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| FACTOR: | 0.000 | 0.000 | 0.380 | 0.372 | 0.376 |
|---------|-------|-------|-------|-------|-------|

CONTROL: No Controls  
 COMMENT 1: 0  
 GPS: 33.681960, -112.008062

### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: **HS Bus Exit** DATE: **08/16/22** LOCATION: **Phoenix**  
E-W STREET: **Mayo Blvd** DAY: **TUESDAY** PROJECT#: **22-1469-004**

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 0          | 0  | 17 | 0          | 0  | 0  | 0         | 187 | 0  | 0         | 40 | 0  | 244   |
| 7:15 AM  | 0          | 0  | 23 | 0          | 0  | 0  | 0         | 121 | 0  | 1         | 97 | 0  | 242   |
| 7:30 AM  | 2          | 0  | 17 | 0          | 0  | 0  | 0         | 17  | 2  | 0         | 14 | 0  | 52    |
| 7:45 AM  | 0          | 0  | 1  | 0          | 0  | 0  | 0         | 4   | 0  | 1         | 6  | 0  | 12    |
| 8:00 AM  | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 7   | 0  | 1         | 5  | 0  | 14    |
| 8:15 AM  | 0          | 0  | 1  | 0          | 0  | 0  | 0         | 3   | 0  | 4         | 8  | 0  | 16    |
| 8:30 AM  | 0          | 0  | 2  | 0          | 0  | 0  | 0         | 2   | 0  | 1         | 10 | 0  | 15    |
| 8:45 AM  | 0          | 0  | 0  | 0          | 0  | 0  | 0         | 6   | 0  | 0         | 8  | 0  | 14    |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL   | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 3    | 0    | 61    | 0    | 0    | 0    | 0    | 347   | 2    | 8    | 188   | 0    | 609   |
| Approach % | 4.69 | 0.00 | 95.31 | #### | #### | #### | 0.00 | 99.43 | 0.57 | 4.08 | 95.92 | 0.00 |       |
| App/Depart | 64   | /    | 0     | 0    | /    | 10   | 349  | /     | 408  | 196  | /     | 191  |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL   | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 2    | 0    | 58    | 0    | 0    | 0    | 0    | 329   | 2    | 2    | 157   | 0    | 550   |
| Approach % | 3.33 | 0.00 | 96.67 | #### | #### | #### | 0.00 | 99.40 | 0.60 | 1.26 | 98.74 | 0.00 |       |

| PEAK HR. FACTOR: | NL    | NT | NR | SL    | ST | SR | EL    | ET | ER | WL    | WT | WR | TOTAL |
|------------------|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|
|                  | 0.652 |    |    | 0.000 |    |    | 0.443 |    |    | 0.406 |    |    | 0.564 |

CONTROL: **1-Way Stop (NB)**  
COMMENT 1: **33.681473, -112.006873**

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: **HS Bus Exit** DATE: **08/16/22** LOCATION: **Phoenix**  
E-W STREET: **Mayo Blvd** DAY: **TUESDAY** PROJECT#: **22-1469-004**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 2:00 PM | 1          | 0  | 4  | 0          | 0  | 0  | 0         | 19  | 0  | 2         | 16 | 0  | 42    |
| 2:15 PM | 0          | 0  | 35 | 0          | 0  | 0  | 0         | 103 | 0  | 0         | 72 | 0  | 210   |
| 2:30 PM | 2          | 0  | 11 | 0          | 0  | 0  | 0         | 16  | 0  | 0         | 10 | 0  | 39    |
| 2:45 PM | 0          | 0  | 11 | 0          | 0  | 0  | 0         | 12  | 1  | 2         | 6  | 0  | 32    |
| 3:00 PM | 1          | 0  | 8  | 0          | 0  | 0  | 0         | 15  | 0  | 0         | 1  | 0  | 25    |
| 3:15 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 4  | 0  | 14    |
| 3:30 PM | 1          | 0  | 3  | 0          | 0  | 0  | 0         | 9   | 0  | 1         | 5  | 0  | 19    |
| 3:45 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 4   | 0  | 0         | 1  | 0  | 8     |
| 4:00 PM | 2          | 0  | 10 | 0          | 0  | 0  | 0         | 1   | 1  | 1         | 3  | 0  | 18    |
| 4:15 PM | 1          | 0  | 11 | 0          | 0  | 0  | 0         | 2   | 0  | 4         | 11 | 0  | 29    |
| 4:30 PM | 0          | 0  | 34 | 0          | 0  | 0  | 0         | 3   | 1  | 0         | 2  | 0  | 40    |
| 4:45 PM | 0          | 0  | 23 | 0          | 0  | 0  | 0         | 14  | 0  | 1         | 6  | 0  | 44    |
| 5:00 PM | 0          | 0  | 6  | 0          | 0  | 0  | 0         | 8   | 0  | 0         | 3  | 0  | 17    |
| 5:15 PM | 0          | 0  | 2  | 0          | 0  | 0  | 0         | 3   | 0  | 0         | 5  | 0  | 10    |
| 5:30 PM | 0          | 0  | 7  | 0          | 0  | 0  | 0         | 4   | 0  | 1         | 3  | 0  | 15    |
| 5:45 PM | 0          | 0  | 2  | 0          | 0  | 0  | 0         | 5   | 0  | 2         | 6  | 0  | 15    |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL   | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 8    | 0    | 173   | 0    | 0    | 0    | 0    | 225   | 3    | 14   | 154   | 0    | 577   |
| Approach % | 4.42 | 0.00 | 95.58 | #### | #### | #### | 0.00 | 98.68 | 1.32 | 8.33 | 91.67 | 0.00 |       |
| App/Depart | 181  | /    | 0     | 0    | /    | 17   | 228  | /     | 398  | 168  | /     | 162  |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|-------|-------|------|-------|
| Volumes    | 3     | 0    | 19    | 0    | 0    | 0    | 0    | 21    | 1    | 2     | 13    | 0    | 59    |
| Approach % | 13.64 | 0.00 | 86.36 | #### | #### | #### | 0.00 | 95.45 | 4.55 | 13.33 | 86.67 | 0.00 |       |

| PEAK HR. FACTOR: | NL    | NT | NR | SL    | ST | SR | EL    | ET | ER | WL    | WT | WR | TOTAL |
|------------------|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|
|                  | 0.458 |    |    | 0.000 |    |    | 0.611 |    |    | 0.625 |    |    | 0.776 |

CONTROL: **1-Way Stop (NB)**  
COMMENT 1: **33.681473, -112.006873**

## Intersection Turning Movement



N-S STREET: **HS Bus Exit**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Mayo Blvd**      DAY: **TUESDAY**      PROJECT# **22-1469-004**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 2:00 PM | 1          | 0  | 4  | 0          | 0  | 0  | 0         | 19  | 0  | 2         | 16 | 0  | 42    |
| 2:15 PM | 0          | 0  | 35 | 0          | 0  | 0  | 0         | 103 | 0  | 0         | 72 | 0  | 210   |
| 2:30 PM | 2          | 0  | 11 | 0          | 0  | 0  | 0         | 16  | 0  | 0         | 10 | 0  | 39    |
| 2:45 PM | 0          | 0  | 11 | 0          | 0  | 0  | 0         | 12  | 1  | 2         | 6  | 0  | 32    |
| 3:00 PM | 1          | 0  | 8  | 0          | 0  | 0  | 0         | 15  | 0  | 0         | 1  | 0  | 25    |
| 3:15 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 4  | 0  | 14    |
| 3:30 PM | 1          | 0  | 3  | 0          | 0  | 0  | 0         | 9   | 0  | 1         | 5  | 0  | 19    |
| 3:45 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 4   | 0  | 0         | 1  | 0  | 8     |
| 4:00 PM | 2          | 0  | 10 | 0          | 0  | 0  | 0         | 1   | 1  | 1         | 3  | 0  | 18    |
| 4:15 PM | 1          | 0  | 11 | 0          | 0  | 0  | 0         | 2   | 0  | 4         | 11 | 0  | 29    |
| 4:30 PM | 0          | 0  | 34 | 0          | 0  | 0  | 0         | 3   | 1  | 0         | 2  | 0  | 40    |
| 4:45 PM | 0          | 0  | 23 | 0          | 0  | 0  | 0         | 14  | 0  | 1         | 6  | 0  | 44    |
| 5:00 PM | 0          | 0  | 6  | 0          | 0  | 0  | 0         | 8   | 0  | 0         | 3  | 0  | 17    |
| 5:15 PM | 0          | 0  | 2  | 0          | 0  | 0  | 0         | 3   | 0  | 0         | 5  | 0  | 10    |
| 5:30 PM | 0          | 0  | 7  | 0          | 0  | 0  | 0         | 4   | 0  | 1         | 3  | 0  | 15    |
| 5:45 PM | 0          | 0  | 2  | 0          | 0  | 0  | 0         | 5   | 0  | 2         | 6  | 0  | 15    |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL   | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 8    | 0    | 173   | 0    | 0    | 0    | 0    | 225   | 3    | 14   | 154   | 0    | 577   |
| Approach % | 4.42 | 0.00 | 95.58 | #### | #### | #### | 0.00 | 98.68 | 1.32 | 8.33 | 91.67 | 0.00 |       |
| App/Depart | 181  | /    | 0     | 0    | /    | 17   | 228  | /     | 398  | 168  | /     | 162  |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |      |      |       |      |      |      |      |       |      |      |       |      |     |
|------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|-----|
| Volumes    | 3    | 0    | 61    | 0    | 0    | 0    | 0    | 150   | 1    | 4    | 104   | 0    | 323 |
| Approach % | 4.69 | 0.00 | 95.31 | #### | #### | #### | 0.00 | 99.34 | 0.66 | 3.70 | 96.30 | 0.00 |     |

PEAK HR. FACTOR:      |      0.457      |      0.000      |      0.367      |      0.375      |      0.385      |

CONTROL: **1-Way Stop (NB)**  
 COMMENT 1: **0**  
 GPS: **33.681473, -112.006873**

### Intersection Turning Movement Prepared by:



N-S STREET: **HS Eastern Driveway**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Mayo Blvd**      DAY: **TUESDAY**      PROJECT# **22-1469-005**

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 0          | 0  | 9  | 0          | 0  | 0  | 0         | 204 | 0  | 0         | 40 | 0  | 253   |
| 7:15 AM  | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 144 | 0  | 0         | 98 | 0  | 247   |
| 7:30 AM  | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 34  | 0  | 0         | 14 | 0  | 51    |
| 7:45 AM  | 0          | 0  | 4  | 0          | 0  | 0  | 0         | 5   | 0  | 0         | 7  | 0  | 16    |
| 8:00 AM  | 1          | 0  | 1  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 5  | 0  | 14    |
| 8:15 AM  | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 4   | 0  | 0         | 12 | 0  | 19    |
| 8:30 AM  | 0          | 0  | 8  | 0          | 0  | 0  | 0         | 4   | 0  | 0         | 11 | 0  | 23    |
| 8:45 AM  | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 6   | 0  | 0         | 8  | 0  | 19    |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL   | NT   | NR    | SL    | ST    | SR    | EL   | ET     | ER   | WL   | WT     | WR   | TOTAL |
|------------|------|------|-------|-------|-------|-------|------|--------|------|------|--------|------|-------|
| Volumes    | 1    | 0    | 38    | 0     | 0     | 0     | 0    | 408    | 0    | 0    | 195    | 0    | 642   |
| Approach % | 2.56 | 0.00 | 97.44 | ##### | ##### | ##### | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 | 0.00 |       |
| App/Depart | 39   | /    | 0     | 0     | /     | 0     | 408  | /      | 446  | 195  | /      | 196  |       |

AM Peak Hr Begins at: 700 AM

PEAK

|            |      |      |        |       |       |       |      |        |      |      |        |      |     |
|------------|------|------|--------|-------|-------|-------|------|--------|------|------|--------|------|-----|
| Volumes    | 0    | 0    | 21     | 0     | 0     | 0     | 0    | 387    | 0    | 0    | 159    | 0    | 567 |
| Approach % | 0.00 | 0.00 | 100.00 | ##### | ##### | ##### | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 | 0.00 |     |

PEAK HR. FACTOR:      |      0.583      |      0.000      |      0.474      |      0.406      |      0.560      |

CONTROL: **1-Way Stop (NB)**  
 COMMENT 1:      **33.681156, -112.006058**

### Intersection Turning Movement



N-S STREET: **HS Eastern Driveway**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Mayo Blvd**      DAY: **TUESDAY**      PROJECT# **22-1469-005**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 2:00 PM | 0          | 0  | 8  | 0          | 0  | 0  | 0         | 23  | 0  | 0         | 18 | 0  | 49    |
| 2:15 PM | 0          | 0  | 10 | 0          | 0  | 0  | 0         | 138 | 0  | 0         | 72 | 0  | 220   |
| 2:30 PM | 1          | 0  | 5  | 0          | 0  | 0  | 0         | 27  | 0  | 0         | 9  | 0  | 42    |
| 2:45 PM | 2          | 0  | 5  | 0          | 0  | 0  | 0         | 23  | 0  | 0         | 6  | 0  | 36    |
| 3:00 PM | 0          | 0  | 4  | 0          | 0  | 0  | 0         | 23  | 0  | 1         | 1  | 0  | 29    |
| 3:15 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 9   | 1  | 0         | 4  | 0  | 17    |
| 3:30 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 12  | 0  | 0         | 6  | 0  | 23    |
| 3:45 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 1  | 0  | 13    |
| 4:00 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 11  | 0  | 1         | 4  | 0  | 21    |
| 4:15 PM | 0          | 0  | 7  | 0          | 0  | 0  | 0         | 13  | 0  | 0         | 15 | 0  | 35    |
| 4:30 PM | 0          | 0  | 7  | 0          | 0  | 0  | 0         | 37  | 0  | 0         | 2  | 0  | 46    |
| 4:45 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 37  | 0  | 0         | 7  | 0  | 49    |
| 5:00 PM | 1          | 0  | 2  | 0          | 0  | 0  | 0         | 14  | 0  | 0         | 2  | 0  | 19    |
| 5:15 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 4   | 1  | 0         | 5  | 0  | 13    |
| 5:30 PM | 0          | 0  | 4  | 0          | 0  | 0  | 0         | 11  | 0  | 0         | 4  | 0  | 19    |
| 5:45 PM | 0          | 0  | 6  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 8  | 0  | 21    |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL   | NT   | NR    | SL    | ST    | SR    | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|-------|-------|-------|------|-------|------|------|-------|------|-------|
| Volumes    | 4    | 0    | 84    | 0     | 0     | 0     | 0    | 396   | 2    | 2    | 164   | 0    | 652   |
| Approach % | 4.55 | 0.00 | 95.45 | ##### | ##### | ##### | 0.00 | 99.50 | 0.50 | 1.20 | 98.80 | 0.00 |       |
| App/Depart | 88   | /    | 0     | 0     | /     | 4     | 398  | /     | 480  | 166  | /     | 168  |       |

PM Peak Hr Begins at: 315 PM

PEAK

|            |      |      |        |       |       |       |      |       |      |      |       |      |    |
|------------|------|------|--------|-------|-------|-------|------|-------|------|------|-------|------|----|
| Volumes    | 0    | 0    | 18     | 0     | 0     | 0     | 0    | 39    | 1    | 1    | 15    | 0    | 74 |
| Approach % | 0.00 | 0.00 | 100.00 | ##### | ##### | ##### | 0.00 | 97.50 | 2.50 | 6.25 | 93.75 | 0.00 |    |

PEAK HR. FACTOR:      |      0.900      |      0.000      |      0.833      |      0.667      |      0.804      |

CONTROL: **1-Way Stop (NB)**  
 COMMENT 1:      **33.681156, -112.006058**

## Intersection Turning Movement



N-S STREET: **HS Eastern Driveway**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Mayo Blvd**      DAY: **TUESDAY**      PROJECT# **22-1469-005**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 2:00 PM | 0          | 0  | 8  | 0          | 0  | 0  | 0         | 23  | 0  | 0         | 18 | 0  | 49    |
| 2:15 PM | 0          | 0  | 10 | 0          | 0  | 0  | 0         | 138 | 0  | 0         | 72 | 0  | 220   |
| 2:30 PM | 1          | 0  | 5  | 0          | 0  | 0  | 0         | 27  | 0  | 0         | 9  | 0  | 42    |
| 2:45 PM | 2          | 0  | 5  | 0          | 0  | 0  | 0         | 23  | 0  | 0         | 6  | 0  | 36    |
| 3:00 PM | 0          | 0  | 4  | 0          | 0  | 0  | 0         | 23  | 0  | 1         | 1  | 0  | 29    |
| 3:15 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 9   | 1  | 0         | 4  | 0  | 17    |
| 3:30 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 12  | 0  | 0         | 6  | 0  | 23    |
| 3:45 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 1  | 0  | 13    |
| 4:00 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 11  | 0  | 1         | 4  | 0  | 21    |
| 4:15 PM | 0          | 0  | 7  | 0          | 0  | 0  | 0         | 13  | 0  | 0         | 15 | 0  | 35    |
| 4:30 PM | 0          | 0  | 7  | 0          | 0  | 0  | 0         | 37  | 0  | 0         | 2  | 0  | 46    |
| 4:45 PM | 0          | 0  | 5  | 0          | 0  | 0  | 0         | 37  | 0  | 0         | 7  | 0  | 49    |
| 5:00 PM | 1          | 0  | 2  | 0          | 0  | 0  | 0         | 14  | 0  | 0         | 2  | 0  | 19    |
| 5:15 PM | 0          | 0  | 3  | 0          | 0  | 0  | 0         | 4   | 1  | 0         | 5  | 0  | 13    |
| 5:30 PM | 0          | 0  | 4  | 0          | 0  | 0  | 0         | 11  | 0  | 0         | 4  | 0  | 19    |
| 5:45 PM | 0          | 0  | 6  | 0          | 0  | 0  | 0         | 7   | 0  | 0         | 8  | 0  | 21    |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL   | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 4    | 0    | 84    | 0    | 0    | 0    | 0    | 396   | 2    | 2    | 164   | 0    | 652   |
| Approach % | 4.55 | 0.00 | 95.45 | #### | #### | #### | 0.00 | 99.50 | 0.50 | 1.20 | 98.80 | 0.00 |       |
| App/Depart | 88   | /    | 0     | 0    | /    | 4    | 398  | /     | 480  | 166  | /     | 168  |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |      |      |       |      |      |      |      |        |      |      |        |      |     |
|------------|------|------|-------|------|------|------|------|--------|------|------|--------|------|-----|
| Volumes    | 3    | 0    | 28    | 0    | 0    | 0    | 0    | 211    | 0    | 0    | 105    | 0    | 347 |
| Approach % | 9.68 | 0.00 | 90.32 | #### | #### | #### | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 | 0.00 |     |

PEAK HR. FACTOR:      | 0.775      |      0.000      |      0.382      |      0.365      |      0.394      |

CONTROL: **1-Way Stop (NB)**  
 COMMENT 1: **0**  
 GPS: **33.681156, -112.006058**

### Intersection Turning Movement Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: **Black Mountain Blvd** DATE: **08/16/22** LOCATION: **Phoenix**  
E-W STREET: **Rough Rider Rd** DAY: **TUESDAY** PROJECT# **22-1469-010**

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 3          | 132 | 6  | 1          | 162 | 5  | 8         | 2  | 9  | 23        | 2  | 1  | 354   |
| 7:15 AM  | 7          | 39  | 31 | 1          | 127 | 3  | 4         | 6  | 4  | 13        | 1  | 0  | 236   |
| 7:30 AM  | 6          | 28  | 16 | 0          | 118 | 8  | 5         | 0  | 16 | 22        | 0  | 1  | 220   |
| 7:45 AM  | 4          | 60  | 11 | 2          | 93  | 4  | 10        | 2  | 13 | 11        | 1  | 3  | 214   |
| 8:00 AM  | 6          | 42  | 10 | 2          | 67  | 3  | 5         | 1  | 6  | 17        | 0  | 2  | 161   |
| 8:15 AM  | 7          | 63  | 16 | 2          | 99  | 32 | 7         | 4  | 9  | 20        | 1  | 1  | 261   |
| 8:30 AM  | 5          | 51  | 21 | 4          | 86  | 24 | 29        | 10 | 8  | 23        | 5  | 2  | 268   |
| 8:45 AM  | 2          | 53  | 9  | 1          | 66  | 8  | 7         | 6  | 8  | 18        | 9  | 2  | 189   |
| 9:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL   | ST    | SR   | EL    | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Volumes    | 40   | 468   | 120   | 13   | 818   | 87   | 75    | 31    | 73    | 147   | 19    | 12   | 1903  |
| Approach % | 6.37 | 74.52 | 19.11 | 1.42 | 89.11 | 9.48 | 41.90 | 17.32 | 40.78 | 82.58 | 10.67 | 6.74 |       |
| App/Depart | 628  | /     | 555   | 918  | /     | 1038 | 179   | /     | 164   | 178   | /     | 146  |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | Volumes           | Approach %      |
|------------|-------------------|-----------------|
| PEAK       | 20 259 64         | 4 500 20        |
| Volumes    | 27 10 42          | 69 4 5          |
| Approach % | 5.83 75.51 18.66  | 0.76 95.42 3.82 |
|            | 34.18 12.66 53.16 | 88.46 5.13 6.41 |

| PEAK HR. FACTOR: |
|------------------|
| 0.608            |
| 0.780            |
| 0.790            |
| 0.750            |
| 0.723            |

CONTROL: **2-Way Stop (EB & WB)**  
COMMENT 1:  
GPS: **33.691255, -112.005228**

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: **Black Mountain Blvd** DATE: **08/16/22** LOCATION: **Phoenix**  
E-W STREET: **Rough Rider Rd** DAY: **TUESDAY** PROJECT# **22-1469-010**

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 5          | 75  | 5  | 2          | 28 | 3  | 0         | 1  | 3  | 9         | 1  | 0  | 132   |
| 2:15 PM | 7          | 26  | 17 | 0          | 78 | 2  | 1         | 1  | 8  | 11        | 1  | 4  | 156   |
| 2:30 PM | 2          | 54  | 10 | 0          | 53 | 2  | 6         | 0  | 5  | 7         | 2  | 0  | 141   |
| 2:45 PM | 6          | 47  | 13 | 0          | 46 | 14 | 4         | 4  | 7  | 20        | 2  | 5  | 168   |
| 3:00 PM | 7          | 66  | 19 | 2          | 37 | 30 | 5         | 4  | 8  | 15        | 2  | 1  | 196   |
| 3:15 PM | 4          | 121 | 13 | 2          | 51 | 10 | 25        | 9  | 4  | 26        | 6  | 3  | 274   |
| 3:30 PM | 9          | 57  | 15 | 1          | 50 | 5  | 5         | 6  | 11 | 7         | 2  | 3  | 171   |
| 3:45 PM | 8          | 97  | 12 | 4          | 32 | 10 | 7         | 2  | 4  | 18        | 11 | 1  | 206   |
| 4:00 PM | 4          | 75  | 10 | 2          | 45 | 9  | 8         | 1  | 1  | 13        | 0  | 2  | 170   |
| 4:15 PM | 5          | 105 | 6  | 1          | 59 | 5  | 5         | 2  | 7  | 12        | 1  | 2  | 210   |
| 4:30 PM | 5          | 114 | 13 | 1          | 62 | 6  | 5         | 4  | 4  | 4         | 2  | 4  | 224   |
| 4:45 PM | 8          | 113 | 10 | 4          | 63 | 7  | 4         | 3  | 7  | 8         | 2  | 1  | 230   |
| 5:00 PM | 6          | 80  | 9  | 2          | 37 | 7  | 7         | 2  | 7  | 10        | 6  | 2  | 175   |
| 5:15 PM | 8          | 115 | 17 | 3          | 47 | 13 | 6         | 3  | 2  | 7         | 2  | 1  | 224   |
| 5:30 PM | 7          | 78  | 13 | 1          | 42 | 7  | 4         | 2  | 8  | 10        | 1  | 4  | 177   |
| 5:45 PM | 6          | 55  | 14 | 1          | 56 | 2  | 1         | 4  | 6  | 17        | 6  | 2  | 170   |
| 6:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL   | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 97   | 1278  | 196   | 26   | 786   | 132   | 93    | 48    | 92    | 194   | 47    | 35    | 3024  |
| Approach % | 6.17 | 81.35 | 12.48 | 2.75 | 83.26 | 13.98 | 39.91 | 20.60 | 39.48 | 70.29 | 17.03 | 12.68 |       |
| App/Depart | 1571 | /     | 1406  | 944  | /     | 1072  | 233   | /     | 270   | 276   | /     | 276   |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | Volumes           | Approach %       |
|------------|-------------------|------------------|
| PEAK       | 25 350 50         | 9 178 34         |
| Volumes    | 45 18 20          | 64 19 9          |
| Approach % | 5.88 82.35 11.76  | 4.07 80.54 15.38 |
|            | 54.22 21.69 24.10 | 69.57 20.65 9.78 |

| PEAK HR. FACTOR: |
|------------------|
| 0.770            |
| 0.877            |
| 0.546            |
| 0.657            |
| 0.749            |

CONTROL: **2-Way Stop (EB & WB)**  
COMMENT 1:  
GPS: **33.691255, -112.005228**

## Intersection Turning Movement



N-S STREET: **Black Mountain Blvd**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 0  
 E-W STREET: **Rough Rider Rd**      DAY: **TUESDAY**      PROJECT# **22-1469-010**

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 1          | 2   | 1  | 1          | 2  | 0  | 0         | 1  | 0  | 0         | 1  | 0  |       |
| 1:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 5          | 75  | 5  | 2          | 28 | 3  | 0         | 1  | 3  | 9         | 1  | 0  | 132   |
| 2:15 PM | 7          | 26  | 17 | 0          | 78 | 2  | 1         | 1  | 8  | 11        | 1  | 4  | 156   |
| 2:30 PM | 2          | 54  | 10 | 0          | 53 | 2  | 6         | 0  | 5  | 7         | 2  | 0  | 141   |
| 2:45 PM | 6          | 47  | 13 | 0          | 46 | 14 | 4         | 4  | 7  | 20        | 2  | 5  | 168   |
| 3:00 PM | 7          | 66  | 19 | 2          | 37 | 30 | 5         | 4  | 8  | 15        | 2  | 1  | 196   |
| 3:15 PM | 4          | 121 | 13 | 2          | 51 | 10 | 25        | 9  | 4  | 26        | 6  | 3  | 274   |
| 3:30 PM | 9          | 57  | 15 | 1          | 50 | 5  | 5         | 6  | 11 | 7         | 2  | 3  | 171   |
| 3:45 PM | 8          | 97  | 12 | 4          | 32 | 10 | 7         | 2  | 4  | 18        | 11 | 1  | 206   |
| 4:00 PM | 4          | 75  | 10 | 2          | 45 | 9  | 8         | 1  | 1  | 13        | 0  | 2  | 170   |
| 4:15 PM | 5          | 105 | 6  | 1          | 59 | 5  | 5         | 2  | 7  | 12        | 1  | 2  | 210   |
| 4:30 PM | 5          | 114 | 13 | 1          | 62 | 6  | 5         | 4  | 4  | 4         | 2  | 4  | 224   |
| 4:45 PM | 8          | 113 | 10 | 4          | 63 | 7  | 4         | 3  | 7  | 8         | 2  | 1  | 230   |
| 5:00 PM | 6          | 80  | 9  | 2          | 37 | 7  | 7         | 2  | 7  | 10        | 6  | 2  | 175   |
| 5:15 PM | 8          | 115 | 17 | 3          | 47 | 13 | 6         | 3  | 2  | 7         | 2  | 1  | 224   |
| 5:30 PM | 7          | 78  | 13 | 1          | 42 | 7  | 4         | 2  | 8  | 10        | 1  | 4  | 177   |
| 5:45 PM | 6          | 55  | 14 | 1          | 56 | 2  | 1         | 4  | 6  | 17        | 6  | 2  | 170   |
| 6:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL   | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 97   | 1278  | 196   | 26   | 786   | 132   | 93    | 48    | 92    | 194   | 47    | 35    | 3024  |
| Approach % | 6.17 | 81.35 | 12.48 | 2.75 | 83.26 | 13.98 | 39.91 | 20.60 | 39.48 | 70.29 | 17.03 | 12.68 |       |
| App/Depart | 1571 | /     | 1406  | 944  | /     | 1072  | 233   | /     | 270   | 276   | /     | 276   |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |      |       |       |      |       |      |       |       |       |       |      |       |     |
|------------|------|-------|-------|------|-------|------|-------|-------|-------|-------|------|-------|-----|
| Volumes    | 20   | 202   | 45    | 2    | 205   | 21   | 11    | 6     | 23    | 47    | 6    | 9     | 597 |
| Approach % | 7.49 | 75.66 | 16.85 | 0.88 | 89.91 | 9.21 | 27.50 | 15.00 | 57.50 | 75.81 | 9.68 | 14.52 |     |

PEAK HR.

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| FACTOR: | 0.785 | 0.713 | 0.667 | 0.574 | 0.888 |
|---------|-------|-------|-------|-------|-------|

CONTROL: **2-Way Stop (EB & WB)**  
 COMMENT 1: **0**  
 GPS: **33.691255, -112.005228**

**Intersection Turning Movement**

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: **Black Mountain Blvd**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Bryce Ln**      DAY: **TUESDAY**      PROJECT# **22-1469-006**

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 14         | 135 | 2  | 0          | 193 | 1  | 6         | 1  | 35 | 1         | 1  | 0  | 389   |
| 7:15 AM  | 33         | 70  | 4  | 0          | 143 | 1  | 7         | 2  | 29 | 1         | 0  | 0  | 290   |
| 7:30 AM  | 19         | 46  | 0  | 0          | 156 | 0  | 4         | 0  | 35 | 2         | 0  | 0  | 262   |
| 7:45 AM  | 21         | 68  | 5  | 0          | 113 | 4  | 7         | 0  | 26 | 3         | 0  | 0  | 247   |
| 8:00 AM  | 24         | 57  | 3  | 1          | 81  | 8  | 1         | 0  | 19 | 0         | 2  | 0  | 196   |
| 8:15 AM  | 29         | 79  | 2  | 0          | 122 | 6  | 3         | 1  | 51 | 2         | 0  | 4  | 299   |
| 8:30 AM  | 29         | 70  | 3  | 1          | 113 | 3  | 6         | 0  | 51 | 5         | 0  | 1  | 282   |
| 8:45 AM  | 9          | 59  | 3  | 0          | 89  | 3  | 4         | 0  | 19 | 3         | 0  | 1  | 190   |
| 9:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|------|------|-------|------|-------|------|-------|-------|-------|-------|-------|
| Volumes    | 178   | 584   | 22   | 2    | 1010  | 26   | 38    | 4    | 265   | 17    | 3     | 6     | 2155  |
| Approach % | 22.70 | 74.49 | 2.81 | 0.19 | 97.30 | 2.50 | 12.38 | 1.30 | 86.32 | 65.38 | 11.54 | 23.08 |       |
| App/Depart | 784   | /     | 628  | 1038 | /     | 1292 | 307   | /    | 28    | 26    | /     | 207   |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL    | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|-------|------|------|-------|------|-------|------|-------|-------|-------|------|-------|
| Volumes    | 87    | 319   | 11   | 0    | 605   | 6    | 24    | 3    | 125   | 7     | 1     | 0    | 1188  |
| Approach % | 20.86 | 76.50 | 2.64 | 0.00 | 99.02 | 0.98 | 15.79 | 1.97 | 82.24 | 87.50 | 12.50 | 0.00 |       |

PEAK HR. FACTOR: |      0.690      |      0.787      |      0.905      |      0.667      |      0.763      |

CONTROL: **2-Way Stop (EB & WB)**  
 COMMENT 1: **33.687360, -112.005135**

**Intersection Turning Movement**



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: **Black Mountain Blvd**      DATE: **08/16/22**      LOCATION: **Phoenix**  
 E-W STREET: **Bryce Ln**      DAY: **TUESDAY**      PROJECT# **22-1469-006**

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 10         | 81  | 2  | 0          | 40 | 0  | 2         | 0  | 17 | 6         | 0  | 2  | 160   |
| 2:15 PM | 38         | 46  | 1  | 1          | 96 | 0  | 2         | 0  | 17 | 1         | 0  | 2  | 204   |
| 2:30 PM | 21         | 62  | 3  | 1          | 64 | 0  | 2         | 0  | 14 | 1         | 0  | 2  | 170   |
| 2:45 PM | 16         | 65  | 1  | 1          | 71 | 1  | 0         | 0  | 23 | 3         | 0  | 1  | 182   |
| 3:00 PM | 34         | 88  | 2  | 0          | 57 | 3  | 4         | 0  | 22 | 1         | 3  | 0  | 214   |
| 3:15 PM | 37         | 131 | 3  | 3          | 77 | 1  | 6         | 1  | 52 | 2         | 0  | 1  | 314   |
| 3:30 PM | 22         | 76  | 1  | 0          | 65 | 3  | 5         | 0  | 32 | 2         | 0  | 0  | 206   |
| 3:45 PM | 22         | 115 | 2  | 0          | 50 | 4  | 1         | 0  | 20 | 3         | 0  | 1  | 218   |
| 4:00 PM | 14         | 88  | 3  | 0          | 58 | 1  | 0         | 0  | 15 | 1         | 1  | 1  | 182   |
| 4:15 PM | 17         | 114 | 7  | 1          | 77 | 0  | 2         | 1  | 15 | 0         | 0  | 0  | 234   |
| 4:30 PM | 26         | 128 | 4  | 1          | 64 | 5  | 2         | 0  | 15 | 2         | 0  | 2  | 249   |
| 4:45 PM | 17         | 128 | 3  | 0          | 77 | 1  | 2         | 0  | 15 | 2         | 0  | 1  | 246   |
| 5:00 PM | 26         | 94  | 3  | 1          | 48 | 5  | 1         | 0  | 17 | 3         | 0  | 0  | 198   |
| 5:15 PM | 18         | 136 | 4  | 0          | 52 | 4  | 4         | 0  | 20 | 1         | 0  | 0  | 239   |
| 5:30 PM | 24         | 98  | 1  | 1          | 58 | 1  | 0         | 0  | 12 | 2         | 0  | 0  | 197   |
| 5:45 PM | 26         | 75  | 0  | 2          | 75 | 2  | 0         | 0  | 24 | 0         | 0  | 0  | 204   |
| 6:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR   | EL   | ET   | ER    | WL    | WT   | WR    | TOTAL |
|------------|-------|-------|------|------|-------|------|------|------|-------|-------|------|-------|-------|
| Volumes    | 368   | 1525  | 40   | 12   | 1029  | 31   | 33   | 2    | 330   | 30    | 4    | 13    | 3417  |
| Approach % | 19.04 | 78.89 | 2.07 | 1.12 | 95.99 | 2.89 | 9.04 | 0.55 | 90.41 | 63.83 | 8.51 | 27.66 |       |
| App/Depart | 1933  | /     | 1571 | 1072 | /     | 1389 | 365  | /    | 54    | 47    | /    | 403   |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL    | NT    | NR   | SL   | ST    | SR   | EL   | ET   | ER    | WL    | WT   | WR    | TOTAL |
|------------|-------|-------|------|------|-------|------|------|------|-------|-------|------|-------|-------|
| Volumes    | 95    | 410   | 9    | 3    | 250   | 9    | 12   | 1    | 119   | 8     | 1    | 3     | 920   |
| Approach % | 18.48 | 79.77 | 1.75 | 1.15 | 95.42 | 3.44 | 9.09 | 0.76 | 90.15 | 66.67 | 8.33 | 25.00 |       |

PEAK HR. FACTOR: |      0.751      |      0.809      |      0.559      |      0.750      |      0.732      |

CONTROL: **2-Way Stop (EB & WB)**  
 COMMENT 1: **33.687360, -112.005135**



## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Black Mountain Blvd    DATE: 08/16/22    LOCATION: Phoenix  
 E-W STREET: Bryce Ln    DAY: TUESDAY    PROJECT# 22-1469-006

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
|         | 1          | 3   | 0  | 1          | 3  | 0  | 0         | 1  | 0  | 0         | 1  | 0  |       |
| 1:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 10         | 81  | 2  | 0          | 40 | 0  | 2         | 0  | 17 | 6         | 0  | 2  | 160   |
| 2:15 PM | 38         | 46  | 1  | 1          | 96 | 0  | 2         | 0  | 17 | 1         | 0  | 2  | 204   |
| 2:30 PM | 21         | 62  | 3  | 1          | 64 | 0  | 2         | 0  | 14 | 1         | 0  | 2  | 170   |
| 2:45 PM | 16         | 65  | 1  | 1          | 71 | 1  | 0         | 0  | 23 | 3         | 0  | 1  | 182   |
| 3:00 PM | 34         | 88  | 2  | 0          | 57 | 3  | 4         | 0  | 22 | 1         | 3  | 0  | 214   |
| 3:15 PM | 37         | 131 | 3  | 3          | 77 | 1  | 6         | 1  | 52 | 2         | 0  | 1  | 314   |
| 3:30 PM | 22         | 76  | 1  | 0          | 65 | 3  | 5         | 0  | 32 | 2         | 0  | 0  | 206   |
| 3:45 PM | 22         | 115 | 2  | 0          | 50 | 4  | 1         | 0  | 20 | 3         | 0  | 1  | 218   |
| 4:00 PM | 14         | 88  | 3  | 0          | 58 | 1  | 0         | 0  | 15 | 1         | 1  | 1  | 182   |
| 4:15 PM | 17         | 114 | 7  | 1          | 77 | 0  | 2         | 1  | 15 | 0         | 0  | 0  | 234   |
| 4:30 PM | 26         | 128 | 4  | 1          | 64 | 5  | 2         | 0  | 15 | 2         | 0  | 2  | 249   |
| 4:45 PM | 17         | 128 | 3  | 0          | 77 | 1  | 2         | 0  | 15 | 2         | 0  | 1  | 246   |
| 5:00 PM | 26         | 94  | 3  | 1          | 48 | 5  | 1         | 0  | 17 | 3         | 0  | 0  | 198   |
| 5:15 PM | 18         | 136 | 4  | 0          | 52 | 4  | 4         | 0  | 20 | 1         | 0  | 0  | 239   |
| 5:30 PM | 24         | 98  | 1  | 1          | 58 | 1  | 0         | 0  | 12 | 2         | 0  | 0  | 197   |
| 5:45 PM | 26         | 75  | 0  | 2          | 75 | 2  | 0         | 0  | 24 | 0         | 0  | 0  | 204   |
| 6:00 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR   | EL   | ET   | ER    | WL    | WT   | WR    | TOTAL |
|------------|-------|-------|------|------|-------|------|------|------|-------|-------|------|-------|-------|
| Volumes    | 368   | 1525  | 40   | 12   | 1029  | 31   | 33   | 2    | 330   | 30    | 4    | 13    | 3417  |
| Approach % | 19.04 | 78.89 | 2.07 | 1.12 | 95.99 | 2.89 | 9.04 | 0.55 | 90.41 | 63.83 | 8.51 | 27.66 |       |
| App/Depart | 1933  | /     | 1571 | 1072 | /     | 1389 | 365  | /    | 54    | 47    | /    | 403   |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |       |       |      |      |       |      |      |      |       |       |      |       |     |
|------------|-------|-------|------|------|-------|------|------|------|-------|-------|------|-------|-----|
| Volumes    | 85    | 254   | 7    | 3    | 271   | 1    | 6    | 0    | 71    | 11    | 0    | 7     | 716 |
| Approach % | 24.57 | 73.41 | 2.02 | 1.09 | 98.55 | 0.36 | 7.79 | 0.00 | 92.21 | 61.11 | 0.00 | 38.89 |     |

PEAK HR.

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| FACTOR: | 0.930 | 0.709 | 0.837 | 0.563 | 0.877 |
|---------|-------|-------|-------|-------|-------|

CONTROL: 2-Way Stop (EB & WB)  
 COMMENT 1: 0  
 GPS: 33.687360, -112.005135

### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix  
 E-W STREET: Deer Valley Dr DAY: TUESDAY PROJECT#: 22-1469-007

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |     |     | WESTBOUND |     |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|-----|-----|-----------|-----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET  | ER  | WL        | WT  | WR |       |
|          | 1          | 3   | 1  | 1          | 3   | 0  | 1         | 3   | 1   | 2         | 3   | 0  |       |
| 6:00 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 6:15 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 7:00 AM  | 85         | 128 | 76 | 18         | 185 | 26 | 11        | 150 | 66  | 62        | 76  | 12 | 895   |
| 7:15 AM  | 111        | 68  | 96 | 17         | 144 | 12 | 28        | 146 | 109 | 29        | 48  | 11 | 819   |
| 7:30 AM  | 53         | 49  | 30 | 30         | 147 | 16 | 7         | 158 | 100 | 19        | 44  | 9  | 662   |
| 7:45 AM  | 31         | 75  | 22 | 21         | 112 | 9  | 7         | 191 | 138 | 24        | 38  | 12 | 680   |
| 8:00 AM  | 27         | 59  | 25 | 9          | 83  | 8  | 10        | 151 | 136 | 19        | 33  | 15 | 575   |
| 8:15 AM  | 21         | 65  | 43 | 23         | 131 | 21 | 24        | 184 | 120 | 37        | 47  | 21 | 737   |
| 8:30 AM  | 35         | 70  | 51 | 34         | 115 | 20 | 10        | 166 | 97  | 51        | 118 | 22 | 789   |
| 8:45 AM  | 21         | 52  | 32 | 11         | 91  | 9  | 12        | 117 | 83  | 47        | 85  | 7  | 567   |
| 9:00 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 10:00 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 10:15 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 10:30 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 10:45 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 11:00 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 11:15 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 11:30 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |
| 11:45 AM |            |     |    |            |     |    |           |     |     |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR   | EL   | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Volumes    | 384   | 566   | 375   | 163   | 1008  | 121  | 109  | 1263  | 849   | 288   | 489   | 109   | 5724  |
| Approach % | 28.98 | 42.72 | 28.30 | 12.62 | 78.02 | 9.37 | 4.91 | 56.87 | 38.23 | 32.51 | 55.19 | 12.30 |       |
| App/Depart | 1325  | /     | 784   | 1292  | /     | 2145 | 2221 | /     | 1801  | 886   | /     | 994   |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL    | NT    | NR    | SL    | ST    | SR   | EL   | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Volumes    | 280   | 320   | 224   | 86    | 588   | 63   | 53   | 645   | 413   | 134   | 206   | 44    | 3056  |
| Approach % | 33.98 | 38.83 | 27.18 | 11.67 | 79.78 | 8.55 | 4.77 | 58.06 | 37.17 | 34.90 | 53.65 | 11.46 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.713 |    |    | 0.805 |    |    | 0.827 |    |    | 0.640 |    | 0.854 |

CONTROL: Signal  
 COMMENT 1: 33.684175, -112.005147

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix  
 E-W STREET: Deer Valley Dr DAY: TUESDAY PROJECT#: 22-1469-007

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
|         | 1          | 3   | 1  | 1          | 3  | 0  | 1         | 3   | 1  | 2         | 3   | 0  |       |
| 1:00 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 1:15 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM | 11         | 76  | 25 | 8          | 48 | 7  | 8         | 58  | 82 | 43        | 53  | 9  | 428   |
| 2:15 PM | 147        | 35  | 93 | 8          | 95 | 11 | 36        | 122 | 72 | 34        | 76  | 14 | 743   |
| 2:30 PM | 46         | 67  | 26 | 14         | 61 | 4  | 9         | 57  | 45 | 25        | 51  | 10 | 415   |
| 2:45 PM | 35         | 64  | 31 | 17         | 67 | 13 | 5         | 85  | 49 | 13        | 67  | 13 | 459   |
| 3:00 PM | 32         | 89  | 52 | 20         | 51 | 9  | 11        | 73  | 52 | 29        | 64  | 24 | 506   |
| 3:15 PM | 39         | 137 | 57 | 27         | 78 | 26 | 13        | 72  | 53 | 30        | 115 | 21 | 668   |
| 3:30 PM | 55         | 76  | 51 | 17         | 73 | 9  | 1         | 78  | 43 | 24        | 102 | 22 | 551   |
| 3:45 PM | 27         | 108 | 30 | 15         | 54 | 4  | 5         | 108 | 40 | 50        | 134 | 26 | 601   |
| 4:00 PM | 47         | 85  | 28 | 15         | 49 | 10 | 5         | 85  | 57 | 34        | 86  | 15 | 516   |
| 4:15 PM | 38         | 110 | 32 | 11         | 74 | 7  | 6         | 85  | 53 | 30        | 120 | 22 | 588   |
| 4:30 PM | 39         | 137 | 44 | 13         | 64 | 4  | 8         | 71  | 46 | 26        | 99  | 13 | 564   |
| 4:45 PM | 59         | 120 | 33 | 17         | 68 | 9  | 8         | 83  | 52 | 16        | 102 | 20 | 587   |
| 5:00 PM | 45         | 93  | 42 | 16         | 43 | 9  | 8         | 94  | 56 | 26        | 93  | 22 | 547   |
| 5:15 PM | 46         | 131 | 63 | 16         | 51 | 6  | 6         | 103 | 31 | 19        | 123 | 21 | 616   |
| 5:30 PM | 49         | 95  | 37 | 7          | 55 | 10 | 5         | 74  | 52 | 30        | 107 | 23 | 544   |
| 5:45 PM | 46         | 72  | 38 | 18         | 78 | 3  | 6         | 68  | 41 | 42        | 95  | 23 | 530   |
| 6:00 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR    | EL   | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Volumes    | 761   | 1495  | 682   | 239   | 1009  | 141   | 140  | 1316  | 824   | 471   | 1487  | 298   | 8863  |
| Approach % | 25.90 | 50.88 | 23.21 | 17.21 | 72.64 | 10.15 | 6.14 | 57.72 | 36.14 | 20.88 | 65.91 | 13.21 |       |
| App/Depart | 2938  | /     | 1933  | 1389  | /     | 2304  | 2280 | /     | 2237  | 2256  | /     | 2389  |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL    | NT    | NR    | SL    | ST    | SR    | EL   | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Volumes    | 168   | 406   | 166   | 74    | 254   | 49    | 24   | 343   | 193   | 138   | 437   | 84    | 2336  |
| Approach % | 22.70 | 54.86 | 22.43 | 19.63 | 67.37 | 13.00 | 4.29 | 61.25 | 34.46 | 20.94 | 66.31 | 12.75 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.794 |    |    | 0.719 |    |    | 0.915 |    |    | 0.785 |    | 0.874 |

CONTROL: Signal  
 COMMENT 1: 33.684175, -112.005147

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Black Mountain Blvd    DATE: 08/16/22    LOCATION: Phoenix  
 E-W STREET: Deer Valley Dr    DAY: TUESDAY    PROJECT# 22-1469-007

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|-----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT  | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM | 1          | 3   | 1  | 1          | 3  | 0  | 1         | 3   | 1  | 2         | 3   | 0  |       |
| 1:15 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM | 11         | 76  | 25 | 8          | 48 | 7  | 8         | 58  | 82 | 43        | 53  | 9  | 428   |
| 2:15 PM | 147        | 35  | 93 | 8          | 95 | 11 | 36        | 122 | 72 | 34        | 76  | 14 | 743   |
| 2:30 PM | 46         | 67  | 26 | 14         | 61 | 4  | 9         | 57  | 45 | 25        | 51  | 10 | 415   |
| 2:45 PM | 35         | 64  | 31 | 17         | 67 | 13 | 5         | 85  | 49 | 13        | 67  | 13 | 459   |
| 3:00 PM | 32         | 89  | 52 | 20         | 51 | 9  | 11        | 73  | 52 | 29        | 64  | 24 | 506   |
| 3:15 PM | 39         | 137 | 57 | 27         | 78 | 26 | 13        | 72  | 53 | 30        | 115 | 21 | 668   |
| 3:30 PM | 55         | 76  | 51 | 17         | 73 | 9  | 1         | 78  | 43 | 24        | 102 | 22 | 551   |
| 3:45 PM | 27         | 108 | 30 | 15         | 54 | 4  | 5         | 108 | 40 | 50        | 134 | 26 | 601   |
| 4:00 PM | 47         | 85  | 28 | 15         | 49 | 10 | 5         | 85  | 57 | 34        | 86  | 15 | 516   |
| 4:15 PM | 38         | 110 | 32 | 11         | 74 | 7  | 6         | 85  | 53 | 30        | 120 | 22 | 588   |
| 4:30 PM | 39         | 137 | 44 | 13         | 64 | 4  | 8         | 71  | 46 | 26        | 99  | 13 | 564   |
| 4:45 PM | 59         | 120 | 33 | 17         | 68 | 9  | 8         | 83  | 52 | 16        | 102 | 20 | 587   |
| 5:00 PM | 45         | 93  | 42 | 16         | 43 | 9  | 8         | 94  | 56 | 26        | 93  | 22 | 547   |
| 5:15 PM | 46         | 131 | 63 | 16         | 51 | 6  | 6         | 103 | 31 | 19        | 123 | 21 | 616   |
| 5:30 PM | 49         | 95  | 37 | 7          | 55 | 10 | 5         | 74  | 52 | 30        | 107 | 23 | 544   |
| 5:45 PM | 46         | 72  | 38 | 18         | 78 | 3  | 6         | 68  | 41 | 42        | 95  | 23 | 530   |
| 6:00 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |     |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR    | EL   | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Volumes    | 761   | 1495  | 682   | 239   | 1009  | 141   | 140  | 1316  | 824   | 471   | 1487  | 298   | 8863  |
| Approach % | 25.90 | 50.88 | 23.21 | 17.21 | 72.64 | 10.15 | 6.14 | 57.72 | 36.14 | 20.88 | 65.91 | 13.21 |       |
| App/Depart | 2938  | /     | 1933  | 1389  | /     | 2304  | 2280 | /     | 2237  | 2256  | /     | 2389  |       |

PM Peak Hr Begins at: 200 PM

| PEAK       | NL    | NT    | NR    | SL    | ST    | SR   | EL   | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Volumes    | 239   | 242   | 175   | 47    | 271   | 35   | 58   | 322   | 248   | 115   | 247   | 46    | 2045  |
| Approach % | 36.43 | 36.89 | 26.68 | 13.31 | 76.77 | 9.92 | 9.24 | 51.27 | 39.49 | 28.19 | 60.54 | 11.27 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL    | ST | SR | EL    | ET | ER | WL    | WT | WR | TOTAL |
|------------------|----|-------|----|-------|----|----|-------|----|----|-------|----|----|-------|
|                  |    | 0.596 |    | 0.774 |    |    | 0.683 |    |    | 0.823 |    |    | 0.688 |

CONTROL: Signal  
 COMMENT 1: 0  
 GPS: 33.684175, -112.005147

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC. 520.316.6745



veracitytrafficgroup

N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix

E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-008

Table with 13 columns (NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR, TOTAL) and 30 rows (Time slots from 6:00 AM to 11:45 AM)

Summary table with 13 columns and 4 rows (TOTAL, Volumes, Approach %, App/Depart)

AM Peak Hr Begins at: 700 AM

Table with 13 columns and 2 rows (PEAK Volumes, PEAK Approach %)

Table with 13 columns and 2 rows (PEAK HR FACTOR)

CONTROL: Signal
COMMENT 1: 33.680858, -112.005116

Intersection Turning Movement



FIELD DATA SERVICES OF ARIZONA, INC. 520.316.6745



veracitytrafficgroup

N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix

E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-008

Table with 13 columns (NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR, TOTAL) and 30 rows (Time slots from 1:00 PM to 6:45 PM)

Summary table with 13 columns and 4 rows (TOTAL, Volumes, Approach %, App/Depart)

PM Peak Hr Begins at: 315 PM

Table with 13 columns and 2 rows (PEAK Volumes, PEAK Approach %)

Table with 13 columns and 2 rows (PEAK HR FACTOR)

CONTROL: Signal
COMMENT 1: 33.680858, -112.005116

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Black Mountain Blvd    DATE: 08/16/22    LOCATION: Phoenix  
 E-W STREET: Mayo Blvd    DAY: TUESDAY    PROJECT# 22-1469-008

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
|         | 1          | 3   | 1  | 1          | 3   | 1  | 1         | 1  | 0  | 1         | 1  | 1  |       |
| 1:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM | 7          | 87  | 23 | 18         | 150 | 5  | 17        | 0  | 14 | 31        | 6  | 8  | 366   |
| 2:15 PM | 22         | 143 | 42 | 16         | 137 | 48 | 76        | 22 | 50 | 32        | 2  | 56 | 646   |
| 2:30 PM | 2          | 107 | 37 | 21         | 103 | 7  | 12        | 3  | 17 | 32        | 0  | 20 | 361   |
| 2:45 PM | 0          | 104 | 40 | 38         | 86  | 5  | 16        | 3  | 9  | 12        | 1  | 10 | 324   |
| 3:00 PM | 1          | 144 | 34 | 28         | 104 | 0  | 14        | 2  | 11 | 34        | 1  | 15 | 388   |
| 3:15 PM | 0          | 180 | 35 | 27         | 131 | 3  | 8         | 1  | 3  | 32        | 1  | 45 | 466   |
| 3:30 PM | 2          | 158 | 35 | 12         | 125 | 3  | 5         | 3  | 9  | 54        | 1  | 19 | 426   |
| 3:45 PM | 1          | 147 | 39 | 10         | 134 | 0  | 5         | 2  | 5  | 31        | 0  | 13 | 387   |
| 4:00 PM | 3          | 136 | 27 | 13         | 126 | 1  | 10        | 4  | 2  | 47        | 1  | 14 | 384   |
| 4:15 PM | 7          | 156 | 34 | 12         | 138 | 7  | 13        | 3  | 4  | 38        | 1  | 11 | 424   |
| 4:30 PM | 1          | 175 | 30 | 12         | 124 | 0  | 36        | 4  | 4  | 28        | 1  | 9  | 424   |
| 4:45 PM | 2          | 171 | 15 | 10         | 125 | 1  | 31        | 7  | 4  | 34        | 4  | 10 | 414   |
| 5:00 PM | 2          | 159 | 42 | 15         | 110 | 0  | 12        | 1  | 3  | 21        | 0  | 9  | 374   |
| 5:15 PM | 2          | 216 | 36 | 11         | 90  | 0  | 6         | 0  | 1  | 19        | 3  | 18 | 402   |
| 5:30 PM | 3          | 162 | 36 | 8          | 128 | 1  | 11        | 3  | 1  | 38        | 0  | 8  | 399   |
| 5:45 PM | 2          | 143 | 33 | 9          | 148 | 4  | 8         | 2  | 3  | 28        | 2  | 5  | 387   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR    | SL    | ST    | SR   | EL    | ET    | ER    | WL    | WT   | WR    | TOTAL |
|------------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|
| Volumes    | 57   | 2388  | 538   | 260   | 1959  | 85   | 280   | 60    | 140   | 511   | 24   | 270   | 6572  |
| Approach % | 1.91 | 80.05 | 18.04 | 11.28 | 85.03 | 3.69 | 58.33 | 12.50 | 29.17 | 63.48 | 2.98 | 33.54 |       |
| App/Depart | 2983 | /     | 2938  | 2304  | /     | 2610 | 480   | /     | 858   | 805   | /    | 166   |       |

PM Peak Hr Begins at: 200 PM

| PEAK       | NL   | NT    | NR    | SL    | ST    | SR    | EL    | ET    | ER    | WL    | WT   | WR    | TOTAL |
|------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Volumes    | 31   | 441   | 142   | 93    | 476   | 65    | 121   | 28    | 90    | 107   | 9    | 94    | 1697  |
| Approach % | 5.05 | 71.82 | 23.13 | 14.67 | 75.08 | 10.25 | 50.63 | 11.72 | 37.66 | 50.95 | 4.29 | 44.76 |       |

| PEAK HR. FACTOR: | NL    | NT | NR | SL    | ST | SR | EL    | ET | ER | WL    | WT | WR | TOTAL |
|------------------|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|
|                  | 0.742 |    |    | 0.789 |    |    | 0.404 |    |    | 0.583 |    |    | 0.657 |

CONTROL: Signal  
 COMMENT 1: 0  
 GPS: 33.680858, -112.005116

### Intersection Turning Movement Prepared by:



N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix  
 E-W STREET: HS North Driveway DAY: TUESDAY PROJECT# 22-1469-015

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |     | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|-----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR  | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:15 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 7:00 AM  | 0          | 112 | 0  | 0          | 145 | 274 | 0         | 0  | 0  | 0         | 0  | 0  | 531   |
| 7:15 AM  | 0          | 172 | 0  | 0          | 177 | 157 | 0         | 0  | 0  | 0         | 0  | 0  | 506   |
| 7:30 AM  | 0          | 143 | 0  | 0          | 314 | 11  | 0         | 0  | 1  | 0         | 0  | 0  | 469   |
| 7:45 AM  | 0          | 139 | 0  | 0          | 303 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 442   |
| 8:00 AM  | 0          | 128 | 0  | 0          | 273 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 401   |
| 8:15 AM  | 0          | 148 | 0  | 0          | 279 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 427   |
| 8:30 AM  | 0          | 136 | 0  | 0          | 287 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 423   |
| 8:45 AM  | 0          | 101 | 0  | 0          | 243 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 344   |
| 9:00 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |     |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT     | NR   | SL   | ST    | SR    | EL   | ET   | ER     | WL   | WT   | WR   | TOTAL |
|------------|------|--------|------|------|-------|-------|------|------|--------|------|------|------|-------|
| Volumes    | 0    | 1079   | 0    | 0    | 2021  | 442   | 0    | 0    | 1      | 0    | 0    | 0    | 3543  |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | 82.05 | 17.95 | 0.00 | 0.00 | 100.00 | #### | #### | #### |       |
| App/Depart | 1079 |        | 1079 | 2463 |       | 2022  | 1    |      | 0      | 0    |      | 442  |       |

AM Peak Hr Begins at: 700 AM

PEAK

|            |      |        |      |      |       |       |      |      |        |      |      |      |      |
|------------|------|--------|------|------|-------|-------|------|------|--------|------|------|------|------|
| Volumes    | 0    | 566    | 0    | 0    | 939   | 442   | 0    | 0    | 1      | 0    | 0    | 0    | 1948 |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | 67.99 | 32.01 | 0.00 | 0.00 | 100.00 | #### | #### | #### |      |

PEAK HR. FACTOR: 0.823 0.824 0.250 0.000 0.917

CONTROL: 1-Way Stop (EB)  
 COMMENT 1: 33.679837, -112.005147  
 GPS:

### Intersection Turning Movement



N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix  
 E-W STREET: HS North Driveway DAY: TUESDAY PROJECT# 22-1469-015

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |     | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|-----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR  | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 2:00 PM | 0          | 117 | 0  | 0          | 91  | 104 | 0         | 0  | 0  | 0         | 0  | 0  | 312   |
| 2:15 PM | 0          | 207 | 0  | 0          | 161 | 58  | 0         | 0  | 4  | 0         | 0  | 0  | 430   |
| 2:30 PM | 0          | 146 | 0  | 0          | 135 | 17  | 0         | 0  | 5  | 0         | 0  | 0  | 303   |
| 2:45 PM | 0          | 144 | 0  | 0          | 103 | 4   | 0         | 0  | 0  | 0         | 0  | 0  | 251   |
| 3:00 PM | 0          | 179 | 0  | 0          | 134 | 15  | 0         | 0  | 4  | 0         | 0  | 0  | 332   |
| 3:15 PM | 0          | 215 | 0  | 0          | 161 | 5   | 0         | 0  | 2  | 0         | 0  | 0  | 383   |
| 3:30 PM | 0          | 195 | 0  | 0          | 179 | 9   | 0         | 0  | 2  | 0         | 0  | 0  | 385   |
| 3:45 PM | 0          | 187 | 0  | 0          | 158 | 12  | 0         | 0  | 2  | 0         | 0  | 0  | 359   |
| 4:00 PM | 0          | 166 | 0  | 0          | 159 | 16  | 0         | 0  | 1  | 0         | 0  | 0  | 342   |
| 4:15 PM | 0          | 197 | 0  | 0          | 130 | 50  | 0         | 0  | 3  | 0         | 0  | 0  | 380   |
| 4:30 PM | 0          | 206 | 0  | 0          | 130 | 26  | 0         | 0  | 9  | 0         | 0  | 0  | 371   |
| 4:45 PM | 0          | 188 | 0  | 0          | 135 | 28  | 0         | 0  | 5  | 0         | 0  | 0  | 356   |
| 5:00 PM | 0          | 203 | 0  | 0          | 125 | 9   | 0         | 0  | 0  | 0         | 0  | 0  | 337   |
| 5:15 PM | 0          | 254 | 0  | 0          | 103 | 7   | 0         | 0  | 2  | 0         | 0  | 0  | 366   |
| 5:30 PM | 0          | 201 | 0  | 0          | 128 | 39  | 0         | 0  | 7  | 0         | 0  | 0  | 375   |
| 5:45 PM | 0          | 178 | 0  | 0          | 86  | 93  | 0         | 0  | 2  | 0         | 0  | 0  | 359   |
| 6:00 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT     | NR   | SL   | ST    | SR    | EL   | ET   | ER     | WL   | WT   | WR   | TOTAL |
|------------|------|--------|------|------|-------|-------|------|------|--------|------|------|------|-------|
| Volumes    | 0    | 2983   | 0    | 0    | 2118  | 492   | 0    | 0    | 48     | 0    | 0    | 0    | 5641  |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | 81.15 | 18.85 | 0.00 | 0.00 | 100.00 | #### | #### | #### |       |
| App/Depart | 2983 |        | 2983 | 2610 |       | 2166  | 48   |      | 0      | 0    |      | 492  |       |

PM Peak Hr Begins at: 315 PM

PEAK

|            |      |        |      |      |       |      |      |      |        |      |      |      |      |
|------------|------|--------|------|------|-------|------|------|------|--------|------|------|------|------|
| Volumes    | 0    | 763    | 0    | 0    | 657   | 42   | 0    | 0    | 7      | 0    | 0    | 0    | 1469 |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | 93.99 | 6.01 | 0.00 | 0.00 | 100.00 | #### | #### | #### |      |

PEAK HR. FACTOR: 0.887 0.930 0.875 0.000 0.954

CONTROL: 1-Way Stop (EB)  
 COMMENT 1: 33.679837, -112.005147  
 GPS:

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Black Mountain Blvd    DATE: 08/16/22    LOCATION: Phoenix  
 E-W STREET: HS North Driveway    DAY: TUESDAY    PROJECT# 22-1469-015

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |     | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|-----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR  | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 3   | 0  | 0          | 2   | 1   | 0         | 0  | 1  | 0         | 0  | 0  |       |
| 1:15 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 2:00 PM | 0          | 117 | 0  | 0          | 91  | 104 | 0         | 0  | 0  | 0         | 0  | 0  | 312   |
| 2:15 PM | 0          | 207 | 0  | 0          | 161 | 58  | 0         | 0  | 4  | 0         | 0  | 0  | 430   |
| 2:30 PM | 0          | 146 | 0  | 0          | 135 | 17  | 0         | 0  | 5  | 0         | 0  | 0  | 303   |
| 2:45 PM | 0          | 144 | 0  | 0          | 103 | 4   | 0         | 0  | 0  | 0         | 0  | 0  | 251   |
| 3:00 PM | 0          | 179 | 0  | 0          | 134 | 15  | 0         | 0  | 4  | 0         | 0  | 0  | 332   |
| 3:15 PM | 0          | 215 | 0  | 0          | 161 | 5   | 0         | 0  | 2  | 0         | 0  | 0  | 383   |
| 3:30 PM | 0          | 195 | 0  | 0          | 179 | 9   | 0         | 0  | 2  | 0         | 0  | 0  | 385   |
| 3:45 PM | 0          | 187 | 0  | 0          | 158 | 12  | 0         | 0  | 2  | 0         | 0  | 0  | 359   |
| 4:00 PM | 0          | 166 | 0  | 0          | 159 | 16  | 0         | 0  | 1  | 0         | 0  | 0  | 342   |
| 4:15 PM | 0          | 197 | 0  | 0          | 130 | 50  | 0         | 0  | 3  | 0         | 0  | 0  | 380   |
| 4:30 PM | 0          | 206 | 0  | 0          | 130 | 26  | 0         | 0  | 9  | 0         | 0  | 0  | 371   |
| 4:45 PM | 0          | 188 | 0  | 0          | 135 | 28  | 0         | 0  | 5  | 0         | 0  | 0  | 356   |
| 5:00 PM | 0          | 203 | 0  | 0          | 125 | 9   | 0         | 0  | 0  | 0         | 0  | 0  | 337   |
| 5:15 PM | 0          | 254 | 0  | 0          | 103 | 7   | 0         | 0  | 2  | 0         | 0  | 0  | 366   |
| 5:30 PM | 0          | 201 | 0  | 0          | 128 | 39  | 0         | 0  | 7  | 0         | 0  | 0  | 375   |
| 5:45 PM | 0          | 178 | 0  | 0          | 86  | 93  | 0         | 0  | 2  | 0         | 0  | 0  | 359   |
| 6:00 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT     | NR   | SL   | ST    | SR    | EL   | ET   | ER     | WL   | WT   | WR   | TOTAL |
|------------|------|--------|------|------|-------|-------|------|------|--------|------|------|------|-------|
| Volumes    | 0    | 2983   | 0    | 0    | 2118  | 492   | 0    | 0    | 48     | 0    | 0    | 0    | 5641  |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | 81.15 | 18.85 | 0.00 | 0.00 | 100.00 | #### | #### | #### |       |
| App/Depart | 2983 | /      | 2983 | 2610 | /     | 2166  | 48   | /    | 0      | 0    | /    | 492  |       |

PM Peak Hr Begins at: 200 PM

| PEAK       | NL   | NT     | NR   | SL   | ST    | SR    | EL   | ET   | ER     | WL   | WT   | WR   | TOTAL |
|------------|------|--------|------|------|-------|-------|------|------|--------|------|------|------|-------|
| Volumes    | 0    | 614    | 0    | 0    | 490   | 183   | 0    | 0    | 9      | 0    | 0    | 0    | 1296  |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | 72.81 | 27.19 | 0.00 | 0.00 | 100.00 | #### | #### | #### |       |

| PEAK HR. | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|----------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
| FACTOR:  |    | 0.742 |    |    | 0.768 |    |    | 0.450 |    |    | 0.000 |    | 0.753 |

CONTROL: 1-Way Stop (EB)  
 COMMENT 1: 0  
 GPS: 33.679837, -112.005147

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC. 520.316.6745



veracitytrafficgroup

N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix
E-W STREET: Round a bout DAY: TUESDAY PROJECT# 22-1469-009

Table with 14 columns (LANES, NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR, TOTAL) and 24 rows (Time slots from 6:00 AM to 11:45 AM)

Summary table with 14 columns (TOTAL, NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR, TOTAL) and 3 rows (Volumes, Approach %, App/Depart)

AM Peak Hr Begins at: 730 AM

Summary table for AM Peak Hour with 14 columns and 2 rows (Volumes, Approach %)

PEAK HR. FACTOR: 0.930, 0.915, 0.806, 0.000, 0.931

CONTROL: Round a bout
COMMENT 1: 33.676401, -112.005109

Intersection Turning Movement



FIELD DATA SERVICES OF ARIZONA, INC. 520.316.6745



veracitytrafficgroup

N-S STREET: Black Mountain Blvd DATE: 08/16/22 LOCATION: Phoenix
E-W STREET: Round a bout DAY: TUESDAY PROJECT# 22-1469-009

Table with 14 columns (LANES, NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR, TOTAL) and 24 rows (Time slots from 1:00 PM to 6:45 PM)

Summary table with 14 columns (TOTAL, NL, NT, NR, SL, ST, SR, EL, ET, ER, WL, WT, WR, TOTAL) and 3 rows (Volumes, Approach %, App/Depart)

PM Peak Hr Begins at: 315 PM

Summary table for PM Peak Hour with 14 columns and 2 rows (Volumes, Approach %)

PEAK HR. FACTOR: 0.885, 0.906, 0.333, 0.000, 0.935

CONTROL: Round a bout
COMMENT 1: 33.676401, -112.005109



## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Black Mountain Blvd    DATE: 08/16/22    LOCATION: Phoenix  
 E-W STREET: Round a bout    DAY: TUESDAY    PROJECT# 22-1469-009

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |     | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|-----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR  | EL        | ET | ER | WL        | WT | WR |       |
|         | 0.5        | 1.5 | 0  | 0          | 1.5 | 0.5 | 0         | 1  | 0  | 0         | 0  | 0  |       |
| 1:00 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 2:00 PM | 3          | 116 | 0  | 0          | 116 | 4   | 1         | 0  | 0  | 0         | 0  | 0  | 240   |
| 2:15 PM | 5          | 204 | 0  | 0          | 247 | 1   | 3         | 0  | 12 | 0         | 0  | 0  | 472   |
| 2:30 PM | 1          | 146 | 0  | 0          | 155 | 0   | 0         | 0  | 1  | 0         | 0  | 0  | 303   |
| 2:45 PM | 1          | 143 | 0  | 0          | 107 | 0   | 1         | 0  | 1  | 0         | 0  | 0  | 253   |
| 3:00 PM | 1          | 179 | 0  | 0          | 135 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 315   |
| 3:15 PM | 1          | 215 | 0  | 0          | 163 | 1   | 0         | 0  | 3  | 0         | 0  | 0  | 383   |
| 3:30 PM | 0          | 195 | 0  | 0          | 183 | 0   | 0         | 0  | 0  | 0         | 0  | 0  | 378   |
| 3:45 PM | 1          | 187 | 0  | 0          | 157 | 1   | 0         | 0  | 0  | 0         | 0  | 0  | 346   |
| 4:00 PM | 1          | 165 | 0  | 0          | 156 | 2   | 1         | 0  | 0  | 0         | 0  | 0  | 325   |
| 4:15 PM | 1          | 194 | 0  | 0          | 129 | 0   | 3         | 0  | 1  | 0         | 0  | 0  | 328   |
| 4:30 PM | 1          | 205 | 0  | 0          | 125 | 1   | 1         | 0  | 0  | 0         | 0  | 0  | 333   |
| 4:45 PM | 1          | 188 | 0  | 0          | 126 | 1   | 0         | 0  | 1  | 0         | 0  | 0  | 317   |
| 5:00 PM | 2          | 203 | 0  | 0          | 116 | 0   | 0         | 0  | 2  | 0         | 0  | 0  | 323   |
| 5:15 PM | 3          | 253 | 0  | 0          | 97  | 1   | 1         | 0  | 0  | 0         | 0  | 0  | 355   |
| 5:30 PM | 1          | 199 | 0  | 0          | 125 | 3   | 2         | 0  | 1  | 0         | 0  | 0  | 331   |
| 5:45 PM | 4          | 177 | 0  | 0          | 95  | 4   | 1         | 0  | 2  | 0         | 0  | 0  | 283   |
| 6:00 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |     |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 27   | 2969  | 0    | 0    | 2232  | 19   | 14    | 0    | 24    | 0    | 0    | 0    | 5285  |
| Approach % | 0.90 | 99.10 | 0.00 | 0.00 | 99.16 | 0.84 | 36.84 | 0.00 | 63.16 | #### | #### | #### |       |
| App/Depart | 2996 | /     | 2983 | 2251 | /     | 2256 | 38    | /    | 0     | 0    | /    | 46   |       |

PM Peak Hr Begins at: 200 PM

| PEAK       |      |       |      |      |       |      |       |      |       |      |      |      |      |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|------|
| Volumes    | 10   | 609   | 0    | 0    | 625   | 5    | 5     | 0    | 14    | 0    | 0    | 0    | 1268 |
| Approach % | 1.62 | 98.38 | 0.00 | 0.00 | 99.21 | 0.79 | 26.32 | 0.00 | 73.68 | #### | #### | #### |      |

| PEAK HR. |  |       |  |       |  |       |  |  |  |       |  |  |       |
|----------|--|-------|--|-------|--|-------|--|--|--|-------|--|--|-------|
| FACTOR:  |  | 0.740 |  | 0.635 |  | 0.317 |  |  |  | 0.000 |  |  | 0.672 |

CONTROL: Round a bout  
 COMMENT 1: 0  
 GPS: 33.676401, -112.005109

### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: Lone Cactus Dr DATE: 08/16/22 LOCATION: Phoenix  
E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-012

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |     |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|----|----|-----------|-----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT  | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 7:00 AM  | 5          | 1  | 4  | 4          | 0  | 31 | 16        | 34 | 3  | 4         | 140 | 7  | 249   |
| 7:15 AM  | 2          | 0  | 3  | 3          | 1  | 32 | 22        | 49 | 1  | 3         | 95  | 5  | 216   |
| 7:30 AM  | 1          | 1  | 0  | 0          | 2  | 23 | 27        | 19 | 2  | 0         | 47  | 4  | 126   |
| 7:45 AM  | 2          | 1  | 0  | 4          | 2  | 10 | 14        | 17 | 1  | 2         | 28  | 2  | 83    |
| 8:00 AM  | 2          | 1  | 1  | 5          | 1  | 12 | 22        | 13 | 0  | 3         | 40  | 5  | 105   |
| 8:15 AM  | 2          | 1  | 1  | 4          | 0  | 47 | 58        | 40 | 3  | 6         | 41  | 42 | 245   |
| 8:30 AM  | 5          | 1  | 2  | 11         | 2  | 65 | 68        | 6  | 1  | 0         | 38  | 23 | 222   |
| 8:45 AM  | 3          | 1  | 3  | 3          | 0  | 28 | 15        | 19 | 3  | 4         | 26  | 6  | 111   |
| 9:00 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 10:00 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 10:15 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 10:30 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 10:45 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 11:00 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 11:15 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 11:30 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 11:45 AM |            |    |    |            |    |    |           |    |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|-------|-------|
| Volumes    | 22    | 7     | 14    | 34    | 8    | 248   | 242   | 197   | 14   | 22   | 455   | 94    | 1357  |
| Approach % | 51.16 | 16.28 | 32.56 | 11.72 | 2.76 | 85.52 | 53.42 | 43.49 | 3.09 | 3.85 | 79.68 | 16.46 |       |
| App/Depart | 43    | /     | 343   | 290   | /    | 44    | 453   | /     | 245  | 571  | /     | 725   |       |

AM Peak Hr Begins at: 800 AM

| PEAK       | NL    | NT    | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|-------|-------|
| Volumes    | 12    | 4     | 7     | 23    | 3    | 152   | 163   | 78    | 7    | 13   | 145   | 76    | 683   |
| Approach % | 52.17 | 17.39 | 30.43 | 12.92 | 1.69 | 85.39 | 65.73 | 31.45 | 2.82 | 5.56 | 61.97 | 32.48 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.719 |    |    | 0.571 |    |    | 0.614 |    |    | 0.657 |    | 0.697 |

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1: 33.679959, -112.002938

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: Lone Cactus Dr DATE: 08/16/22 LOCATION: Phoenix  
E-W STREET: Mayo Blvd DAY: TUESDAY PROJECT#: 22-1469-012

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 2          | 0  | 1  | 0          | 1  | 14 | 7         | 30 | 4  | 4         | 36 | 2  | 101   |
| 2:15 PM | 4          | 1  | 4  | 4          | 1  | 17 | 19        | 54 | 7  | 4         | 31 | 9  | 155   |
| 2:30 PM | 4          | 1  | 1  | 1          | 1  | 9  | 32        | 25 | 4  | 1         | 35 | 15 | 129   |
| 2:45 PM | 0          | 1  | 0  | 2          | 0  | 6  | 49        | 31 | 1  | 3         | 19 | 13 | 125   |
| 3:00 PM | 2          | 2  | 2  | 3          | 1  | 13 | 27        | 36 | 1  | 4         | 31 | 11 | 133   |
| 3:15 PM | 2          | 0  | 2  | 15         | 2  | 57 | 29        | 32 | 2  | 5         | 29 | 13 | 188   |
| 3:30 PM | 3          | 0  | 0  | 5          | 1  | 30 | 15        | 34 | 1  | 10        | 21 | 5  | 125   |
| 3:45 PM | 3          | 2  | 1  | 4          | 1  | 17 | 14        | 31 | 6  | 6         | 32 | 5  | 122   |
| 4:00 PM | 1          | 2  | 0  | 3          | 0  | 23 | 16        | 27 | 1  | 2         | 33 | 3  | 111   |
| 4:15 PM | 1          | 0  | 3  | 3          | 0  | 16 | 14        | 29 | 6  | 2         | 31 | 5  | 110   |
| 4:30 PM | 4          | 0  | 4  | 3          | 0  | 15 | 15        | 30 | 1  | 2         | 22 | 0  | 96    |
| 4:45 PM | 0          | 0  | 1  | 1          | 0  | 14 | 8         | 21 | 3  | 0         | 28 | 1  | 77    |
| 5:00 PM | 2          | 2  | 3  | 2          | 0  | 11 | 13        | 38 | 7  | 6         | 22 | 2  | 108   |
| 5:15 PM | 2          | 0  | 0  | 1          | 2  | 12 | 10        | 34 | 3  | 2         | 23 | 3  | 92    |
| 5:30 PM | 5          | 0  | 2  | 3          | 1  | 16 | 16        | 28 | 3  | 2         | 24 | 1  | 101   |
| 5:45 PM | 3          | 2  | 0  | 1          | 0  | 10 | 6         | 35 | 3  | 1         | 17 | 1  | 79    |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|-------|-------|
| Volumes    | 38    | 13    | 24    | 51    | 11   | 280   | 290   | 515   | 53   | 54   | 434   | 89    | 1852  |
| Approach % | 50.67 | 17.33 | 32.00 | 14.91 | 3.22 | 81.87 | 33.80 | 60.02 | 6.18 | 9.36 | 75.22 | 15.42 |       |
| App/Depart | 75    | /     | 392   | 342   | /    | 118   | 858   | /     | 590  | 577  | /     | 752   |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL    | NT    | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| Volumes    | 9     | 4     | 3     | 27    | 4    | 127   | 74    | 124   | 10   | 23    | 115   | 26    | 546   |
| Approach % | 56.25 | 25.00 | 18.75 | 17.09 | 2.53 | 80.38 | 35.58 | 59.62 | 4.81 | 14.02 | 70.12 | 15.85 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.667 |    |    | 0.534 |    |    | 0.825 |    |    | 0.872 |    | 0.726 |

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1: 33.679959, -112.002938

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Lone Cactus Dr      DATE: 08/16/22      LOCATION: Phoenix  
 E-W STREET: Mayo Blvd      DAY: TUESDAY      PROJECT# 22-1469-012

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 1  | 0  | 1         | 2  | 0  | 1         | 2  | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 2          | 0  | 1  | 0          | 1  | 14 | 7         | 30 | 4  | 4         | 36 | 2  | 101   |
| 2:15 PM | 4          | 1  | 4  | 4          | 1  | 17 | 19        | 54 | 7  | 4         | 31 | 9  | 155   |
| 2:30 PM | 4          | 1  | 1  | 1          | 1  | 9  | 32        | 25 | 4  | 1         | 35 | 15 | 129   |
| 2:45 PM | 0          | 1  | 0  | 2          | 0  | 6  | 49        | 31 | 1  | 3         | 19 | 13 | 125   |
| 3:00 PM | 2          | 2  | 2  | 3          | 1  | 13 | 27        | 36 | 1  | 4         | 31 | 11 | 133   |
| 3:15 PM | 2          | 0  | 2  | 15         | 2  | 57 | 29        | 32 | 2  | 5         | 29 | 13 | 188   |
| 3:30 PM | 3          | 0  | 0  | 5          | 1  | 30 | 15        | 34 | 1  | 10        | 21 | 5  | 125   |
| 3:45 PM | 3          | 2  | 1  | 4          | 1  | 17 | 14        | 31 | 6  | 6         | 32 | 5  | 122   |
| 4:00 PM | 1          | 2  | 0  | 3          | 0  | 23 | 16        | 27 | 1  | 2         | 33 | 3  | 111   |
| 4:15 PM | 1          | 0  | 3  | 3          | 0  | 16 | 14        | 29 | 6  | 2         | 31 | 5  | 110   |
| 4:30 PM | 4          | 0  | 4  | 3          | 0  | 15 | 15        | 30 | 1  | 2         | 22 | 0  | 96    |
| 4:45 PM | 0          | 0  | 1  | 1          | 0  | 14 | 8         | 21 | 3  | 0         | 28 | 1  | 77    |
| 5:00 PM | 2          | 2  | 3  | 2          | 0  | 11 | 13        | 38 | 7  | 6         | 22 | 2  | 108   |
| 5:15 PM | 2          | 0  | 0  | 1          | 2  | 12 | 10        | 34 | 3  | 2         | 23 | 3  | 92    |
| 5:30 PM | 5          | 0  | 2  | 3          | 1  | 16 | 16        | 28 | 3  | 2         | 24 | 1  | 101   |
| 5:45 PM | 3          | 2  | 0  | 1          | 0  | 10 | 6         | 35 | 3  | 1         | 17 | 1  | 79    |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|-------|-------|
| Volumes    | 38    | 13    | 24    | 51    | 11   | 280   | 290   | 515   | 53   | 54   | 434   | 89    | 1852  |
| Approach % | 50.67 | 17.33 | 32.00 | 14.91 | 3.22 | 81.87 | 33.80 | 60.02 | 6.18 | 9.36 | 75.22 | 15.42 |       |
| App/Depart | 75    | /     | 392   | 342   | /    | 118   | 858   | /     | 590  | 577  | /     | 752   |       |

PM Peak Hr Begins at: 200 PM

PEAK

|            |       |       |       |       |      |       |       |       |      |      |       |       |     |
|------------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|-------|-----|
| Volumes    | 10    | 3     | 6     | 7     | 3    | 46    | 107   | 140   | 16   | 12   | 121   | 39    | 510 |
| Approach % | 52.63 | 15.79 | 31.58 | 12.50 | 5.36 | 82.14 | 40.68 | 53.23 | 6.08 | 6.98 | 70.35 | 22.67 |     |

PEAK HR.

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| FACTOR: | 0.528 | 0.636 | 0.812 | 0.843 | 0.823 |
|---------|-------|-------|-------|-------|-------|

CONTROL: 2-Way Stop (NB & SB)  
 COMMENT 1: 0  
 GPS: 33.679959, -112.002938

### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Aviano Way      DATE: 08/16/22      LOCATION: Phoenix  
E-W STREET: Deer Valley Dr      DAY: TUESDAY      PROJECT# 22-1469-013

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 7:00 AM  | 6          | 0  | 15 | 15         | 3  | 10 | 9         | 187 | 14 | 11        | 128 | 4  | 402   |
| 7:15 AM  | 3          | 1  | 16 | 20         | 2  | 13 | 10        | 258 | 27 | 7         | 63  | 3  | 423   |
| 7:30 AM  | 2          | 1  | 9  | 6          | 0  | 7  | 9         | 224 | 7  | 4         | 61  | 10 | 340   |
| 7:45 AM  | 5          | 0  | 11 | 3          | 0  | 7  | 12        | 234 | 3  | 8         | 55  | 6  | 344   |
| 8:00 AM  | 1          | 0  | 12 | 11         | 0  | 2  | 9         | 156 | 8  | 7         | 66  | 4  | 276   |
| 8:15 AM  | 9          | 3  | 14 | 5          | 3  | 9  | 10        | 222 | 21 | 21        | 89  | 3  | 409   |
| 8:30 AM  | 30         | 2  | 41 | 11         | 2  | 14 | 16        | 213 | 20 | 20        | 149 | 10 | 528   |
| 8:45 AM  | 4          | 1  | 18 | 10         | 2  | 7  | 7         | 164 | 11 | 9         | 126 | 7  | 366   |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|------|-------|
| Volumes    | 60    | 8    | 136   | 81    | 12   | 69    | 82   | 1658  | 111  | 87   | 737   | 47   | 3088  |
| Approach % | 29.41 | 3.92 | 66.67 | 50.00 | 7.41 | 42.59 | 4.43 | 89.57 | 6.00 | 9.99 | 84.62 | 5.40 |       |
| App/Depart | 204   | /    | 137   | 162   | /    | 210   | 1851 | /     | 1875 | 871  | /     | 866  |       |

AM Peak Hr Begins at: 800 AM

| PEAK       | NL    | NT   | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|------|-------|------|-------|-------|------|-------|
| Volumes    | 44    | 6    | 85    | 37    | 7    | 32    | 42   | 755   | 60   | 57    | 430   | 24   | 1579  |
| Approach % | 32.59 | 4.44 | 62.96 | 48.68 | 9.21 | 42.11 | 4.90 | 88.10 | 7.00 | 11.15 | 84.15 | 4.70 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.462 |    |    | 0.704 |    |    | 0.847 |    |    | 0.714 |    | 0.748 |

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1:  
GPS: 33.686501, -111.994845

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Aviano Way      DATE: 08/16/22      LOCATION: Phoenix  
E-W STREET: Deer Valley Dr      DAY: TUESDAY      PROJECT# 22-1469-013

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM | 1          | 0  | 4  | 8          | 3  | 6  | 4         | 74  | 5  | 7         | 110 | 8  | 230   |
| 2:15 PM | 3          | 2  | 11 | 9          | 3  | 12 | 22        | 187 | 9  | 3         | 107 | 8  | 376   |
| 2:30 PM | 3          | 1  | 10 | 7          | 2  | 4  | 7         | 79  | 11 | 10        | 87  | 9  | 230   |
| 2:45 PM | 1          | 1  | 11 | 3          | 2  | 3  | 9         | 108 | 15 | 18        | 88  | 19 | 278   |
| 3:00 PM | 9          | 1  | 15 | 2          | 3  | 1  | 10        | 109 | 19 | 22        | 114 | 14 | 319   |
| 3:15 PM | 33         | 0  | 40 | 7          | 1  | 9  | 15        | 139 | 14 | 14        | 135 | 11 | 418   |
| 3:30 PM | 14         | 1  | 23 | 5          | 0  | 9  | 17        | 116 | 4  | 17        | 126 | 16 | 348   |
| 3:45 PM | 6          | 3  | 8  | 10         | 3  | 19 | 19        | 143 | 7  | 15        | 196 | 18 | 447   |
| 4:00 PM | 3          | 0  | 10 | 3          | 0  | 3  | 9         | 110 | 5  | 7         | 137 | 11 | 298   |
| 4:15 PM | 4          | 0  | 10 | 8          | 0  | 10 | 11        | 116 | 5  | 6         | 156 | 18 | 344   |
| 4:30 PM | 3          | 1  | 11 | 4          | 0  | 4  | 15        | 104 | 5  | 11        | 134 | 13 | 305   |
| 4:45 PM | 4          | 0  | 7  | 7          | 1  | 1  | 17        | 111 | 4  | 7         | 131 | 16 | 306   |
| 5:00 PM | 1          | 1  | 12 | 4          | 1  | 7  | 16        | 120 | 2  | 14        | 143 | 17 | 338   |
| 5:15 PM | 1          | 1  | 6  | 5          | 1  | 5  | 20        | 159 | 1  | 16        | 156 | 11 | 382   |
| 5:30 PM | 3          | 2  | 13 | 7          | 1  | 8  | 18        | 96  | 7  | 12        | 151 | 17 | 335   |
| 5:45 PM | 3          | 0  | 13 | 5          | 1  | 8  | 16        | 105 | 5  | 11        | 139 | 18 | 324   |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|-------|-------|------|------|-------|------|-------|
| Volumes    | 92    | 14   | 204   | 94    | 22   | 109   | 225   | 1876  | 118  | 190  | 2110  | 224  | 5278  |
| Approach % | 29.68 | 4.52 | 65.81 | 41.78 | 9.78 | 48.44 | 10.14 | 84.54 | 5.32 | 7.53 | 83.60 | 8.87 |       |
| App/Depart | 310   | /    | 463   | 225   | /    | 330   | 2219  | /     | 2174 | 2524 | /     | 2311 |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL    | NT   | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|-------|-------|------|------|-------|------|-------|
| Volumes    | 56    | 4    | 81    | 25    | 4    | 40    | 60    | 508   | 30   | 53   | 594   | 56   | 1511  |
| Approach % | 39.72 | 2.84 | 57.45 | 36.23 | 5.80 | 57.97 | 10.03 | 84.95 | 5.02 | 7.54 | 84.50 | 7.97 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.483 |    |    | 0.539 |    |    | 0.885 |    |    | 0.767 |    | 0.845 |

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1:  
GPS: 33.686501, -111.994845

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: Aviano Way      DATE: 08/16/22      LOCATION: Phoenix  
 E-W STREET: Deer Valley Dr      DAY: TUESDAY      PROJECT# 22-1469-013

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |     |     | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|-----|-----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST  | SR  | EL        | ET  | ER | WL        | WT  | WR |       |
|         | 1          | 1  | 0  | 1          | 0.5 | 0.5 | 1         | 3   | 0  | 1         | 3   | 0  |       |
| 1:00 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 1:15 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 1:30 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 1:45 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 2:00 PM | 1          | 0  | 4  | 8          | 3   | 6   | 4         | 74  | 5  | 7         | 110 | 8  | 230   |
| 2:15 PM | 3          | 2  | 11 | 9          | 3   | 12  | 22        | 187 | 9  | 3         | 107 | 8  | 376   |
| 2:30 PM | 3          | 1  | 10 | 7          | 2   | 4   | 7         | 79  | 11 | 10        | 87  | 9  | 230   |
| 2:45 PM | 1          | 1  | 11 | 3          | 2   | 3   | 9         | 108 | 15 | 18        | 88  | 19 | 278   |
| 3:00 PM | 9          | 1  | 15 | 2          | 3   | 1   | 10        | 109 | 19 | 22        | 114 | 14 | 319   |
| 3:15 PM | 33         | 0  | 40 | 7          | 1   | 9   | 15        | 139 | 14 | 14        | 135 | 11 | 418   |
| 3:30 PM | 14         | 1  | 23 | 5          | 0   | 9   | 17        | 116 | 4  | 17        | 126 | 16 | 348   |
| 3:45 PM | 6          | 3  | 8  | 10         | 3   | 19  | 19        | 143 | 7  | 15        | 196 | 18 | 447   |
| 4:00 PM | 3          | 0  | 10 | 3          | 0   | 3   | 9         | 110 | 5  | 7         | 137 | 11 | 298   |
| 4:15 PM | 4          | 0  | 10 | 8          | 0   | 10  | 11        | 116 | 5  | 6         | 156 | 18 | 344   |
| 4:30 PM | 3          | 1  | 11 | 4          | 0   | 4   | 15        | 104 | 5  | 11        | 134 | 13 | 305   |
| 4:45 PM | 4          | 0  | 7  | 7          | 1   | 1   | 17        | 111 | 4  | 7         | 131 | 16 | 306   |
| 5:00 PM | 1          | 1  | 12 | 4          | 1   | 7   | 16        | 120 | 2  | 14        | 143 | 17 | 338   |
| 5:15 PM | 1          | 1  | 6  | 5          | 1   | 5   | 20        | 159 | 1  | 16        | 156 | 11 | 362   |
| 5:30 PM | 3          | 2  | 13 | 7          | 1   | 8   | 18        | 96  | 7  | 12        | 151 | 17 | 335   |
| 5:45 PM | 3          | 0  | 13 | 5          | 1   | 8   | 16        | 105 | 5  | 11        | 139 | 18 | 324   |
| 6:00 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 6:15 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 6:30 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |
| 6:45 PM |            |    |    |            |     |     |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL    | ST   | SR    | EL    | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|-------|-------|------|------|-------|------|-------|
| Volumes    | 92    | 14   | 204   | 94    | 22   | 109   | 225   | 1876  | 118  | 190  | 2110  | 224  | 5278  |
| Approach % | 29.68 | 4.52 | 65.81 | 41.78 | 9.78 | 48.44 | 10.14 | 84.54 | 5.32 | 7.53 | 83.60 | 8.87 |       |
| App/Depart | 310   | /    | 463   | 225   | /    | 330   | 2219  | /     | 2174 | 2524 | /     | 2311 |       |

PM Peak Hr Begins at: 200 PM

| PEAK       | NL    | NT   | NR    | SL    | ST    | SR    | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|-------|-------|------|-------|------|------|-------|------|-------|
| Volumes    | 8     | 4    | 36    | 27    | 10    | 25    | 42   | 448   | 40   | 38   | 392   | 44   | 1114  |
| Approach % | 16.67 | 8.33 | 75.00 | 43.55 | 16.13 | 40.32 | 7.92 | 84.53 | 7.55 | 8.02 | 82.70 | 9.28 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL    | ST | SR | EL    | ET | ER | WL    | WT | WR | TOTAL |
|------------------|----|-------|----|-------|----|----|-------|----|----|-------|----|----|-------|
|                  |    | 0.750 |    | 0.646 |    |    | 0.608 |    |    | 0.948 |    |    | 0.741 |

CONTROL: 2-Way Stop (NB & SB)  
 COMMENT 1: 0  
 GPS: 33.686501, -111.994845

**Intersection Turning Movement**

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: **40th St**      DATE: **08/16/22**      LOCATION: **Phoenix**  
E-W STREET: **Mayo Blvd**      DAY: **TUESDAY**      PROJECT# **22-1469-014**

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |     | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|-----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR  | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 6:15 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 7:00 AM  | 10         | 10 | 0  | 0          | 10 | 119 | 46        | 0  | 3  | 0         | 0  | 0  | 198   |
| 7:15 AM  | 8          | 11 | 0  | 0          | 6  | 77  | 49        | 0  | 4  | 0         | 0  | 0  | 155   |
| 7:30 AM  | 9          | 15 | 0  | 0          | 4  | 16  | 26        | 0  | 3  | 0         | 0  | 0  | 73    |
| 7:45 AM  | 7          | 13 | 0  | 0          | 3  | 10  | 18        | 0  | 2  | 0         | 0  | 0  | 53    |
| 8:00 AM  | 9          | 14 | 0  | 0          | 8  | 14  | 15        | 0  | 3  | 0         | 0  | 0  | 63    |
| 8:15 AM  | 9          | 12 | 0  | 0          | 13 | 39  | 24        | 0  | 1  | 0         | 0  | 0  | 98    |
| 8:30 AM  | 5          | 20 | 0  | 0          | 8  | 34  | 35        | 0  | 5  | 0         | 0  | 0  | 107   |
| 8:45 AM  | 4          | 7  | 0  | 0          | 10 | 27  | 17        | 0  | 6  | 0         | 0  | 0  | 71    |
| 9:00 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |     |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET   | ER    | WL  | WT  | WR  | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|------|-------|-----|-----|-----|-------|
| Volumes    | 61    | 102   | 0    | 0    | 62    | 336   | 230   | 0    | 27    | 0   | 0   | 0   | 818   |
| Approach % | 37.42 | 62.58 | 0.00 | 0.00 | 15.58 | 84.42 | 89.49 | 0.00 | 10.51 | ### | ### | ### |       |
| App/Depart | 163   | /     | 332  | 398  | /     | 89    | 257   | /    | 0     | 0   | /   | 397 |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL    | NT    | NR   | SL   | ST   | SR    | EL    | ET   | ER   | WL  | WT  | WR  | TOTAL |
|------------|-------|-------|------|------|------|-------|-------|------|------|-----|-----|-----|-------|
| Volumes    | 34    | 49    | 0    | 0    | 23   | 222   | 139   | 0    | 12   | 0   | 0   | 0   | 479   |
| Approach % | 40.96 | 59.04 | 0.00 | 0.00 | 9.39 | 90.61 | 92.05 | 0.00 | 7.95 | ### | ### | ### |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.865 |    |    | 0.475 |    |    | 0.712 |    |    | 0.000 |    | 0.605 |

CONTROL: **1-Way Stop (EB)**  
COMMENT 1:  
GPS: **33.677045, -111.995890**

**Intersection Turning Movement**



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: **40th St**      DATE: **08/16/22**      LOCATION: **Phoenix**  
E-W STREET: **Mayo Blvd**      DAY: **TUESDAY**      PROJECT# **22-1469-014**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 4          | 6  | 0  | 0          | 8  | 32 | 11        | 0  | 1  | 0         | 0  | 0  | 62    |
| 2:15 PM | 4          | 14 | 0  | 0          | 17 | 29 | 46        | 0  | 6  | 0         | 0  | 0  | 116   |
| 2:30 PM | 4          | 18 | 0  | 0          | 9  | 22 | 24        | 0  | 5  | 0         | 0  | 0  | 82    |
| 2:45 PM | 6          | 8  | 0  | 0          | 11 | 18 | 19        | 0  | 4  | 0         | 0  | 0  | 66    |
| 3:00 PM | 2          | 12 | 0  | 0          | 7  | 36 | 26        | 0  | 4  | 0         | 0  | 0  | 87    |
| 3:15 PM | 4          | 8  | 0  | 0          | 15 | 35 | 28        | 0  | 10 | 0         | 0  | 0  | 100   |
| 3:30 PM | 5          | 13 | 0  | 0          | 14 | 23 | 25        | 0  | 5  | 0         | 0  | 0  | 85    |
| 3:45 PM | 1          | 11 | 0  | 0          | 17 | 55 | 12        | 0  | 4  | 0         | 0  | 0  | 100   |
| 4:00 PM | 10         | 9  | 0  | 0          | 8  | 19 | 17        | 0  | 12 | 0         | 0  | 0  | 75    |
| 4:15 PM | 8          | 8  | 0  | 0          | 11 | 25 | 14        | 0  | 10 | 0         | 0  | 0  | 76    |
| 4:30 PM | 6          | 15 | 0  | 0          | 7  | 24 | 24        | 0  | 5  | 0         | 0  | 0  | 81    |
| 4:45 PM | 6          | 6  | 0  | 0          | 10 | 19 | 27        | 0  | 4  | 0         | 0  | 0  | 72    |
| 5:00 PM | 3          | 11 | 0  | 0          | 11 | 20 | 25        | 0  | 4  | 0         | 0  | 0  | 74    |
| 5:15 PM | 6          | 8  | 0  | 0          | 17 | 10 | 17        | 0  | 10 | 0         | 0  | 0  | 68    |
| 5:30 PM | 4          | 9  | 0  | 0          | 12 | 18 | 21        | 0  | 8  | 0         | 0  | 0  | 72    |
| 5:45 PM | 3          | 7  | 0  | 0          | 10 | 20 | 16        | 0  | 6  | 0         | 0  | 0  | 62    |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET   | ER    | WL  | WT  | WR  | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|------|-------|-----|-----|-----|-------|
| Volumes    | 76    | 163   | 0    | 0    | 184   | 405   | 352   | 0    | 98    | 0   | 0   | 0   | 1278  |
| Approach % | 31.80 | 68.20 | 0.00 | 0.00 | 31.24 | 68.76 | 78.22 | 0.00 | 21.78 | ### | ### | ### |       |
| App/Depart | 239   | /     | 515  | 589  | /     | 282   | 450   | /    | 0     | 0   | /   | 481 |       |

PM Peak Hr Begins at: 315 PM

| PEAK       | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET   | ER    | WL  | WT  | WR  | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|------|-------|-----|-----|-----|-------|
| Volumes    | 20    | 41    | 0    | 0    | 54    | 132   | 82    | 0    | 31    | 0   | 0   | 0   | 360   |
| Approach % | 32.79 | 67.21 | 0.00 | 0.00 | 29.03 | 70.97 | 72.57 | 0.00 | 27.43 | ### | ### | ### |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.803 |    |    | 0.646 |    |    | 0.743 |    |    | 0.000 |    | 0.900 |

CONTROL: **1-Way Stop (EB)**  
COMMENT 1:  
GPS: **33.677045, -111.995890**

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: 40th St      DATE: 08/16/22      LOCATION: Phoenix  
 E-W STREET: Mayo Blvd      DAY: TUESDAY      PROJECT#: 22-1469-014

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 1          | 1  | 0  | 0          | 1  | 1  | 1         | 0  | 1  | 0         | 0  | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM | 4          | 6  | 0  | 0          | 8  | 32 | 11        | 0  | 1  | 0         | 0  | 0  | 62    |
| 2:15 PM | 4          | 14 | 0  | 0          | 17 | 29 | 46        | 0  | 6  | 0         | 0  | 0  | 116   |
| 2:30 PM | 4          | 18 | 0  | 0          | 9  | 22 | 24        | 0  | 5  | 0         | 0  | 0  | 82    |
| 2:45 PM | 6          | 8  | 0  | 0          | 11 | 18 | 19        | 0  | 4  | 0         | 0  | 0  | 66    |
| 3:00 PM | 2          | 12 | 0  | 0          | 7  | 36 | 26        | 0  | 4  | 0         | 0  | 0  | 87    |
| 3:15 PM | 4          | 8  | 0  | 0          | 15 | 35 | 28        | 0  | 10 | 0         | 0  | 0  | 100   |
| 3:30 PM | 5          | 13 | 0  | 0          | 14 | 23 | 25        | 0  | 5  | 0         | 0  | 0  | 85    |
| 3:45 PM | 1          | 11 | 0  | 0          | 17 | 55 | 12        | 0  | 4  | 0         | 0  | 0  | 100   |
| 4:00 PM | 10         | 9  | 0  | 0          | 8  | 19 | 17        | 0  | 12 | 0         | 0  | 0  | 75    |
| 4:15 PM | 8          | 8  | 0  | 0          | 11 | 25 | 14        | 0  | 10 | 0         | 0  | 0  | 76    |
| 4:30 PM | 6          | 15 | 0  | 0          | 7  | 24 | 24        | 0  | 5  | 0         | 0  | 0  | 81    |
| 4:45 PM | 6          | 6  | 0  | 0          | 10 | 19 | 27        | 0  | 4  | 0         | 0  | 0  | 72    |
| 5:00 PM | 3          | 11 | 0  | 0          | 11 | 20 | 25        | 0  | 4  | 0         | 0  | 0  | 74    |
| 5:15 PM | 6          | 8  | 0  | 0          | 17 | 10 | 17        | 0  | 10 | 0         | 0  | 0  | 68    |
| 5:30 PM | 4          | 9  | 0  | 0          | 12 | 18 | 21        | 0  | 8  | 0         | 0  | 0  | 72    |
| 5:45 PM | 3          | 7  | 0  | 0          | 10 | 20 | 16        | 0  | 6  | 0         | 0  | 0  | 62    |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|------|-------|------|------|------|-------|
| Volumes    | 76    | 163   | 0    | 0    | 184   | 405   | 352   | 0    | 98    | 0    | 0    | 0    | 1278  |
| Approach % | 31.80 | 68.20 | 0.00 | 0.00 | 31.24 | 68.76 | 78.22 | 0.00 | 21.78 | #### | #### | #### |       |
| App/Depart | 239   | /     | 515  | 589  | /     | 282   | 450   | /    | 0     | 0    | /    | 481  |       |

PM Peak Hr Begins at: 200 PM

| PEAK       | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|------|-------|------|------|------|-------|
| Volumes    | 18    | 46    | 0    | 0    | 45    | 101   | 100   | 0    | 16    | 0    | 0    | 0    | 326   |
| Approach % | 28.13 | 71.88 | 0.00 | 0.00 | 30.82 | 69.18 | 86.21 | 0.00 | 13.79 | #### | #### | #### |       |

PEAK HR. FACTOR:      0.727      0.793      0.558      0.000      0.703

CONTROL: 1-Way Stop (EB)  
 COMMENT 1: 0  
 GPS: 33.677045, -111.995890

**APPENDIX C**

**EXISTING PEAK HOUR ANALYSIS**

DRAFT



22-1270: Black Mountain Village  
Existing AM

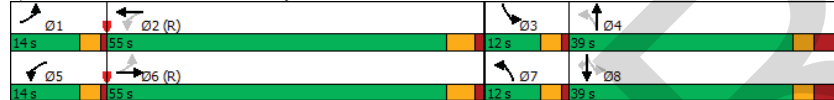
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 22    | 1147  | 11    | 452   | 11    | 3     | 103   | 2     | 19    |
| Future Volume (vph)  | 22    | 1147  | 11    | 452   | 11    | 3     | 103   | 2     | 19    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 25 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
Existing School PM

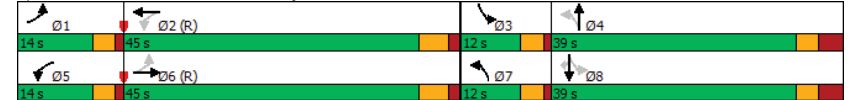
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 15    | 502   | 5     | 461   | 7     | 4     | 64    | 1     | 17    |
| Future Volume (vph)  | 15    | 502   | 5     | 461   | 7     | 4     | 64    | 1     | 17    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 45.0  | 14.0  | 45.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 12.7% | 40.9% | 12.7% | 40.9% | 10.9% | 35.5% | 10.9% | 35.5% | 35.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 59 (54%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
Existing PM

1: 32nd St. & Deer Valley Dr.  
Timings



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 29    | 479   | 15    | 556   | 6     | 3     | 74    | 3     | 38    |
| Future Volume (vph)  | 29    | 479   | 15    | 556   | 6     | 3     | 74    | 3     | 38    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     |       |       |       |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 56 (47%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.





22-1270: Black Mountain Village  
Existing School PM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations  | ↔    | ↔↔    | ↔    | ↔    | ↔↔   | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)   | 15   | 502   | 8    | 5    | 461  | 62    | 7    | 4    | 8    | 64   | 1    | 17   |
| Future Volume (veh/h)  | 15   | 502   | 8    | 5    | 461  | 62    | 7    | 4    | 8    | 64   | 1    | 17   |
| Initial Q (Ob), veh  | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 22   | 749   | 9    | 7    | 688  | 71    | 10   | 6    | 9    | 96   | 1    | 19   |
| Peak Hour Factor   | 0.67 | 0.67  | 0.67 | 0.67 | 0.67 | 0.67  | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 353  | 2395  | 29   | 342  | 2104 | 215   | 499  | 200  | 300  | 563  | 628  | 533  |
| Arrive On Green  | 0.02 | 0.46  | 0.46 | 0.01 | 0.45 | 0.45  | 0.01 | 0.30 | 0.30 | 0.05 | 0.34 | 0.34 |
| Sat Flow, veh/h  | 1781 | 5201  | 62   | 1781 | 4706 | 482   | 1781 | 675  | 1013 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h   | 22   | 490   | 268  | 7    | 496  | 263   | 10   | 0    | 15   | 96   | 1    | 19   |
| Grp Sat Flow(s),veh/h/ln   | 1781 | 1702  | 1859 | 1781 | 1702 | 1784  | 1781 | 0    | 1688 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s  | 0.7  | 10.0  | 10.0 | 0.2  | 10.4 | 10.5  | 0.4  | 0.0  | 0.7  | 4.0  | 0.0  | 0.9  |
| Cycle Q Clear(g_c), s  | 0.7  | 10.0  | 10.0 | 0.2  | 10.4 | 10.5  | 0.4  | 0.0  | 0.7  | 4.0  | 0.0  | 0.9  |
| Prop In Lane   | 1.00 |       | 0.03 | 1.00 |      | 0.27  | 1.00 |      | 0.60 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 353  | 1568  | 856  | 342  | 1522 | 797   | 499  | 0    | 500  | 563  | 628  | 533  |
| V/C Ratio(X)   | 0.06 | 0.31  | 0.31 | 0.02 | 0.33 | 0.33  | 0.02 | 0.00 | 0.03 | 0.17 | 0.00 | 0.04 |
| Avail Cap(c_a), veh/h  | 476  | 1568  | 856  | 489  | 1522 | 797   | 608  | 0    | 500  | 601  | 628  | 533  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 16.2 | 18.7  | 18.7 | 16.7 | 19.7 | 19.7  | 26.5 | 0.0  | 27.5 | 23.4 | 24.3 | 24.5 |
| Incr Delay (d2), s/veh   | 0.0  | 0.5   | 1.0  | 0.0  | 0.6  | 1.1   | 0.0  | 0.0  | 0.1  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln   | 0.5  | 7.2   | 8.0  | 0.2  | 7.5  | 8.1   | 0.3  | 0.0  | 0.5  | 3.0  | 0.0  | 0.6  |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 16.2 | 19.2  | 19.7 | 16.7 | 20.3 | 20.8  | 26.5 | 0.0  | 27.6 | 23.4 | 24.3 | 24.7 |
| LnGrp LOS  | B    | B     | B    | B    | C    | C     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h  |      | 780   |      |      | 766  |       |      | 25   |      |      | 116  |      |
| Approach Delay, s/veh  |      | 19.3  |      |      | 20.4 |       |      | 27.1 |      |      | 23.7 |      |
| Approach LOS   |      | B     |      |      | C    |       |      | C    |      |      | C    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 6.4  | 54.9  | 9.7  | 39.0 | 5.0  | 56.4  | 5.3  | 43.4 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.0 | * 39  | 8.0  | 32.6 | 10.0 | * 39  | 8.0  | 32.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 2.7  | 12.5  | 6.0  | 2.7  | 2.2  | 12.0  | 2.4  | 2.9  |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 3.5   | 0.0  | 0.0  | 0.0  | 3.5   | 0.0  | 0.0  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |      |      |       |      |      |      |      |      |      |
| HCM 6th Ctrl Delay   | 20.2 |       |      |      |      |       |      |      |      |      |      |      |
| HCM 6th LOS  | C    |       |      |      |      |       |      |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |      |      |       |      |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |       |      |      |      |      |      |      |

22-1270: Black Mountain Village  
Existing AM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑    | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 994  | 275  | 64   | 485  | 12   | 117  |
| Future Vol, veh/h        | 994  | 275  | 64   | 485  | 12   | 117  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 85   | 85   | 85   | 85   | 85   | 85   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1169 | 324  | 75   | 571  | 14   | 138  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 1493   | 0 | 1709 747  |
| Stage 1              | -      | -      | -      | - | 1331 -    |
| Stage 2              | -      | -      | -      | - | 378 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 507    | - | *493 *690 |
| Stage 1              | -      | -      | -      | - | *483 -    |
| Stage 2              | -      | -      | -      | - | *844 -    |
| Platoon blocked, %   | -      | -      | 1      | - | 1 1       |
| Mov Cap-1 Maneuver   | -      | -      | 507    | - | *420 *690 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *420 -    |
| Stage 1              | -      | -      | -      | - | *483 -    |
| Stage 2              | -      | -      | -      | - | *719 -    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.6 | 11.5 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 690   | -   | -   | 507   | -   |
| HCM Lane V/C Ratio    | 0.199 | -   | -   | 0.149 | -   |
| HCM Control Delay (s) | 11.5  | -   | -   | 13.3  | -   |
| HCM Lane LOS          | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 0.5   | -   |

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

22-1270: Black Mountain Village  
Existing PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑    | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 550  | 10   | 5    | 649  | 4    | 10   |
| Future Vol, veh/h        | 550  | 10   | 5    | 649  | 4    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 579  | 11   | 5    | 683  | 4    | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 590    | 0 | 868 295   |
| Stage 1              | -      | -      | -      | - | 585 -     |
| Stage 2              | -      | -      | -      | - | 283 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 986    | - | *679 *800 |
| Stage 1              | -      | -      | -      | - | *807 -    |
| Stage 2              | -      | -      | -      | - | *799 -    |
| Platoon blocked, %   | -      | -      | 1      | - | 1 1       |
| Mov Cap-1 Maneuver   | -      | -      | 986    | - | *676 *800 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *676 -    |
| Stage 1              | -      | -      | -      | - | *807 -    |
| Stage 2              | -      | -      | -      | - | *795 -    |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.1 | 9.6 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 800   | -   | -   | 986   | -   |
| HCM Lane V/C Ratio    | 0.013 | -   | -   | 0.005 | -   |
| HCM Control Delay (s) | 9.6   | -   | -   | 8.7   | -   |
| HCM Lane LOS          | A     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | -   |

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

22-1270: Black Mountain Village  
Existing School PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑    | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 498  | 76   | 9    | 512  | 16   | 130  |
| Future Vol, veh/h        | 498  | 76   | 9    | 512  | 16   | 130  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 830  | 127  | 15   | 853  | 27   | 217  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 957    | 0 | 1265 479  |
| Stage 1              | -      | -      | -      | - | 894 -     |
| Stage 2              | -      | -      | -      | - | 371 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 596    | - | *228 *814 |
| Stage 1              | -      | -      | -      | - | *467 -    |
| Stage 2              | -      | -      | -      | - | *821 -    |
| Platoon blocked, %   | -      | -      | 1      | - | - 1       |
| Mov Cap-1 Maneuver   | -      | -      | 596    | - | *222 *814 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *222 -    |
| Stage 1              | -      | -      | -      | - | *467 -    |
| Stage 2              | -      | -      | -      | - | *801 -    |

| Approach             | EB | WB  | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 0.2 | 11 |
| HCM LOS              |    |     | B  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 814   | -   | -   | 596   | -   |
| HCM Lane V/C Ratio    | 0.266 | -   | -   | 0.025 | -   |
| HCM Control Delay (s) | 11    | -   | -   | 11.2  | -   |
| HCM Lane LOS          | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 1.1   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
Existing AM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 25.7 |
| Intersection LOS          | D    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 2    | 11   | 0    | 31   | 0    | 117  | 0    | 10   | 18   | 308  | 31   | 0    |
| Future Vol, veh/h   | 2    | 11   | 0    | 31   | 0    | 117  | 0    | 10   | 18   | 308  | 31   | 0    |
| Peak Hour Factor    | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 4    | 20   | 0    | 57   | 0    | 217  | 0    | 19   | 33   | 570  | 57   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB | NB  | SB   |
|----------------------------|-----|----|-----|------|
| Opposing Approach          | WB  | EB | SB  | NB   |
| Opposing Lanes             | 1   | 1  | 1   | 1    |
| Conflicting Approach Left  | SB  | NB | EB  | WB   |
| Conflicting Lanes Left     | 1   | 1  | 1   | 1    |
| Conflicting Approach Right | NB  | SB | WB  | EB   |
| Conflicting Lanes Right    | 1   | 1  | 1   | 1    |
| HCM Control Delay          | 9.6 | 12 | 8.8 | 33.7 |
| HCM LOS                    | A   | B  | A   | D    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 15%   | 21%   | 91%   |
| Vol Thru, %            | 36%   | 85%   | 0%    | 9%    |
| Vol Right, %           | 64%   | 0%    | 79%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 28    | 13    | 148   | 339   |
| LT Vol                 | 0     | 2     | 31    | 308   |
| Through Vol            | 10    | 11    | 0     | 31    |
| RT Vol                 | 18    | 0     | 117   | 0     |
| Lane Flow Rate         | 52    | 24    | 274   | 628   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.076 | 0.042 | 0.406 | 0.883 |
| Departure Headway (Hd) | 5.288 | 6.275 | 5.339 | 5.063 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 676   | 569   | 674   | 722   |
| Service Time           | 3.331 | 4.334 | 3.383 | 3.063 |
| HCM Lane V/C Ratio     | 0.077 | 0.042 | 0.407 | 0.87  |
| HCM Control Delay      | 8.8   | 9.6   | 12    | 33.7  |
| HCM Lane LOS           | A     | A     | B     | D     |
| HCM 95th-tile Q        | 0.2   | 0.1   | 2     | 11    |

22-1270: Black Mountain Village  
Existing PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 6.9 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 4    | 0    | 9    | 17   | 11   | 4    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 4    | 0    | 9    | 17   | 11   | 4    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 6    | 0    | 13   | 25   | 16   | 6    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.1 | 6.8 | 6.7 | 7.3 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 33%   | 73%   |
| Vol Thru, %            | 35%   | 75%   | 0%    | 27%   |
| Vol Right, %           | 65%   | 0%    | 67%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 26    | 4     | 6     | 15    |
| LT Vol                 | 0     | 1     | 2     | 11    |
| Through Vol            | 9     | 3     | 0     | 4     |
| RT Vol                 | 17    | 0     | 4     | 0     |
| Lane Flow Rate         | 38    | 6     | 9     | 22    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.038 | 0.007 | 0.009 | 0.025 |
| Departure Headway (Hd) | 3.584 | 4.096 | 3.71  | 4.135 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 1002  | 875   | 966   | 869   |
| Service Time           | 1.594 | 2.115 | 1.729 | 2.144 |
| HCM Lane V/C Ratio     | 0.038 | 0.007 | 0.009 | 0.025 |
| HCM Control Delay      | 6.7   | 7.1   | 6.8   | 7.3   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0     | 0.1   |

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 10.9 |
| Intersection LOS          | B    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 39   | 33   | 1    | 14   | 0    | 78   | 0    | 29   | 44   | 81   | 4    | 0    |
| Future Vol, veh/h   | 39   | 33   | 1    | 14   | 0    | 78   | 0    | 29   | 44   | 81   | 4    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 105  | 89   | 3    | 38   | 0    | 211  | 0    | 78   | 119  | 219  | 11   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   | SB   |
|----------------------------|------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   | NB   |
| Opposing Lanes             | 1    | 1    | 1    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   | WB   |
| Conflicting Lanes Left     | 1    | 1    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   | EB   |
| Conflicting Lanes Right    | 1    | 1    | 1    | 1    |
| HCM Control Delay          | 11.1 | 10.6 | 10.2 | 11.8 |
| HCM LOS                    | B    | B    | B    | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 53%   | 15%   | 95%   |
| Vol Thru, %            | 40%   | 45%   | 0%    | 5%    |
| Vol Right, %           | 60%   | 1%    | 85%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 73    | 73    | 92    | 85    |
| LT Vol                 | 0     | 39    | 14    | 81    |
| Through Vol            | 29    | 33    | 0     | 4     |
| RT Vol                 | 44    | 1     | 78    | 0     |
| Lane Flow Rate         | 197   | 197   | 249   | 230   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.283 | 0.307 | 0.343 | 0.359 |
| Departure Headway (Hd) | 5.161 | 5.593 | 4.966 | 5.631 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 694   | 641   | 724   | 639   |
| Service Time           | 3.206 | 3.638 | 3.009 | 3.674 |
| HCM Lane V/C Ratio     | 0.284 | 0.307 | 0.344 | 0.36  |
| HCM Control Delay      | 10.2  | 11.1  | 10.6  | 11.8  |
| HCM Lane LOS           | B     | B     | B     | B     |
| HCM 95th-tile Q        | 1.2   | 1.3   | 1.5   | 1.6   |



22-1270: Black Mountain Village  
Existing AM

4: HS Bus Entrance & Mayo Blvd.  
HCM Unsignalized Intersection Capacity Analysis

| Movement                          | EBT         | EBR         | WBL         | WBT  | NBL                  | NBR  |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Lane Configurations               | ↕↕          |             |             | ↕    |                      |      |
| Traffic Volume (veh/h)            | 331         | 6           | 10          | 149  | 0                    | 0    |
| Future Volume (Veh/h)             | 331         | 6           | 10          | 149  | 0                    | 0    |
| Sign Control                      | Free        |             |             | Free | Stop                 |      |
| Grade                             | 0%          |             |             | 0%   | 0%                   |      |
| Peak Hour Factor                  | 0.54        | 0.54        | 0.54        | 0.54 | 0.54                 | 0.54 |
| Hourly flow rate (vph)            | 613         | 11          | 19          | 276  | 0                    | 0    |
| Pedestrians                       |             |             |             |      |                      |      |
| Lane Width (ft)                   |             |             |             |      |                      |      |
| Walking Speed (ft/s)              |             |             |             |      |                      |      |
| Percent Blockage                  |             |             |             |      |                      |      |
| Right turn flare (veh)            |             |             |             |      |                      |      |
| Median type                       | None        |             |             | None |                      |      |
| Median storage (veh)              |             |             |             |      |                      |      |
| Upstream signal (ft)              |             |             |             | 971  |                      |      |
| pX, platoon unblocked             |             |             |             |      |                      |      |
| vC, conflicting volume            |             |             | 624         |      | 932                  | 312  |
| vC1, stage 1 conf vol             |             |             |             |      |                      |      |
| vC2, stage 2 conf vol             |             |             |             |      |                      |      |
| vCu, unblocked vol                |             |             | 624         |      | 932                  | 312  |
| IC, single (s)                    |             |             | 4.1         |      | 6.8                  | 6.9  |
| IC, 2 stage (s)                   |             |             |             |      |                      |      |
| IF (s)                            |             |             | 2.2         |      | 3.5                  | 3.3  |
| p0 queue free %                   |             |             | 98          |      | 100                  | 100  |
| cM capacity (veh/h)               |             |             | 953         |      | 260                  | 684  |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>EB 2</b> | <b>WB 1</b> |      |                      |      |
| Volume Total                      | 409         | 215         | 295         |      |                      |      |
| Volume Left                       | 0           | 0           | 19          |      |                      |      |
| Volume Right                      | 0           | 11          | 0           |      |                      |      |
| eSH                               | 1700        | 1700        | 953         |      |                      |      |
| Volume to Capacity                | 0.24        | 0.13        | 0.02        |      |                      |      |
| Queue Length 95th (ft)            | 0           | 0           | 2           |      |                      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.8         |      |                      |      |
| Lane LOS                          |             |             | A           |      |                      |      |
| Approach Delay (s)                | 0.0         |             | 0.8         |      |                      |      |
| Approach LOS                      |             |             |             |      |                      |      |
| <b>Intersection Summary</b>       |             |             |             |      |                      |      |
| Average Delay                     |             |             | 0.2         |      |                      |      |
| Intersection Capacity Utilization |             |             | 19.4%       |      | ICU Level of Service | A    |
| Analysis Period (min)             |             |             | 15          |      |                      |      |

22-1270: Black Mountain Village  
Existing PM

4: HS Bus Entrance & Mayo Blvd.  
HCM Unsignalized Intersection Capacity Analysis

| Movement                          | EBT         | EBR         | WBL         | WBT  | NBL                  | NBR  |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Lane Configurations               | ↕↕          |             |             | ↕    |                      |      |
| Traffic Volume (veh/h)            | 22          | 9           | 9           | 7    | 0                    | 0    |
| Future Volume (Veh/h)             | 22          | 9           | 9           | 7    | 0                    | 0    |
| Sign Control                      | Free        |             |             | Free | Stop                 |      |
| Grade                             | 0%          |             |             | 0%   | 0%                   |      |
| Peak Hour Factor                  | 0.69        | 0.69        | 0.69        | 0.69 | 0.69                 | 0.69 |
| Hourly flow rate (vph)            | 32          | 13          | 13          | 10   | 0                    | 0    |
| Pedestrians                       |             |             |             |      |                      |      |
| Lane Width (ft)                   |             |             |             |      |                      |      |
| Walking Speed (ft/s)              |             |             |             |      |                      |      |
| Percent Blockage                  |             |             |             |      |                      |      |
| Right turn flare (veh)            |             |             |             |      |                      |      |
| Median type                       | None        |             |             | None |                      |      |
| Median storage (veh)              |             |             |             |      |                      |      |
| Upstream signal (ft)              |             |             |             | 971  |                      |      |
| pX, platoon unblocked             |             |             |             |      |                      |      |
| vC, conflicting volume            |             |             | 45          |      | 74                   | 22   |
| vC1, stage 1 conf vol             |             |             |             |      |                      |      |
| vC2, stage 2 conf vol             |             |             |             |      |                      |      |
| vCu, unblocked vol                |             |             | 45          |      | 74                   | 22   |
| IC, single (s)                    |             |             | 4.1         |      | 6.8                  | 6.9  |
| IC, 2 stage (s)                   |             |             |             |      |                      |      |
| IF (s)                            |             |             | 2.2         |      | 3.5                  | 3.3  |
| p0 queue free %                   |             |             | 99          |      | 100                  | 100  |
| cM capacity (veh/h)               |             |             | 1561        |      | 913                  | 1049 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>EB 2</b> | <b>WB 1</b> |      |                      |      |
| Volume Total                      | 21          | 24          | 23          |      |                      |      |
| Volume Left                       | 0           | 0           | 13          |      |                      |      |
| Volume Right                      | 0           | 13          | 0           |      |                      |      |
| eSH                               | 1700        | 1700        | 1561        |      |                      |      |
| Volume to Capacity                | 0.01        | 0.01        | 0.01        |      |                      |      |
| Queue Length 95th (ft)            | 0           | 0           | 1           |      |                      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 4.2         |      |                      |      |
| Lane LOS                          |             |             | A           |      |                      |      |
| Approach Delay (s)                | 0.0         |             | 4.2         |      |                      |      |
| Approach LOS                      |             |             |             |      |                      |      |
| <b>Intersection Summary</b>       |             |             |             |      |                      |      |
| Average Delay                     |             |             | 1.4         |      |                      |      |
| Intersection Capacity Utilization |             |             | 10.9%       |      | ICU Level of Service | A    |
| Analysis Period (min)             |             |             | 15          |      |                      |      |

22-1270: Black Mountain Village  
Existing School PM

4: HS Bus Entrance & Mayo Blvd.  
HCM Unsignalized Intersection Capacity Analysis

| Movement                          | EBT  | EBR  | WBL   | WBT                  | NBL  | NBR  |
|-----------------------------------|------|------|-------|----------------------|------|------|
| Lane Configurations               | ↑↑   |      |       | ↑                    |      |      |
| Traffic Volume (veh/h)            | 151  | 7    | 15    | 92                   | 0    | 0    |
| Future Volume (Veh/h)             | 151  | 7    | 15    | 92                   | 0    | 0    |
| Sign Control                      | Free |      | Free  |                      | Stop |      |
| Grade                             | 0%   |      | 0%    |                      | 0%   |      |
| Peak Hour Factor                  | 0.38 | 0.38 | 0.38  | 0.38                 | 0.38 | 0.38 |
| Hourly flow rate (vph)            | 397  | 18   | 39    | 242                  | 0    | 0    |
| Pedestrians                       |      |      |       |                      |      |      |
| Lane Width (ft)                   |      |      |       |                      |      |      |
| Walking Speed (ft/s)              |      |      |       |                      |      |      |
| Percent Blockage                  |      |      |       |                      |      |      |
| Right turn flare (veh)            |      |      |       |                      |      |      |
| Median type                       | None |      | None  |                      |      |      |
| Median storage (veh)              |      |      |       |                      |      |      |
| Upstream signal (ft)              | 971  |      |       |                      |      |      |
| pX, platoon unblocked             |      |      |       |                      |      |      |
| vC, conflicting volume            |      |      | 415   |                      | 726  | 208  |
| vC1, stage 1 conf vol             |      |      |       |                      |      |      |
| vC2, stage 2 conf vol             |      |      |       |                      |      |      |
| vCu, unblocked vol                |      |      | 415   |                      | 726  | 208  |
| tC, single (s)                    |      |      | 4.1   |                      | 6.8  | 6.9  |
| tC, 2 stage (s)                   |      |      |       |                      |      |      |
| tF (s)                            |      |      | 2.2   |                      | 3.5  | 3.3  |
| p0 queue free. %                  |      |      | 97    |                      | 100  | 100  |
| cM capacity (veh/h)               |      |      | 1140  |                      | 347  | 799  |
| Direction, Lane #                 | EB 1 | EB 2 | WB 1  |                      |      |      |
| Volume Total                      | 265  | 150  | 281   |                      |      |      |
| Volume Left                       | 0    | 0    | 39    |                      |      |      |
| Volume Right                      | 0    | 18   | 0     |                      |      |      |
| cSH                               | 1700 | 1700 | 1140  |                      |      |      |
| Volume to Capacity                | 0.16 | 0.09 | 0.03  |                      |      |      |
| Queue Length 95th (ft)            | 0    | 0    | 3     |                      |      |      |
| Control Delay (s)                 | 0.0  | 0.0  | 1.4   |                      |      |      |
| Lane LOS                          |      |      | A     |                      |      |      |
| Approach Delay (s)                | 0.0  |      | 1.4   |                      |      |      |
| Approach LOS                      |      |      |       |                      |      |      |
| Intersection Summary              |      |      |       |                      |      |      |
| Average Delay                     |      |      | 0.6   |                      |      |      |
| Intersection Capacity Utilization |      |      | 16.7% | ICU Level of Service | A    |      |
| Analysis Period (min)             |      |      | 15    |                      |      |      |

22-1270: Black Mountain Village  
Existing AM

5: HS Bus Exit & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 329  | 0    | 0    | 157  | 2    | 58   |
| Future Vol, veh/h        | 329  | 0    | 0    | 157  | 2    | 58   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 56   | 56   | 56   | 56   | 56   | 56   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 588  | 0    | 0    | 280  | 4    | 104  |

| Major/Minor          | Major1 | Major2 | Minor1 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 0      | -      | -      | 868   | 294   |
| Stage 1              | -      | -      | -      | 588   | -     |
| Stage 2              | -      | -      | -      | 280   | -     |
| Critical Hdwy        | -      | -      | -      | 6.63  | 6.93  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43  | -     |
| Follow-up Hdwy       | -      | -      | -      | 3.519 | 3.319 |
| Pot Cap-1 Maneuver   | -      | 0      | 0      | *408  | 703   |
| Stage 1              | -      | 0      | 0      | *519  | -     |
| Stage 2              | -      | 0      | 0      | *898  | -     |
| Platoon blocked, %   | -      | -      | -      | 1     | -     |
| Mov Cap-1 Maneuver   | -      | -      | -      | *408  | 703   |
| Mov Cap-2 Maneuver   | -      | -      | -      | *408  | -     |
| Stage 1              | -      | -      | -      | *519  | -     |
| Stage 2              | -      | -      | -      | *898  | -     |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.2 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | WBT |
|-----------------------|-------|-----|-----|
| Capacity (veh/h)      | 686   | -   | -   |
| HCM Lane V/C Ratio    | 0.156 | -   | -   |
| HCM Control Delay (s) | 11.2  | -   | -   |
| HCM Lane LOS          | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.6   | -   | -   |

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

22-1270: Black Mountain Village  
Existing PM

5: HS Bus Exit & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 21   | 0    | 0    | 13   | 3    | 19   |
| Future Vol, veh/h        | 21   | 0    | 0    | 13   | 3    | 19   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 78   | 78   | 78   | 78   | 78   | 78   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 27   | 0    | 0    | 17   | 4    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 0      | -      | -      | 44    | 14    |
| Stage 1              | -      | -      | -      | 27    | -     |
| Stage 2              | -      | -      | -      | 17    | -     |
| Critical Hdwy        | -      | -      | -      | 6.63  | 6.93  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43  | -     |
| Follow-up Hdwy       | -      | -      | -      | 3.519 | 3.319 |
| Pot Cap-1 Maneuver   | -      | 0      | 0      | 981   | 1063  |
| Stage 1              | -      | 0      | 0      | 992   | -     |
| Stage 2              | -      | 0      | 0      | 1017  | -     |
| Platoon blocked, %   | -      | -      | -      | 1     | -     |
| Mov Cap-1 Maneuver   | -      | -      | -      | 981   | 1063  |
| Mov Cap-2 Maneuver   | -      | -      | -      | 981   | -     |
| Stage 1              | -      | -      | -      | 992   | -     |
| Stage 2              | -      | -      | -      | 1017  | -     |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | WBT |
|-----------------------|-------|-----|-----|
| Capacity (veh/h)      | 1051  | -   | -   |
| HCM Lane V/C Ratio    | 0.027 | -   | -   |
| HCM Control Delay (s) | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   |

22-1270: Black Mountain Village  
Existing School PM

5: HS Bus Exit & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 2.2    |        |        |       |       |      |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL   | NBR  |
| Lane Configurations      | ↑↑     |        |        | ↑     | ↓     |      |
| Traffic Vol, veh/h       | 150    | 0      | 0      | 104   | 3     | 61   |
| Future Vol, veh/h        | 150    | 0      | 0      | 104   | 3     | 61   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0     | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0     | -    |
| Peak Hour Factor         | 39     | 39     | 39     | 39    | 39    | 39   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2     | 2    |
| Mvmt Flow                | 385    | 0      | 0      | 267   | 8     | 156  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |       |      |
| Conflicting Flow All     | 0      | -      | -      | 652   | 193   |      |
| Stage 1                  | -      | -      | -      | 385   | -     |      |
| Stage 2                  | -      | -      | -      | 267   | -     |      |
| Critical Hdwy            | -      | -      | -      | 6.63  | 6.93  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.83  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.43  | -     |      |
| Follow-up Hdwy           | -      | -      | -      | 3.519 | 3.319 |      |
| Pot Cap-1 Maneuver       | -      | 0      | 0      | 487   | 817   |      |
| Stage 1                  | -      | 0      | 0      | 658   | -     |      |
| Stage 2                  | -      | 0      | 0      | 881   | -     |      |
| Platoon blocked, %       | -      | -      | -      | 1     | -     |      |
| Mov Cap-1 Maneuver       | -      | -      | -      | 487   | 817   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 487   | -     |      |
| Stage 1                  | -      | -      | -      | 658   | -     |      |
| Stage 2                  | -      | -      | -      | 881   | -     |      |
| Approach                 | EB     | WB     | NB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 10.7   |       |       |      |
| HCM LOS                  |        |        |        | B     |       |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | WBT    |       |       |      |
| Capacity (veh/h)         | 792    | -      | -      |       |       |      |
| HCM Lane V/C Ratio       | 0.207  | -      | -      |       |       |      |
| HCM Control Delay (s)    | 10.7   | -      | -      |       |       |      |
| HCM Lane LOS             | B      | -      | -      |       |       |      |
| HCM 95th %tile Q(veh)    | 0.8    | -      | -      |       |       |      |

22-1270: Black Mountain Village  
Existing AM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 387  | 0    | 0    | 159  | 0    | 21   |
| Future Vol, veh/h        | 387  | 0    | 0    | 159  | 0    | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 56   | 56   | 56   | 56   | 56   | 56   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 691  | 0    | 0    | 284  | 0    | 38   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 691    | 0 | 975   |
| Stage 1              | -      | -      | -      | - | 691   |
| Stage 2              | -      | -      | -      | - | 284   |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43  |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 |
| Pot Cap-1 Maneuver   | -      | -      | 902    | - | 1344  |
| Stage 1              | -      | -      | -      | - | 460   |
| Stage 2              | -      | -      | -      | - | 898   |
| Platoon blocked, %   | -      | -      | -      | - | 1     |
| Mov Cap-1 Maneuver   | -      | -      | 902    | - | 1344  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1344  |
| Stage 1              | -      | -      | -      | - | 460   |
| Stage 2              | -      | -      | -      | - | 898   |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-----|-----|
| Capacity (veh/h)      | 651   | -   | -   | 902 | -   |
| HCM Lane V/C Ratio    | 0.058 | -   | -   | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | A   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0   | -   |

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

22-1270: Black Mountain Village  
Existing PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 39   | 1    | 1    | 15   | 0    | 18   |
| Future Vol, veh/h        | 39   | 1    | 1    | 15   | 0    | 18   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 49   | 1    | 1    | 19   | 0    | 23   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 50     | 0 | 71    |
| Stage 1              | -      | -      | -      | - | 50    |
| Stage 2              | -      | -      | -      | - | 21    |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43  |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 |
| Pot Cap-1 Maneuver   | -      | -      | 1556   | - | 945   |
| Stage 1              | -      | -      | -      | - | 967   |
| Stage 2              | -      | -      | -      | - | 1012  |
| Platoon blocked, %   | -      | -      | -      | - | 1     |
| Mov Cap-1 Maneuver   | -      | -      | 1556   | - | 944   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 944   |
| Stage 1              | -      | -      | -      | - | 967   |
| Stage 2              | -      | -      | -      | - | 1011  |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.5 | 8.5 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 1046  | -   | -   | 1556  | -   |
| HCM Lane V/C Ratio    | 0.022 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.5   | -   | -   | 7.3   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

22-1270: Black Mountain Village  
Existing School PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↓   |      |      | ↑    | ↓    |      |
| Traffic Vol, veh/h       | 211  | 0    | 0    | 105  | 3    | 28   |
| Future Vol, veh/h        | 211  | 0    | 0    | 105  | 3    | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 541  | 0    | 0    | 269  | 8    | 72   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 541    | 0      |
| Stage 1              | -      | -      | -      | 541    |
| Stage 2              | -      | -      | -      | 269    |
| Critical Hdwy        | -      | -      | 4.13   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83   |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43   |
| Follow-up Hdwy       | -      | -      | 2.219  | -      |
| Pot Cap-1 Maneuver   | -      | -      | 1026   | -      |
| Stage 1              | -      | -      | -      | 548    |
| Stage 2              | -      | -      | -      | 879    |
| Platoon blocked, %   | -      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 1026   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | 385    |
| Stage 1              | -      | -      | -      | 548    |
| Stage 2              | -      | -      | -      | 879    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.1 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 670   | -   | -   | 1026 | -   |
| HCM Lane V/C Ratio    | 0.119 | -   | -   | -    | -   |
| HCM Control Delay (s) | 11.1  | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0    | -   |

22-1270: Black Mountain Village  
Existing AM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 27   | 10   | 42   | 69   | 4    | 5    | 20   | 259  | 64   | 4    | 500  | 20   |
| Future Vol, veh/h        | 27   | 10   | 42   | 69   | 4    | 5    | 20   | 259  | 64   | 4    | 500  | 20   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 38   | 14   | 58   | 96   | 6    | 7    | 28   | 360  | 89   | 6    | 694  | 28   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 959    | 1225   | 361    | 713    |
| Stage 1              | 720    | 720    | -      | 416    |
| Stage 2              | 239    | 505    | -      | 297    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 239    | 178    | 543    | 346    |
| Stage 1              | 319    | 430    | -      | 565    |
| Stage 2              | 716    | 539    | -      | 652    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 221    | 168    | 543    | 277    |
| Mov Cap-2 Maneuver   | 221    | 168    | -      | 277    |
| Stage 1              | 302    | 428    | -      | 535    |
| Stage 2              | 666    | 510    | -      | 560    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 19.4 | 23.7 | 0.7 | 0.1 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 532   | -   | -   | 221   | 380   | 277   | 327   | 1108  | -   | -   |
| HCM Lane V/C Ratio    | 0.052 | -   | -   | 0.17  | 0.19  | 0.346 | 0.038 | 0.005 | -   | -   |
| HCM Control Delay (s) | 12.1  | -   | -   | 24.6  | 16.7  | 24.7  | 16.4  | 8.3   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | C     | C     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.6   | 0.7   | 1.5   | 0.1   | 0     | -   | -   |

22-1270: Black Mountain Village  
Existing PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 45   | 18   | 20   | 64   | 19   | 9    | 25   | 350  | 50   | 9    | 178  | 34   |
| Future Vol, veh/h        | 45   | 18   | 20   | 64   | 19   | 9    | 25   | 350  | 50   | 9    | 178  | 34   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 60   | 24   | 27   | 85   | 25   | 12   | 33   | 467  | 67   | 12   | 237  | 45   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 596    | 884    | 141    | 664    |
| Stage 1              | 284    | 284    | -      | 533    |
| Stage 2              | 312    | 600    | -      | 131    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 411    | 283    | 749    | 372    |
| Stage 1              | 633    | 675    | -      | 483    |
| Stage 2              | 650    | 488    | -      | 820    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 363    | 269    | 749    | 322    |
| Mov Cap-2 Maneuver   | 363    | 269    | -      | 322    |
| Stage 1              | 608    | 667    | -      | 464    |
| Stage 2              | 584    | 469    | -      | 753    |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 16.1 | 19 | 0.6 | 0.3 |
| HCM LOS              | C    | C  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 856   | -   | -   | 363   | 406   | 322   | 357   | 1030  | -   | -   |
| HCM Lane V/C Ratio    | 0.039 | -   | -   | 0.165 | 0.125 | 0.265 | 0.105 | 0.012 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 16.9  | 15.1  | 20.2  | 16.3  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | C     | C     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.6   | 0.4   | 1     | 0.3   | 0     | -   | -   |

22-1270: Black Mountain Village  
Existing School PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |                           |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3                       |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL                       | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗ ↘ ↖ ↗ ↘ ↖ ↗ ↘ ↖ ↗ ↘ ↖ |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 11                        | 6    | 23   | 47   | 6    | 9    | 20   | 202  | 45   | 2    | 205  | 21   |
| Future Vol, veh/h        | 11                        | 6    | 23   | 47   | 6    | 9    | 20   | 202  | 45   | 2    | 205  | 21   |
| Conflicting Peds, #/hr   | 0                         | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop                      | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -                         | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155                       | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -                         | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -                         | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89                        | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2                         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 12                        | 7    | 26   | 53   | 7    | 10   | 22   | 227  | 51   | 2    | 230  | 24   |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |      | Major2 |   |   |      |   |   |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 407    | 568  | 127    | 371  | 529    | 114  | 254    | 0 | 0 | 278  | 0 | 0 |
| Stage 1              | 246    | 246  | -      | 271  | 271    | -    | -      | - | - | -    | - | - |
| Stage 2              | 161    | 322  | -      | 100  | 258    | -    | -      | - | - | -    | - | - |
| Critical Hdwy        | 6.99   | 6.54 | 7.14   | 6.99 | 6.54   | 6.94 | 5.34   | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1  | 7.34   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.54   | 5.54 | -      | 6.74 | 5.54   | -    | -      | - | - | -    | - | - |
| Follow-up Hdwy       | 3.67   | 4.02 | 3.92   | 3.67 | 4.02   | 3.32 | 3.12   | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver   | 544    | 431  | 764    | 573  | 454    | 917  | 882    | - | - | 1282 | - | - |
| Stage 1              | 672    | 701  | -      | 686  | 684    | -    | -      | - | - | -    | - | - |
| Stage 2              | 794    | 650  | -      | 856  | 693    | -    | -      | - | - | -    | - | - |
| Platoon blocked, %   | -      | -    | -      | -    | -      | -    | -      | - | - | -    | - | - |
| Mov Cap-1 Maneuver   | 521    | 419  | 764    | 536  | 442    | 917  | 882    | - | - | 1282 | - | - |
| Mov Cap-2 Maneuver   | 521    | 419  | -      | 536  | 442    | -    | -      | - | - | -    | - | - |
| Stage 1              | 655    | 700  | -      | 669  | 667    | -    | -      | - | - | -    | - | - |
| Stage 2              | 758    | 634  | -      | 818  | 692    | -    | -      | - | - | -    | - | - |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 11.2 | 12 | 0.7 | 0.1 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 882   | -   | -   | 521   | 653   | 536   | 641   | 1282  | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.024 | 0.05  | 0.099 | 0.026 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.2   | -   | -   | 12.1  | 10.8  | 12.4  | 10.8  | 7.8   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.2   | 0.3   | 0.1   | 0     | -   | -   |



22-1270: Black Mountain Village  
Existing AM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |       |      |       |      |      |      |
|--------------------------|------|------|------|------|------|------|-------|------|-------|------|------|------|
| Int Delay, s/veh         | 4.8  |      |      |      |      |      |       |      |       |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR   | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕ ↕ ↕ |      | ↕ ↕ ↕ |      |      |      |
| Traffic Vol, veh/h       | 24   | 3    | 125  | 7    | 1    | 0    | 87    | 319  | 11    | 0    | 605  | 6    |
| Future Vol, veh/h        | 24   | 3    | 125  | 7    | 1    | 0    | 87    | 319  | 11    | 0    | 605  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free  | Free | Free  | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -     | -    | None  | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -     | -    | 185   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -     | 0    | -     | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -     | 0    | -     | -    | 0    | -    |
| Peak Hour Factor         | 76   | 76   | 76   | 76   | 76   | 76   | 76    | 76   | 76    | 76   | 76   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2    | 2    |
| Mvmt Flow                | 32   | 4    | 164  | 9    | 1    | 0    | 114   | 420  | 14    | 0    | 796  | 8    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1197   | 1462   | 402    | 975    |
| Stage 1              | 800    | 800    | -      | 655    |
| Stage 2              | 397    | 662    | -      | 320    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 196    | 128    | 511    | 264    |
| Stage 1              | 274    | 395    | -      | 344    |
| Stage 2              | 549    | 457    | -      | 611    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 159    | 98     | 511    | 142    |
| Mov Cap-2 Maneuver   | 159    | 98     | -      | 142    |
| Stage 1              | 210    | 395    | -      | 263    |
| Stage 2              | 419    | 350    | -      | 410    |

| Approach             | EB   | WB   | NB  | SB |
|----------------------|------|------|-----|----|
| HCM Control Delay, s | 27.2 | 34.1 | 3.1 | 0  |
| HCM LOS              | D    | D    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 486   | -   | -   | 357   | 134   | 727 | -   | -   |
| HCM Lane V/C Ratio    | 0.236 | -   | -   | 0.56  | 0.079 | -   | -   | -   |
| HCM Control Delay (s) | 14.7  | -   | -   | 27.2  | 34.1  | 0   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | D     | D     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.9   | -   | -   | 3.3   | 0.3   | 0   | -   | -   |

22-1270: Black Mountain Village  
Existing PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |       |      |       |      |      |      |
|--------------------------|------|------|------|------|------|------|-------|------|-------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |       |      |       |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR   | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕ ↕ ↕ |      | ↕ ↕ ↕ |      |      |      |
| Traffic Vol, veh/h       | 12   | 1    | 119  | 8    | 1    | 3    | 95    | 410  | 9     | 3    | 250  | 9    |
| Future Vol, veh/h        | 12   | 1    | 119  | 8    | 1    | 3    | 95    | 410  | 9     | 3    | 250  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free  | Free | Free  | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -     | -    | None  | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -     | -    | 185   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -     | 0    | -     | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -     | 0    | -     | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73    | 73   | 73    | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 1    | 163  | 11   | 1    | 4    | 130   | 562  | 12    | 4    | 342  | 12   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 841    | 1190   | 177    | 973    |
| Stage 1              | 356    | 356    | -      | 828    |
| Stage 2              | 485    | 834    | -      | 145    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 316    | 186    | 711    | 265    |
| Stage 1              | 548    | 628    | -      | 262    |
| Stage 2              | 486    | 381    | -      | 775    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 271    | 155    | 711    | 176    |
| Mov Cap-2 Maneuver   | 271    | 155    | -      | 176    |
| Stage 1              | 458    | 624    | -      | 219    |
| Stage 2              | 402    | 319    | -      | 592    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 13.5 | 23.5 | 1.9 | 0.1 |
| HCM LOS              | B    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 793   | -   | -   | 605   | 211   | 625   | -   | -   |
| HCM Lane V/C Ratio    | 0.164 | -   | -   | 0.299 | 0.078 | 0.007 | -   | -   |
| HCM Control Delay (s) | 10.4  | -   | -   | 13.5  | 23.5  | 10.8  | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.6   | -   | -   | 1.2   | 0.3   | 0     | -   | -   |

22-1270: Black Mountain Village  
Existing School PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      |      | ↔    |      |      | ↔↔↔  |      |      | ↔↔↔  |      |      |
| Traffic Vol, veh/h       | 6    | 0    | 71   | 11   | 0    | 7    | 85   | 254  | 7    | 3    | 271  | 1    |
| Future Vol, veh/h        | 6    | 0    | 71   | 11   | 0    | 7    | 85   | 254  | 7    | 3    | 271  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 0    | 81   | 13   | 0    | 8    | 97   | 289  | 8    | 3    | 308  | 1    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |      | Major2 |   |   |      |   |   |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 625    | 806  | 155    | 616  | 802    | 149  | 309    | 0 | 0 | 297  | 0 | 0 |
| Stage 1              | 315    | 315  | -      | 487  | 487    | -    | -      | - | - | -    | - | - |
| Stage 2              | 310    | 491  | -      | 129  | 315    | -    | -      | - | - | -    | - | - |
| Critical Hdwy        | 6.44   | 6.54 | 7.14   | 6.44 | 6.54   | 7.14 | 5.34   | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1  | 7.34   | 5.54 | -      | 7.34 | 5.54   | -    | -      | - | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.74   | 5.54 | -      | 6.74 | 5.54   | -    | -      | - | - | -    | - | - |
| Follow-up Hdwy       | 3.82   | 4.02 | 3.92   | 3.82 | 4.02   | 3.92 | 3.12   | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver   | 421    | 314  | 734    | 426  | 316    | 740  | 832    | - | - | 842  | - | - |
| Stage 1              | 583    | 654  | -      | 447  | 549    | -    | -      | - | - | -    | - | - |
| Stage 2              | 619    | 546  | -      | 792  | 654    | -    | -      | - | - | -    | - | - |
| Platoon blocked, %   | -      | -    | -      | -    | -      | -    | -      | - | - | -    | - | - |
| Mov Cap-1 Maneuver   | 378    | 276  | 734    | 344  | 278    | 740  | 832    | - | - | 842  | - | - |
| Mov Cap-2 Maneuver   | 378    | 276  | -      | 344  | 278    | -    | -      | - | - | -    | - | - |
| Stage 1              | 515    | 651  | -      | 395  | 485    | -    | -      | - | - | -    | - | - |
| Stage 2              | 541    | 482  | -      | 702  | 651    | -    | -      | - | - | -    | - | - |

| Approach             | EB | WB   | NB  | SB  |
|----------------------|----|------|-----|-----|
| HCM Control Delay, s | 11 | 13.7 | 2.4 | 0.1 |
| HCM LOS              | B  | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 832   | -   | -   | 684   | 434   | 842   | -   | -   |
| HCM Lane V/C Ratio    | 0.116 | -   | -   | 0.128 | 0.047 | 0.004 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 11    | 13.7  | 9.3   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.4   | 0.1   | 0     | -   | -   |

22-1270: Black Mountain Village  
Existing AM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 53    | 645   | 413   | 134   | 206   | 280   | 320   | 224   | 86    | 588   |
| Future Volume (vph)  | 53    | 645   | 413   | 134   | 206   | 280   | 320   | 224   | 86    | 588   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 1     | 6     |       | 5     | 2     | 3     | 8     |       | 7     | 4     |
| Permitted Phases     |       |       | 6     |       |       |       |       | 8     |       |       |
| Detector Phase       | 1     | 6     | 6     | 5     | 2     | 3     | 8     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  | 11.1  | 40.4  | 40.4  | 11.1  | 41.5  |
| Total Split (s)      | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  | 18.0  | 42.0  | 20.0  | 20.0  | 44.0  |
| Total Split (%)      | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% | 15.0% | 35.0% | 35.0% | 16.7% | 36.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   | 3.1   | 2.4   | 2.4   | 3.1   | 2.5   |
| 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)  | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   | 6.1   | 6.4   | 6.4   | 6.1   | 6.5   |
| Lead/Lag             | Lead  | Lead  | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | Max   | Max   | None  | None  |

Intersection Summary

Cycle Length: 120

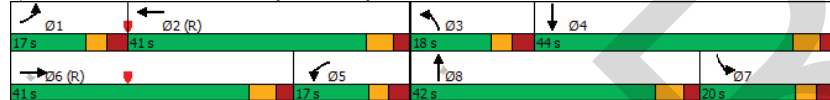
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green, Master Intersection

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
Existing School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 58    | 322   | 248   | 115   | 247   | 239   | 242   | 175   | 47    | 271   |
| Future Volume (vph)  | 58    | 322   | 248   | 115   | 247   | 239   | 242   | 175   | 47    | 271   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (%)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   |

Intersection Summary

Cycle Length: 120

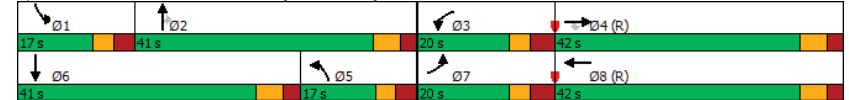
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green, Master Intersection

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
Existing PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

|                      | ↖     | →     | ↘     | ↙     | ←     | ↖     | ↑     | ↘     | ↙     | ↓     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations  | ↖↗    | ↖↗↖↗  | ↖↗    | ↖↗    | ↖↗↖↗  | ↖↗    | ↖↗↖↗  | ↖↗    | ↖↗↖↗  | ↖↗↖↗  |
| Traffic Volume (vph) | 24    | 343   | 193   | 138   | 437   | 168   | 406   | 166   | 74    | 254   |
| Future Volume (vph)  | 24    | 343   | 193   | 138   | 437   | 168   | 406   | 166   | 74    | 254   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       | 2     |       |       |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 2     | 1     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  |
| Minimum Split (s)    | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  | 11.1  | 41.5  | 41.5  | 11.1  | 40.4  |
| Total Split (s)      | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  |
| Total Split (%)      | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   | 3.1   | 2.5   | 2.5   | 3.1   | 2.4   |
| 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)  | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   | 6.1   | 6.5   | 6.5   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | None  | None  | None  | Max   |

Intersection Summary

Cycle Length: 120

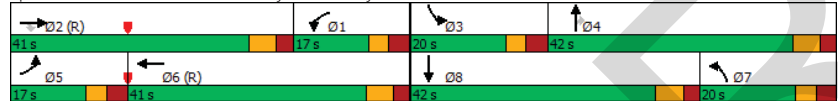
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.





22-1270: Black Mountain Village  
Existing School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|-------|-------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 58   | 322  | 248  | 115  | 247  | 46    | 239   | 242  | 175  | 47   | 271  | 35   |
| Future Volume (veh/h)        | 58   | 322  | 248  | 115  | 247  | 46    | 239   | 242  | 175  | 47   | 271  | 35   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00  |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |       | No    |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 84   | 467  | 0    | 167  | 358  | 51    | 346   | 351  | 0    | 68   | 393  | 39   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69  | 0.69  | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2     | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 135  | 1740 |      | 225  | 1661 | 231   | 314   | 1758 |      | 129  | 1364 | 133  |
| Arrive On Green              | 0.04 | 0.34 | 0.00 | 0.07 | 0.37 | 0.37  | 0.09  | 0.34 | 0.00 | 0.04 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4531 | 630   | 3456  | 5106 | 1585 | 3456 | 4729 | 462  |
| Grp Volume(v), veh/h         | 84   | 467  | 0    | 167  | 267  | 142   | 346   | 351  | 0    | 68   | 281  | 151  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702 | 1585 | 1728 | 1702 | 1757  | 1728  | 1702 | 1585 | 1728 | 1702 | 1787 |
| Q Serve(g_s), s              | 2.9  | 8.0  | 0.0  | 5.7  | 6.5  | 6.7   | 10.9  | 5.8  | 0.0  | 2.3  | 7.7  | 7.9  |
| Cycle Q Clear(g_c), s        | 2.9  | 8.0  | 0.0  | 5.7  | 6.5  | 6.7   | 10.9  | 5.8  | 0.0  | 2.3  | 7.7  | 7.9  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.36  | 1.00  |      | 1.00 | 1.00 |      | 0.26 |
| Lane Grp Cap(c), veh/h       | 135  | 1740 |      | 225  | 1248 | 644   | 314   | 1758 |      | 129  | 982  | 515  |
| V/C Ratio(X)                 | 0.62 | 0.27 |      | 0.74 | 0.21 | 0.22  | 1.10  | 0.20 |      | 0.53 | 0.29 | 0.29 |
| Avail Cap(c_a), veh/h        | 389  | 1740 |      | 389  | 1248 | 644   | 314   | 1758 |      | 314  | 982  | 515  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 56.8 | 28.7 | 0.0  | 55.1 | 26.1 | 26.2  | 54.5  | 27.7 | 0.0  | 56.7 | 33.1 | 33.2 |
| Incr Delay (d2), s/veh       | 1.7  | 0.4  | 0.0  | 1.8  | 0.4  | 0.8   | 81.1  | 0.3  | 0.0  | 1.2  | 0.7  | 1.4  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 2.3  | 6.0  | 0.0  | 4.6  | 4.9  | 5.3   | 13.4  | 4.4  | 0.0  | 1.9  | 5.9  | 6.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |       |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 58.5 | 29.1 | 0.0  | 56.9 | 26.5 | 27.0  | 135.7 | 28.0 | 0.0  | 58.0 | 33.9 | 34.6 |
| LnGrp LOS                    | E    | C    |      | E    | C    | C     | F     | C    |      | E    | C    | C    |
| Approach Vol, veh/h          |      | 551  |      |      | 576  |       |       | 697  |      |      | 500  |      |
| Approach Delay, s/veh        |      | 33.6 |      |      | 35.4 |       |       | 81.4 |      |      | 37.4 |      |
| Approach LOS                 |      | C    |      |      | D    |       |       | F    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7     | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.6 | 47.7 | 14.3 | 47.4 | 17.3 | 41.0  | 11.2  | 50.5 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5   | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | * 35  | 13.5  | 35.5 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 4.3  | 7.8  | 7.7  | 10.0 | 12.9 | 9.9   | 4.9   | 8.7  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.6  | 0.1  | 2.2  | 0.0  | 1.8   | 0.1   | 1.7  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 49.2 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
Existing AM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 281   | 29    | 275   | 55    | 130   | 19    | 413   | 134   | 42    | 1008  | 85    |
| Future Volume (vph)  | 281   | 29    | 275   | 55    | 130   | 19    | 413   | 134   | 42    | 1008  | 85    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |       |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 20.0  | 34.0  | 30.0  | 44.0  | 44.0  | 27.0  | 64.0  | 64.0  | 22.0  | 59.0  | 59.0  |
| Total Split (%)      | 13.3% | 22.7% | 20.0% | 29.3% | 29.3% | 18.0% | 42.7% | 42.7% | 14.7% | 39.3% | 39.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150

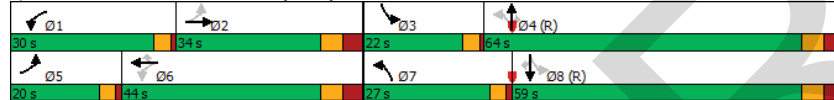
Actuated Cycle Length: 150

Offset: 69 (46%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
Existing PM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 28    | 10    | 164   | 3     | 91    | 6     | 621   | 136   | 62    | 516   | 7     |
| Future Volume (vph)  | 28    | 10    | 164   | 3     | 91    | 6     | 621   | 136   | 62    | 516   | 7     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |       |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 25.7  | 25.7  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 15.0  | 45.0  | 15.0  | 45.0  | 45.0  | 15.0  | 55.0  | 55.0  | 35.0  | 75.0  | 75.0  |
| Total Split (%)      | 10.0% | 30.0% | 10.0% | 30.0% | 30.0% | 10.0% | 36.7% | 36.7% | 23.3% | 50.0% | 50.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150

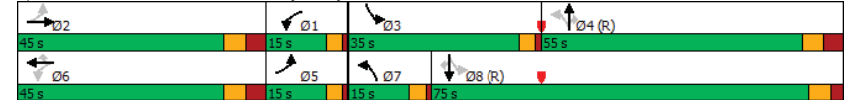
Actuated Cycle Length: 150

Offset: 116 (77%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
Existing School PM

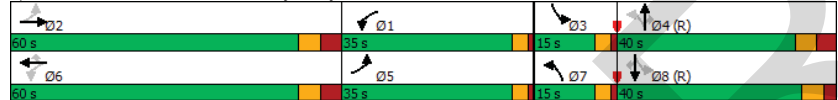
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 121   | 28    | 107   | 9     | 94    | 31    | 441   | 142   | 93    | 476   | 65    |
| Future Volume (vph)  | 121   | 28    | 107   | 9     | 94    | 31    | 441   | 142   | 93    | 476   | 65    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 25.7  | 25.7  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 35.0  | 60.0  | 35.0  | 60.0  | 60.0  | 15.0  | 40.0  | 40.0  | 15.0  | 40.0  | 40.0  |
| Total Split (%)      | 23.3% | 40.0% | 23.3% | 40.0% | 40.0% | 10.0% | 26.7% | 26.7% | 10.0% | 26.7% | 26.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 0 (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.





22-1270: Black Mountain Village  
Existing AM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

Table with 13 columns for movements (EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR) and 40 rows of traffic metrics including Lane Configurations, Traffic Volume, Future Volume, Initial Q, Ped-Bike Adj, Parking Bus, Work Zone, Adj Sat Flow, Adj Flow Rate, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, Unsig. Movement Delay, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer - Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

Intersection Summary  
HCM 6th Ctrl Delay 36.6  
HCM 6th LOS D

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
Existing PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

Table with 13 columns for movements (EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR) and 40 rows of traffic metrics including Lane Configurations, Traffic Volume, Future Volume, Initial Q, Ped-Bike Adj, Parking Bus, Work Zone, Adj Sat Flow, Adj Flow Rate, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, Unsig. Movement Delay, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer - Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

Intersection Summary  
HCM 6th Ctrl Delay 23.0  
HCM 6th LOS C

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
Existing School PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    |      | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 121  | 28   | 90   | 107   | 9    | 94   | 31   | 441   | 142  | 93   | 476  | 65   |
| Future Volume (veh/h)        | 121  | 28   | 90   | 107   | 9    | 94   | 31   | 441   | 142  | 93   | 476  | 65   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |      | No    |      |      | No   |       |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 183  | 42   | 103  | 162   | 14   | 71   | 47   | 668   | 0    | 141  | 721  | 48   |
| Peak Hour Factor             | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 559  | 167  | 411  | 463   | 652  | 553  | 301  | 2060  |      | 393  | 1540 | 687  |
| Arrive On Green              | 0.03 | 0.35 | 0.35 | 0.03  | 0.35 | 0.35 | 0.03 | 0.40  | 0.00 | 0.06 | 0.43 | 0.43 |
| Sat Flow, veh/h              | 1781 | 480  | 1178 | 1781  | 1870 | 1585 | 1781 | 5106  | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 183  | 0    | 145  | 162   | 14   | 71   | 47   | 668   | 0    | 141  | 721  | 48   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0    | 1658 | 1781  | 1870 | 1585 | 1781 | 1702  | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 0.0  | 0.0  | 9.4  | 0.0   | 0.7  | 3.8  | 2.3  | 13.5  | 0.0  | 6.8  | 21.6 | 2.1  |
| Cycle Q Clear(g_c), s        | 0.0  | 0.0  | 9.4  | 0.0   | 0.7  | 3.8  | 2.3  | 13.5  | 0.0  | 6.8  | 21.6 | 2.1  |
| Prop In Lane                 | 1.00 |      | 0.71 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 559  | 0    | 578  | 463   | 652  | 553  | 301  | 2060  |      | 393  | 1540 | 687  |
| V/C Ratio(X)                 | 0.33 | 0.00 | 0.25 | 0.35  | 0.02 | 0.13 | 0.16 | 0.32  |      | 0.36 | 0.47 | 0.07 |
| Avail Cap(c_a), veh/h        | 867  | 0    | 578  | 772   | 652  | 553  | 381  | 2060  |      | 420  | 1540 | 687  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 33.8 | 0.0  | 34.9 | 39.9  | 32.1 | 23.3 | 25.9 | 30.7  | 0.0  | 23.4 | 30.2 | 16.0 |
| Incr Delay (d2), s/veh       | 0.1  | 0.0  | 1.0  | 0.2   | 0.1  | 0.5  | 0.1  | 0.4   | 0.0  | 0.2  | 1.0  | 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(95%),veh/ln     | 8.6  | 0.0  | 7.2  | 8.3   | 0.6  | 3.3  | 1.8  | 9.6   | 0.0  | 5.3  | 14.7 | 1.9  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 33.9 | 0.0  | 35.9 | 40.1  | 32.1 | 23.8 | 26.0 | 31.1  | 0.0  | 23.6 | 31.2 | 16.2 |
| LnGrp LOS                    | C    | A    | D    | D     | C    | C    | C    | C     |      | C    | C    | B    |
| Approach Vol, veh/h          |      | 328  |      |       | 247  |      |      | 715   |      |      | 910  |      |
| Approach Delay, s/veh        |      | 34.8 |      |       | 35.0 |      |      | 30.8  |      |      | 29.3 |      |
| Approach LOS                 |      | C    |      |       | C    |      |      | C     |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4     | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 9.0  | 60.0 | 12.8 | 68.2  | 9.0  | 60.0 | 8.3  | 72.7  |      |      |      |      |
| Change Period (Y+Rc), s      | * 4  | 7.7  | 4.0  | * 7.7 | * 4  | 7.7  | 4.0  | * 7.7 |      |      |      |      |
| Max Green Setting (Gmax), s  | * 31 | 52.3 | 11.0 | * 32  | * 31 | 52.3 | 11.0 | * 34  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 2.0  | 11.4 | 8.8  | 15.5  | 2.0  | 5.8  | 4.3  | 23.6  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.2  | 0.6  | 0.0  | 3.0   | 0.2  | 0.2  | 0.0  | 2.6   |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 31.2 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | C    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
Existing AM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗↗   | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 1    | 0    | 566  | 939  | 442  |
| Future Vol, veh/h        | 0    | 1    | 0    | 566  | 939  | 442  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1    | 0    | 615  | 1021 | 480  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 511    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *681   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *681   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 681   | -   |
| HCM Lane V/C Ratio    | -         | 0.002 | -   |
| HCM Control Delay (s) | -         | 10.3  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0     | -   |

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

22-1270: Black Mountain Village  
Existing PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗↗   | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 7    | 0    | 763  | 657  | 42   |
| Future Vol, veh/h        | 0    | 7    | 0    | 763  | 657  | 42   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 7    | 0    | 803  | 692  | 44   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 346    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *806   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *806   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.5 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 806   | -   |
| HCM Lane V/C Ratio    | -         | 0.009 | -   |
| HCM Control Delay (s) | -         | 9.5   | -   |
| HCM Lane LOS          | -         | A     | -   |
| HCM 95th %tile Q(veh) | -         | 0     | -   |

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

22-1270: Black Mountain Village  
Existing School PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 9    | 0    | 614  | 490  | 183  |
| Future Vol, veh/h        | 0    | 9    | 0    | 614  | 490  | 183  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 12   | 0    | 819  | 653  | 244  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 327  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *889 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *889 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 889     | - - | - - |
| HCM Lane V/C Ratio    | - 0.013   | - - | - - |
| HCM Control Delay (s) | - 9.1     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
Existing AM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 6.6   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 31    | 612   |       | 1263  |       |
| Demand Flow Rate, veh/h     | 31    | 624   |       | 1288  |       |
| Vehicles Circulating, veh/h | 1269  | 12    |       | 24    |       |
| Vehicles Exiting, veh/h     | 43    | 1288  |       | 612   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 8.3   | 4.6   |       | 7.5   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 31    | 293   | 331   | 605   | 683   |
| Cap Entry Lane, veh/h       | 483   | 1335  | 1406  | 1320  | 1391  |
| Entry HV Adj Factor         | 1.000 | 0.982 | 0.980 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 31    | 288   | 324   | 594   | 669   |
| Cap Entry, veh/h            | 483   | 1311  | 1378  | 1296  | 1364  |
| V/C Ratio                   | 0.064 | 0.219 | 0.235 | 0.458 | 0.491 |
| Control Delay, s/veh        | 8.3   | 4.6   | 4.6   | 7.4   | 7.6   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 2     | 3     |

22-1270: Black Mountain Village  
Existing PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.1   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 4     | 814   |       | 705   |       |
| Demand Flow Rate, veh/h     | 4     | 830   |       | 719   |       |
| Vehicles Circulating, veh/h | 715   | 1     |       | 3     |       |
| Vehicles Exiting, veh/h     | 7     | 718   |       | 828   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 4.7   | 5.3   |       | 4.9   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 390   | 440   | 338   | 381   |
| Cap Entry Lane, veh/h       | 773   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 4     | 382   | 431   | 331   | 374   |
| Cap Entry, veh/h            | 773   | 1323  | 1391  | 1320  | 1389  |
| V/C Ratio                   | 0.005 | 0.289 | 0.310 | 0.251 | 0.269 |
| Control Delay, s/veh        | 4.7   | 5.3   | 5.3   | 4.9   | 4.9   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 1     | 1     |

22-1270: Black Mountain Village  
Existing School PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.8   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 28    | 924   |       | 940   |       |
| Demand Flow Rate, veh/h     | 28    | 942   |       | 959   |       |
| Vehicles Circulating, veh/h | 952   | 7     |       | 15    |       |
| Vehicles Exiting, veh/h     | 22    | 973   |       | 934   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 6.2   | 5.8   |       | 5.9   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 28    | 443   | 499   | 451   | 508   |
| Cap Entry Lane, veh/h       | 632   | 1341  | 1412  | 1331  | 1402  |
| Entry HV Adj Factor         | 1.000 | 0.980 | 0.981 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 28    | 434   | 490   | 442   | 498   |
| Cap Entry, veh/h            | 632   | 1315  | 1385  | 1305  | 1376  |
| V/C Ratio                   | 0.044 | 0.330 | 0.353 | 0.339 | 0.362 |
| Control Delay, s/veh        | 6.2   | 5.7   | 5.8   | 5.9   | 5.9   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 2     | 2     | 2     |

22-1270: Black Mountain Village  
Existing AM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 163  | 78   | 7    | 13   | 145  | 76   | 12   | 4    | 7    | 23   | 3    | 152  |
| Future Vol, veh/h        | 163  | 78   | 7    | 13   | 145  | 76   | 12   | 4    | 7    | 23   | 3    | 152  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 233  | 111  | 10   | 19   | 207  | 109  | 17   | 6    | 10   | 33   | 4    | 217  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 316    | 0      | 0      | 121    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1241   | -      | -      | 1519   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1241   | -      | -      | 1519   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 5.6 | 0.4 | 19.5 | 14.9 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 281   | 1241  | -   | -   | 1519  | -   | -   | 617   |
| HCM Lane V/C Ratio    | 0.117 | 0.188 | -   | -   | 0.012 | -   | -   | 0.412 |
| HCM Control Delay (s) | 19.5  | 8.6   | -   | -   | 7.4   | -   | -   | 14.9  |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.4   | 0.7   | -   | -   | 0     | -   | -   | 2     |

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

22-1270: Black Mountain Village  
Existing PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 74   | 124  | 10   | 23   | 115  | 26   | 9    | 4    | 3    | 27   | 4    | 127  |
| Future Vol, veh/h        | 74   | 124  | 10   | 23   | 115  | 26   | 9    | 4    | 3    | 27   | 4    | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 101  | 170  | 14   | 32   | 158  | 36   | 12   | 5    | 4    | 37   | 5    | 174  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 194    | 0      | 0      | 184    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1377   | -      | -      | 1481   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1377   | -      | -      | 1481   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 2.8 | 1  | 13.8 | 11.5 |
| HCM LOS              |     |    | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 433   | 1377  | -   | -   | 1481  | -   | -   | 773   |
| HCM Lane V/C Ratio    | 0.051 | 0.074 | -   | -   | 0.021 | -   | -   | 0.28  |
| HCM Control Delay (s) | 13.8  | 7.8   | -   | -   | 7.5   | -   | -   | 11.5  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.2   | -   | -   | 0.1   | -   | -   | 1.1   |

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

22-1270: Black Mountain Village  
Existing School PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      |
| Traffic Vol, veh/h       | 107  | 140  | 16   | 12   | 121  | 39   | 10   | 3    | 6    | 7    | 3    | 46   |
| Future Vol, veh/h        | 107  | 140  | 16   | 12   | 121  | 39   | 10   | 3    | 6    | 7    | 3    | 46   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 130  | 171  | 20   | 15   | 148  | 48   | 12   | 4    | 7    | 9    | 4    | 56   |

| Major/Minor          | Major1 |   | Major2 |      | Minor1 |   | Minor2 |      |       |      |      |      |
|----------------------|--------|---|--------|------|--------|---|--------|------|-------|------|------|------|
| Conflicting Flow All | 196    | 0 | 0      | 191  | 0      | 0 | 547    | 667  | 96    | 550  | 653  | 98   |
| Stage 1              | -      | - | -      | -    | -      | - | 441    | 441  | -     | 202  | 202  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 106    | 226  | -     | 348  | 451  | -    |
| Critical Hdwy        | 4.14   | - | -      | 4.14 | -      | - | 7.54   | 6.54 | 6.94  | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | - | -      | -    | -      | - | 6.54   | 5.54 | -     | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | -      | -    | -      | - | 6.54   | 5.54 | -     | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | -      | 2.22 | -      | - | 3.52   | 4.02 | 3.32  | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1374   | - | -      | 1472 | -      | - | 484    | 417  | *1035 | 481  | 424  | 939  |
| Stage 1              | -      | - | -      | -    | -      | - | 634    | 620  | -     | 781  | 733  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 888    | 716  | -     | 723  | 614  | -    |
| Platoon blocked, %   | -      | - | -      | 1    | -      | - | 1      | 1    | 1     | 1    | 1    | 1    |
| Mov Cap-1 Maneuver   | 1374   | - | -      | 1472 | -      | - | 416    | 373  | *1035 | 436  | 380  | 939  |
| Mov Cap-2 Maneuver   | -      | - | -      | -    | -      | - | 416    | 373  | -     | 436  | 380  | -    |
| Stage 1              | -      | - | -      | -    | -      | - | 574    | 561  | -     | 707  | 726  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 822    | 709  | -     | 645  | 555  | -    |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.2 | 0.5 | 12.5 | 10.1 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 502   | 1374  | -   | -   | 1472 | -   | -   | 768   |
| HCM Lane V/C Ratio    | 0.046 | 0.095 | -   | -   | 0.01 | -   | -   | 0.089 |
| HCM Control Delay (s) | 12.5  | 7.9   | -   | -   | 7.5  | -   | -   | 10.1  |
| HCM Lane LOS          | B     | A     | -   | -   | A    | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | 0.3   | -   | -   | 0    | -   | -   | 0.3   |

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



22-1270: Black Mountain Village  
Existing AM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 9.5   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 42    | 755  | 60    | 57   | 430   | 24   | 44    | 6    | 85    | 37   | 7     | 32   |
| Future Vol, veh/h        | 42    | 755  | 60    | 57   | 430   | 24   | 44    | 6    | 85    | 37   | 7     | 32   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 75    | 75   | 75    | 75   | 75    | 75   | 75    | 75   | 75    | 75   | 75    | 75   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 56    | 1007 | 80    | 76   | 573   | 32   | 59    | 8    | 113   | 49   | 9     | 43   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 605    | 0      | 1087   | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 604    | -      | 355    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 604    | -      | 355    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.6 | 2  | 66.7 | 58.4 |
| HCM LOS              |     |    | F    | F    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 74    | 275   | 604   | -   | -   | 355   | -   | -   | 89    | 189   |
| HCM Lane V/C Ratio    | 0.793 | 0.441 | 0.093 | -   | -   | 0.214 | -   | -   | 0.554 | 0.275 |
| HCM Control Delay (s) | 146.8 | 28    | 11.6  | -   | -   | 17.9  | -   | -   | 87.1  | 31.1  |
| HCM Lane LOS          | F     | D     | B     | -   | -   | C     | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 3.8   | 2.1   | 0.3   | -   | -   | 0.8   | -   | -   | 2.5   | 1.1   |

22-1270: Black Mountain Village  
Existing PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 4.8   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 60    | 508  | 30    | 53   | 594   | 56   | 56    | 4    | 81    | 25   | 4     | 40   |
| Future Vol, veh/h        | 60    | 508  | 30    | 53   | 594   | 56   | 56    | 4    | 81    | 25   | 4     | 40   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 71    | 598  | 35    | 62   | 699   | 66   | 66    | 5    | 95    | 29   | 5     | 47   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 765    | 0      | 633    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 507    | -      | 586    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 507    | -      | 586    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 1.3 | 0.9 | 28.5 | 27 |
| HCM LOS              |     |     | D    | D  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 147   | 440   | 507   | -   | -   | 586   | -   | -   | 121   | 345   |
| HCM Lane V/C Ratio    | 0.448 | 0.227 | 0.139 | -   | -   | 0.106 | -   | -   | 0.243 | 0.15  |
| HCM Control Delay (s) | 48    | 15.6  | 13.2  | -   | -   | 11.9  | -   | -   | 44.1  | 17.3  |
| HCM Lane LOS          | E     | C     | B     | -   | -   | B     | -   | -   | E     | C     |
| HCM 95th %tile Q(veh) | 2     | 0.9   | 0.5   | -   | -   | 0.4   | -   | -   | 0.9   | 0.5   |

22-1270: Black Mountain Village  
Existing School PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |      |       |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3     |      |      |       |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      |      | ↔ ↔ ↔ |      |      | ↔    |      | ↔    | ↔    |      | ↔    |
| Traffic Vol, veh/h       | 42    | 448  | 40   | 38    | 392  | 44   | 8    | 4    | 36   | 27   | 10   | 25   |
| Future Vol, veh/h        | 42    | 448  | 40   | 38    | 392  | 44   | 8    | 4    | 36   | 27   | 10   | 25   |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free  | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -     | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -    | 125   | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 74    | 74   | 74   | 74    | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   |
| Heavy Vehicles, %        | 2     | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 57    | 605  | 54   | 51    | 530  | 59   | 11   | 5    | 49   | 36   | 14   | 34   |

| Major/Minor          | Major1 |   | Major2 |      | Minor1 |   | Minor2 |      |
|----------------------|--------|---|--------|------|--------|---|--------|------|
| Conflicting Flow All | 589    | 0 | 0      | 659  | 0      | 0 | 1067   | 1437 |
| Stage 1              | -      | - | -      | -    | -      | - | 746    | 746  |
| Stage 2              | -      | - | -      | -    | -      | - | 321    | 691  |
| Critical Hdwy        | 5.34   | - | -      | 5.34 | -      | - | 6.44   | 6.54 |
| Critical Hdwy Stg 1  | -      | - | -      | -    | -      | - | 7.34   | 5.54 |
| Critical Hdwy Stg 2  | -      | - | -      | -    | -      | - | 6.74   | 5.54 |
| Follow-up Hdwy       | 3.12   | - | -      | 3.12 | -      | - | 3.82   | 4.02 |
| Pot Cap-1 Maneuver   | 615    | - | -      | 570  | -      | - | 233    | 132  |
| Stage 1              | -      | - | -      | -    | -      | - | 298    | 419  |
| Stage 2              | -      | - | -      | -    | -      | - | 610    | 444  |
| Platoon blocked, %   | -      | - | -      | -    | -      | - | -      | -    |
| Mov Cap-1 Maneuver   | 615    | - | -      | 570  | -      | - | 173    | 109  |
| Mov Cap-2 Maneuver   | -      | - | -      | -    | -      | - | 173    | 109  |
| Stage 1              | -      | - | -      | -    | -      | - | 270    | 380  |
| Stage 2              | -      | - | -      | -    | -      | - | 507    | 404  |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.9 | 1  | 17.4 | 24.6 |
| HCM LOS              |     |    | C    | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 173   | 400   | 615   | -   | -   | 570  | -   | -   | 189   | 264   |
| HCM Lane V/C Ratio    | 0.062 | 0.135 | 0.092 | -   | -   | 0.09 | -   | -   | 0.193 | 0.179 |
| HCM Control Delay (s) | 27.2  | 15.4  | 11.4  | -   | -   | 11.9 | -   | -   | 28.5  | 21.6  |
| HCM Lane LOS          | D     | C     | B     | -   | -   | B    | -   | -   | D     | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.5   | 0.3   | -   | -   | 0.3  | -   | -   | 0.7   | 0.6   |

22-1270: Black Mountain Village  
Existing AM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.4  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 139  | 12   | 34   | 49   | 23   | 222  |
| Future Vol, veh/h        | 139  | 12   | 34   | 49   | 23   | 222  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 232  | 20   | 57   | 82   | 38   | 370  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 234    | 38     | 408    | 0 | - | 0 |
| Stage 1              | 38     | -      | -      | - | - | - |
| Stage 2              | 196    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 754    | 1034   | 1151   | - | - | - |
| Stage 1              | 984    | -      | -      | - | - | - |
| Stage 2              | 837    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 716    | 1034   | 1151   | - | - | - |
| Mov Cap-2 Maneuver   | 716    | -      | -      | - | - | - |
| Stage 1              | 935    | -      | -      | - | - | - |
| Stage 2              | 837    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.1 | 3.4 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1151  | -   | 716   | 1034  | -   | -   |
| HCM Lane V/C Ratio    | 0.049 | -   | 0.324 | 0.019 | -   | -   |
| HCM Control Delay (s) | 8.3   | -   | 12.4  | 8.6   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | 1.4   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
Existing PM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 82   | 31   | 20   | 41   | 54   | 132  |
| Future Vol, veh/h        | 82   | 31   | 20   | 41   | 54   | 132  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 91   | 34   | 22   | 46   | 60   | 147  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 150    | 60     | 207    | 0 | - | 0 |
| Stage 1              | 60     | -      | -      | - | - | - |
| Stage 2              | 90     | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 842    | 1005   | 1364   | - | - | - |
| Stage 1              | 963    | -      | -      | - | - | - |
| Stage 2              | 934    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 829    | 1005   | 1364   | - | - | - |
| Mov Cap-2 Maneuver   | 829    | -      | -      | - | - | - |
| Stage 1              | 948    | -      | -      | - | - | - |
| Stage 2              | 934    | -      | -      | - | - | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.6 | 2.5 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1364  | -   | 829   | 1005  | -   | -   |
| HCM Lane V/C Ratio    | 0.016 | -   | 0.11  | 0.034 | -   | -   |
| HCM Control Delay (s) | 7.7   | -   | 9.9   | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.4   | 0.1   | -   | -   |

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 4.1    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔     | ↔    | ↔    |
| Traffic Vol, veh/h       | 100    | 16     | 18     | 46    | 45   | 101  |
| Future Vol, veh/h        | 100    | 16     | 18     | 46    | 45   | 101  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 335    | 0      | 175    | -     | -    | 300  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 70     | 70     | 70     | 70    | 70   | 70   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |
| Mvmt Flow                | 143    | 23     | 26     | 66    | 64   | 144  |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 182    | 64     | 208    | 0     | -    | 0    |
| Stage 1                  | 64     | -      | -      | -     | -    | -    |
| Stage 2                  | 118    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.42   | 6.22   | 4.12   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.42   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 5.42   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.518  | 3.318  | 2.218  | -     | -    | -    |
| Pot Cap-1 Maneuver       | 807    | 1000   | 1363   | -     | -    | -    |
| Stage 1                  | 959    | -      | -      | -     | -    | -    |
| Stage 2                  | 907    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 792    | 1000   | 1363   | -     | -    | -    |
| Mov Cap-2 Maneuver       | 792    | -      | -      | -     | -    | -    |
| Stage 1                  | 941    | -      | -      | -     | -    | -    |
| Stage 2                  | 907    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 10.3   | 2.2    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 1363   | -      | 792    | 1000  | -    | -    |
| HCM Lane V/C Ratio       | 0.019  | -      | 0.18   | 0.023 | -    | -    |
| HCM Control Delay (s)    | 7.7    | -      | 10.5   | 8.7   | -    | -    |
| HCM Lane LOS             | A      | -      | B      | A     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.7    | 0.1   | -    | -    |

**APPENDIX D**

**INTERNAL CAPTURE CALCULATIONS**

DRAFT

| NCHRP 684 Internal Trip Capture Estimation Tool |  |  |               |               |  |
|---|--|--|---------------|---------------|--|
| Project Name:                                   | Black Mountain Village                     |  | Organization: | CivTech, Inc. |  |
| Project Location:                               | SWC Black Mountain Pkwy. & Deer Valley Dr. |  | Performed By: | Hong Dang     |  |
| Scenario Description:                           | Built-Out                                  |  | Date:         | 26-Jul-22     |  |
| Analysis Year:                                  | 2024                                       |  | Checked By:   |               |  |
| Analysis Period:                                | AM Street Peak Hour                        |  | Date:         |               |  |

| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |   |                 |       |                                      |          |         |
|--|---|-----------------|-------|--------------------------------------|----------|---------|
| Land Use   | Development Data (For Information Only) |                 |       | Estimated Vehicle-Trips <sup>3</sup> |          |         |
|  | ITE LUCs <sup>1</sup>                   | Quantity        | Units | Total                                | Entering | Exiting |
| Office   |   |                 |       | 0                                    |          |         |
| Retail   | 822,850                                 | 41,500 ; 76,200 | SF    | 316                                  | 187      | 129     |
| Restaurant   | 934                                     | 19,700          | SF    | 878                                  | 450      | 428     |
| Cinema/Entertainment   |   |                 |       | 0                                    |          |         |
| Residential  |   |                 |       | 0                                    |          |         |
| Hotel  |   |                 |       | 0                                    |          |         |
| All Other Land Uses <sup>2</sup>   |   |                 |       | 0                                    |          |         |
|  |   |                 |       | 1,194                                | 637      | 557     |

| Table 2-A: Mode Split and Vehicle Occupancy Estimates |                        |           |                 |                        |           |                 |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use  | Entering Trips         |           |                 | Exiting Trips          |           |                 |
|   | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized |
| Office  |                        |           |                 |                        |           |                 |
| Retail  |                        |           |                 |                        |           |                 |
| Restaurant  |                        |           |                 |                        |           |                 |
| Cinema/Entertainment                                  |                        |           |                 |                        |           |                 |
| Residential   |                        |           |                 |                        |           |                 |
| Hotel   |                        |           |                 |                        |           |                 |
| All Other Land Uses <sup>2</sup>                      |                        |           |                 |                        |           |                 |

| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  |        |            |                      |             |       |
| Retail  |                  |        |            |                      |             |       |
| Restaurant  |                  |        |            |                      |             |       |
| Cinema/Entertainment  |                  |        |            |                      |             |       |
| Residential   |                  |        |            |                      |             |       |
| Hotel   |                  |        |            |                      |             |       |

| Table 4-A: Internal Person-Trip Origin-Destination Matrix* |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 0      | 0          | 0                    | 0           | 0     |
| Retail   | 0                |        | 17         | 0                    | 0           | 0     |
| Restaurant   | 0                | 15     |            | 0                    | 0           | 0     |
| Cinema/Entertainment                                       | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 0                | 0      | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 5-A: Computations Summary           |       |          |         |
|---|-------|----------|---------|
|   | Total | Entering | Exiting |
| All Person-Trips                          | 1,194 | 637      | 557     |
| Internal Capture Percentage               | 5%    | 5%       | 6%      |
| External Vehicle-Trips <sup>5</sup>       | 1,130 | 605      | 525     |
| External Transit-Trips <sup>6</sup>       | 0     | 0        | 0       |
| External Non-Motorized Trips <sup>6</sup> | 0     | 0        | 0       |

| Table 6-A: Internal Trip Capture Percentages by Land Use |                |               |
|--|----------------|---------------|
| Land Use   | Entering Trips | Exiting Trips |
| Office   | N/A            | N/A           |
| Retail   | 8%             | 13%           |
| Restaurant   | 4%             | 4%            |
| Cinema/Entertainment                                     | N/A            | N/A           |
| Residential  | N/A            | N/A           |
| Hotel  | N/A            | N/A           |

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.  
<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.  
<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).  
<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.  
<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.  
<sup>6</sup>Person-Trips  
\*Indicates computation that has been rounded to the nearest whole number.  
Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

| NCHRP 684 Internal Trip Capture Estimation Tool |  |  |               |               |  |
|---|--|--|---------------|---------------|--|
| Project Name:                                   | Black Mountain Village                     |  | Organization: | CivTech, Inc. |  |
| Project Location:                               | SWC Black Mountain Pkwy. & Deer Valley Dr. |  | Performed By: | Hong Dang     |  |
| Scenario Description:                           | Built-Out                                  |  | Date:         | 26-Jul-22     |  |
| Analysis Year:                                  | 2024                                       |  | Checked By:   |               |  |
| Analysis Period:                                | PM Street Peak Hour                        |  | Date:         |               |  |

| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |   |                 |       |                                      |          |         |
|--|---|-----------------|-------|--------------------------------------|----------|---------|
| Land Use   | Development Data (For Information Only) |                 |       | Estimated Vehicle-Trips <sup>3</sup> |          |         |
|  | ITE LUCs <sup>1</sup>                   | Quantity        | Units | Total                                | Entering | Exiting |
| Office   |   |                 |       | 0                                    |          |         |
| Retail   | 822,850                                 | 41,500 ; 76,200 | SF    | 893                                  | 448      | 445     |
| Restaurant   | 934                                     | 19,700          | SF    | 652                                  | 339      | 313     |
| Cinema/Entertainment   |   |                 |       | 0                                    |          |         |
| Residential  |   |                 |       | 0                                    |          |         |
| Hotel  |   |                 |       | 0                                    |          |         |
| All Other Land Uses <sup>2</sup>   |   |                 |       | 0                                    |          |         |
|  |   |                 |       | 1,545                                | 787      | 758     |

| Table 2-P: Mode Split and Vehicle Occupancy Estimates |                        |           |                 |                        |           |                 |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use  | Entering Trips         |           |                 | Exiting Trips          |           |                 |
|   | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized | Veh. Occ. <sup>4</sup> | % Transit | % Non-Motorized |
| Office  |                        |           |                 |                        |           |                 |
| Retail  |                        |           |                 |                        |           |                 |
| Restaurant  |                        |           |                 |                        |           |                 |
| Cinema/Entertainment                                  |                        |           |                 |                        |           |                 |
| Residential   |                        |           |                 |                        |           |                 |
| Hotel   |                        |           |                 |                        |           |                 |
| All Other Land Uses <sup>2</sup>                      |                        |           |                 |                        |           |                 |

| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) |                  |        |            |                      |             |       |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)   | Destination (To) |        |            |                      |             |       |
|   | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office  |                  |        |            |                      |             |       |
| Retail  |                  |        |            |                      |             |       |
| Restaurant  |                  |        |            |                      |             |       |
| Cinema/Entertainment  |                  |        |            |                      |             |       |
| Residential   |                  |        |            |                      |             |       |
| Hotel   |                  |        |            |                      |             |       |

| Table 4-P: Internal Person-Trip Origin-Destination Matrix* |                  |        |            |                      |             |       |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From)  | Destination (To) |        |            |                      |             |       |
|  | Office           | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office   |                  | 0      | 0          | 0                    | 0           | 0     |
| Retail   | 0                |        | 98         | 0                    | 0           | 0     |
| Restaurant   | 0                | 128    |            | 0                    | 0           | 0     |
| Cinema/Entertainment                                       | 0                | 0      | 0          |                      | 0           | 0     |
| Residential  | 0                | 0      | 0          | 0                    |             | 0     |
| Hotel  | 0                | 0      | 0          | 0                    | 0           |       |

| Table 5-P: Computations Summary           |       |          |         |
|---|-------|----------|---------|
|   | Total | Entering | Exiting |
| All Person-Trips                          | 1,545 | 787      | 758     |
| Internal Capture Percentage               | 29%   | 29%      | 30%     |
| External Vehicle-Trips <sup>5</sup>       | 1,093 | 561      | 532     |
| External Transit-Trips <sup>6</sup>       | 0     | 0        | 0       |
| External Non-Motorized Trips <sup>6</sup> | 0     | 0        | 0       |

| Table 6-P: Internal Trip Capture Percentages by Land Use |                |               |
|--|----------------|---------------|
| Land Use   | Entering Trips | Exiting Trips |
| Office   | N/A            | N/A           |
| Retail   | 29%            | 22%           |
| Restaurant   | 29%            | 41%           |
| Cinema/Entertainment                                     | N/A            | N/A           |
| Residential  | N/A            | N/A           |
| Hotel  | N/A            | N/A           |

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.  
<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.  
<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).  
<sup>4</sup>Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.  
<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.  
<sup>6</sup>Person-Trips  
\*Indicates computation that has been rounded to the nearest whole number.  
Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

**APPENDIX E**

**TRIP GENERATION CALCULATIONS**

DRAFT





**22-1270: Black Mountain Village**

**Trip Generation**

Proposed

July 2022

**Box 10 - Estimate Vehicle Trip Subsets Pass-by/Diverted Trips (Pass-By 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, assumptions are highlighted. The percentages is applied to total external vehicle trips.

| Proposed Use   | ADT     |              |              |              | AM Peak Hour |            |            |            | PM Peak Hour |            |            |            |
|----------------|---------|--------------|--------------|--------------|--------------|------------|------------|------------|--------------|------------|------------|------------|
|                | Percent | In           | Out          | Total        | Percent      | In         | Out        | Total      | Percent      | In         | Out        | Total      |
| Pad A          | 50%     | 354          | 354          | 708          | 49%          | 36         | 36         | 72         | 50%          | 23         | 23         | 46         |
| Pad B          | 50%     | 405          | 405          | 810          | 49%          | 41         | 41         | 82         | 50%          | 27         | 27         | 54         |
| Pad C          | 50%     | 354          | 354          | 708          | 49%          | 36         | 36         | 72         | 50%          | 23         | 23         | 46         |
| Pad D          | 50%     | 354          | 354          | 708          | 49%          | 36         | 36         | 72         | 50%          | 23         | 23         | 46         |
| Pad E          | 50%     | 405          | 405          | 810          | 49%          | 41         | 41         | 82         | 50%          | 27         | 27         | 54         |
| Pad F          | 50%     | 121          | 121          | 242          | 49%          | 12         | 12         | 24         | 50%          | 8          | 8          | 16         |
| Grocer + Major | 18%     | 543          | 543          | 1,086        | 0%           | 0          | 0          | 0          | 36%          | 89         | 89         | 178        |
| Shops A        | 17%     | 43           | 43           | 86           | 0%           | 0          | 0          | 0          | 34%          | 10         | 10         | 20         |
| Shops B        | 17%     | 41           | 41           | 82           | 0%           | 0          | 0          | 0          | 34%          | 9          | 9          | 18         |
| Shops C        | 17%     | 51           | 51           | 102          | 0%           | 0          | 0          | 0          | 34%          | 11         | 11         | 22         |
| Shops D        | 17%     | 33           | 33           | 66           | 0%           | 0          | 0          | 0          | 34%          | 7          | 7          | 14         |
| <b>Totals</b>  |         | <b>2,704</b> | <b>2,704</b> | <b>5,408</b> |              | <b>202</b> | <b>202</b> | <b>404</b> |              | <b>257</b> | <b>257</b> | <b>514</b> |

**Net New Trips:** Pass-by trips and truck trips may be subtracted from the total external vehicle trips, if applicable/data available. Diverted link trips may also be separated, but are often (conservatively) grouped with primary trips.

| Proposed Use   | ADT          |              |               |            | AM Peak Hour |            |            |            | PM Peak Hour |  |  |  |
|----------------|--------------|--------------|---------------|------------|--------------|------------|------------|------------|--------------|--|--|--|
|                | In           | Out          | Total         | In         | Out          | Total      | In         | Out        | Total        |  |  |  |
| Pad A          | 362          | 362          | 724           | 40         | 36           | 76         | 25         | 22         | 47           |  |  |  |
| Pad B          | 413          | 413          | 826           | 45         | 42           | 87         | 28         | 24         | 52           |  |  |  |
| Pad C          | 362          | 362          | 724           | 40         | 36           | 76         | 25         | 22         | 47           |  |  |  |
| Pad D          | 362          | 362          | 724           | 40         | 36           | 76         | 25         | 22         | 47           |  |  |  |
| Pad E          | 413          | 413          | 826           | 45         | 42           | 87         | 28         | 24         | 52           |  |  |  |
| Pad F          | 124          | 124          | 248           | 15         | 12           | 27         | 9          | 7          | 16           |  |  |  |
| Grocer + Major | 2,473        | 2,473        | 4,946         | 123        | 84           | 207        | 159        | 159        | 318          |  |  |  |
| Shops A        | 210          | 210          | 420           | 14         | 10           | 24         | 18         | 18         | 36           |  |  |  |
| Shops B        | 202          | 202          | 404           | 13         | 10           | 23         | 18         | 18         | 36           |  |  |  |
| Shops C        | 249          | 249          | 498           | 17         | 11           | 28         | 23         | 21         | 44           |  |  |  |
| Shops D        | 160          | 160          | 320           | 10         | 8            | 18         | 15         | 13         | 28           |  |  |  |
| <b>Totals</b>  | <b>5,330</b> | <b>5,330</b> | <b>10,660</b> | <b>402</b> | <b>327</b>   | <b>729</b> | <b>373</b> | <b>350</b> | <b>723</b>   |  |  |  |

**APPENDIX F**

**TRIP DISTRIBUTION CALCULATIONS**

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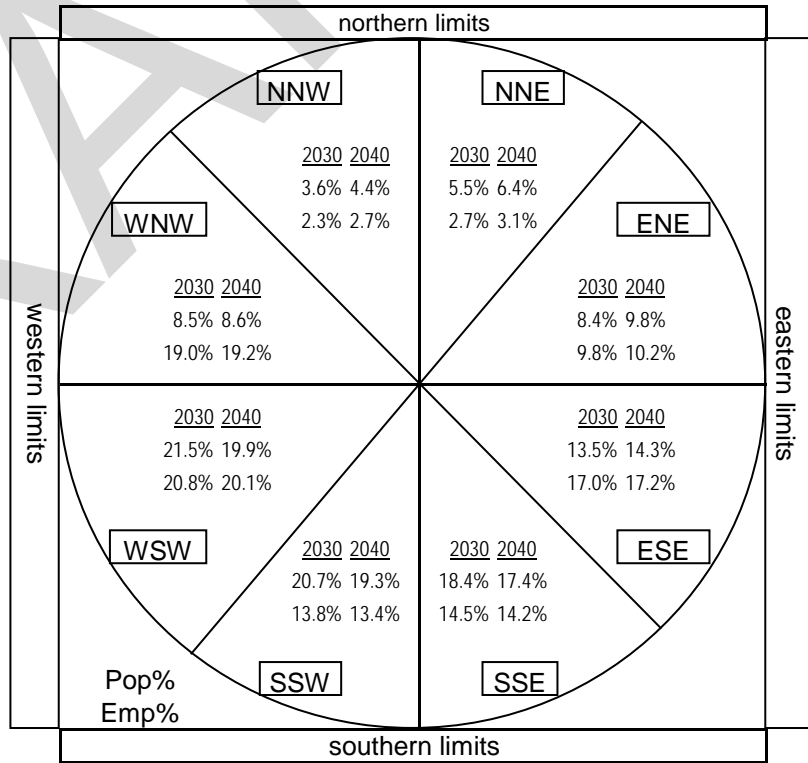


| Quadrant        | 2030       |         |            |         | 2040       |              |            |              |
|-----------------|------------|---------|------------|---------|------------|--------------|------------|--------------|
|                 | Population | Percent | Employment | Percent | Population | Percent      | Employment | Percent      |
| North Northwest | 16,119     | 3.6%    | 5,365      | 2.3%    | 21,336     | 4.4%         | 6,778      | 2.7%         |
| North Northeast | 24,562     | 5.5%    | 6,271      | 2.7%    | 31,307     | 6.4%         | 7,683      | 3.1%         |
| North           | 40,681     | 9.1%    | 11,636     | 5.0%    | 52,643     | <b>10.8%</b> | 14,461     | <b>5.8%</b>  |
| East Northeast  | 37,675     | 8.4%    | 22,454     | 9.8%    | 47,888     | 9.8%         | 25,396     | 10.2%        |
| East Southeast  | 60,550     | 13.5%   | 39,015     | 17.0%   | 70,221     | 14.3%        | 43,020     | 17.2%        |
| East            | 98,226     | 21.9%   | 61,469     | 26.8%   | 118,109    | <b>24.1%</b> | 68,416     | <b>27.4%</b> |
| South Southeast | 82,650     | 18.4%   | 33,280     | 14.5%   | 85,303     | 17.4%        | 35,483     | 14.2%        |
| South Southwest | 93,234     | 20.7%   | 31,588     | 13.8%   | 94,506     | 19.3%        | 33,501     | 13.4%        |
| South           | 175,884    | 39.1%   | 64,868     | 28.3%   | 179,810    | <b>36.7%</b> | 68,983     | <b>27.6%</b> |
| West Southwest  | 96,551     | 21.5%   | 47,608     | 20.8%   | 97,831     | 19.9%        | 50,089     | 20.1%        |
| West Northwest  | 38,286     | 8.5%    | 43,648     | 19.0%   | 42,059     | 8.6%         | 47,836     | 19.2%        |
| West            | 134,837    | 30.0%   | 91,256     | 39.8%   | 139,890    | <b>28.5%</b> | 97,925     | <b>39.3%</b> |
| Totals          | 449,628    | 100.1%  | 229,230    | 99.9%   | 490,452    | 100.1%       | 249,786    | 100.1%       |

Radii

Population radius: 7 miles  
 Employment radius: 7 miles

Select Analysis Year (2030, 2040, 2050)  
 2030



**APPENDIX G**

**BACKGROUND GROWTH CALCULATIONS**

DRAFT

*Location of counts:* Deer Valley Dr. West of  
Black Mountain Pkwy.

|            | Year | Volume |
|------------|------|--------|
| Start      | 2015 | 11,638 |
| End        |      |        |
| AAGR       |      | 0.2%   |
| Exp Factor |      | 0.009  |

Growth Rate Used 2.0%  
Per-Year Multiplier 1.020

| Year        | Expansion Factor(s) |                |
|-------------|---------------------|----------------|
| 2022        | 1.000               |                |
| 2023        | 1.020               |                |
| <b>2024</b> | <b>1.040</b>        | <b>Opening</b> |
| 2025        | 1.061               |                |
| 2026        | 1.082               |                |
| 2027        | 1.104               |                |
| 2028        | 1.126               |                |
| <b>2029</b> | <b>1.149</b>        | <b>Horizon</b> |
| 2030        | 1.172               |                |
| 2031        | 1.195               |                |
| 2032        | 1.219               |                |
| 2033        | 1.243               |                |
| 2034        | 1.268               |                |
| 2035        | 1.294               |                |
| 2036        | 1.319               |                |
| 2037        | 1.346               |                |
| 2038        | 1.373               |                |
| 2039        | 1.400               |                |
| 2040        | 1.428               |                |
| 2041        | 1.457               |                |
| 2042        | 1.486               |                |
| 2043        | 1.516               |                |
| 2044        | 1.546               |                |
| 2045        | 1.577               |                |
| 2046        | 1.608               |                |
| 2047        | 1.641               |                |
| 2048        | 1.673               |                |
| 2049        | 1.707               |                |
| 2050        | 1.741               |                |
| 2051        | 1.776               |                |
| 2052        | 1.811               |                |
| 2053        | 1.848               |                |
| 2054        | 1.885               |                |

**APPENDIX H**

**2024 NO BUILD PEAK HOUR ANALYSIS**

22-1270: Black Mountain Village  
2024 Background AM

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 23    | 1193  | 11    | 470   | 11    | 3     | 107   | 2     | 20    |
| Future Volume (vph)  | 23    | 1193  | 11    | 470   | 11    | 3     | 107   | 2     | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

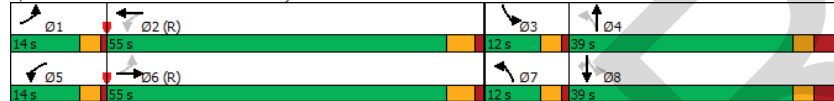
Actuated Cycle Length: 120

Offset: 25 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Background PM

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 30    | 498   | 16    | 578   | 6     | 3     | 77    | 3     | 40    |
| Future Volume (vph)  | 30    | 498   | 16    | 578   | 6     | 3     | 77    | 3     | 40    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

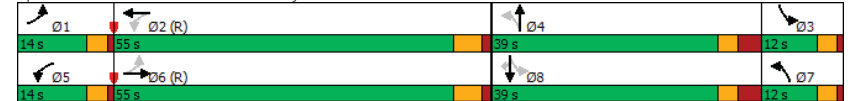
Actuated Cycle Length: 120

Offset: 56 (47%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Background School PM

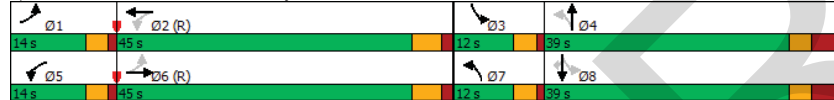
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 16    | 522   | 5     | 480   | 7     | 4     | 67    | 1     | 18    |
| Future Volume (vph)  | 16    | 522   | 5     | 480   | 7     | 4     | 67    | 1     | 18    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     |       |       |       |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 45.0  | 14.0  | 45.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 12.7% | 40.9% | 12.7% | 40.9% | 10.9% | 35.5% | 10.9% | 35.5% | 35.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 59 (54%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Spplits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Background AM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔↔    |      | ↔    | ↔↔   |       | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 23   | 1193  | 6    | 11   | 470  | 35    | 11   | 3    | 20   | 107  | 2    | 20   |
| Future Volume (veh/h)        | 23   | 1193  | 6    | 11   | 470  | 35    | 11   | 3    | 20   | 107  | 2    | 20   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 26   | 1326  | 6    | 12   | 522  | 30    | 12   | 3    | 16   | 119  | 2    | 11   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 503  | 2545  | 12   | 212  | 2346 | 134   | 469  | 70   | 372  | 537  | 598  | 507  |
| Arrive On Green              | 0.02 | 0.49  | 0.49 | 0.03 | 0.95 | 0.95  | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 |
| Sat Flow, veh/h              | 1781 | 5246  | 24   | 1781 | 4942 | 282   | 1781 | 256  | 1368 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 26   | 860   | 472  | 12   | 358  | 194   | 12   | 0    | 19   | 119  | 2    | 11   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702  | 1866 | 1781 | 1702 | 1820  | 1781 | 0    | 1624 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 0.9  | 20.9  | 20.9 | 0.4  | 0.8  | 0.8   | 0.6  | 0.0  | 1.0  | 5.6  | 0.1  | 0.6  |
| Cycle Q Clear(g_c), s        | 0.9  | 20.9  | 20.9 | 0.4  | 0.8  | 0.8   | 0.6  | 0.0  | 1.0  | 5.6  | 0.1  | 0.6  |
| Prop In Lane                 | 1.00 |       | 0.01 | 1.00 |      | 0.15  | 1.00 |      | 0.84 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 503  | 1651  | 905  | 212  | 1616 | 864   | 469  | 0    | 441  | 537  | 598  | 507  |
| V/C Ratio(X)                 | 0.05 | 0.52  | 0.52 | 0.06 | 0.22 | 0.22  | 0.03 | 0.00 | 0.04 | 0.22 | 0.00 | 0.02 |
| Avail Cap(c_a), veh/h        | 609  | 1651  | 905  | 336  | 1616 | 864   | 563  | 0    | 441  | 545  | 598  | 507  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 2.00 | 2.00 | 2.00  | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.3 | 21.3  | 21.3 | 17.2 | 1.6  | 1.6   | 30.8 | 0.0  | 32.2 | 27.2 | 27.8 | 27.9 |
| Incr Delay (d2), s/veh       | 0.0  | 1.2   | 2.1  | 0.0  | 0.3  | 0.6   | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.7  | 13.3  | 14.6 | 0.3  | 0.6  | 0.8   | 0.5  | 0.0  | 0.8  | 4.3  | 0.1  | 0.4  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.3 | 22.5  | 23.4 | 17.3 | 1.9  | 2.2   | 30.9 | 0.0  | 32.4 | 27.3 | 27.8 | 28.0 |
| LnGrp LOS                    | B    | C     | C    | B    | A    | A     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 1358  |      |      | 564  |       |      | 31   |      | 132  |      |      |
| Approach Delay, s/veh        |      | 22.7  |      |      | 2.4  |       |      | 31.8 |      | 27.3 |      |      |
| Approach LOS                 |      | C     |      |      | A    |       |      | C    |      | C    |      |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 6.9  | 62.7  | 11.4 | 39.0 | 5.6  | 63.9  | 5.6  | 44.8 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.0 | * 49  | 8.0  | 32.6 | 10.0 | * 49  | 8.0  | 32.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 2.9  | 2.8   | 7.6  | 3.0  | 2.4  | 22.9  | 2.6  | 2.6  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.5   | 0.0  | 0.0  | 0.0  | 7.0   | 0.0  | 0.0  |      |      |      |      |

Intersection Summary

HCM 6th Ctrl Delay: 17.6  
HCM 6th LOS: B

Notes

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





22-1270: Black Mountain Village  
2024 Background AM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 1034 | 286  | 67   | 505  | 12   | 122  |
| Future Vol, veh/h        | 1034 | 286  | 67   | 505  | 12   | 122  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1149 | 318  | 74   | 561  | 13   | 136  |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1467   |
| Stage 1              | -      | -      | 1308   |
| Stage 2              | -      | -      | 372    |
| Critical Hdwy        | -      | 5.34   | 5.74   |
| Critical Hdwy Stg 1  | -      | -      | 6.64   |
| Critical Hdwy Stg 2  | -      | -      | 6.04   |
| Follow-up Hdwy       | -      | 3.12   | 3.82   |
| Pot Cap-1 Maneuver   | -      | 589    | 566    |
| Stage 1              | -      | -      | 587    |
| Stage 2              | -      | -      | 821    |
| Platoon blocked, %   | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | 589    | 494    |
| Mov Cap-2 Maneuver   | -      | -      | 494    |
| Stage 1              | -      | -      | 587    |
| Stage 2              | -      | -      | 718    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.4 | 11.9 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 494   | 668   | -   | -   | 589   | -   |
| HCM Lane V/C Ratio    | 0.027 | 0.203 | -   | -   | 0.126 | -   |
| HCM Control Delay (s) | 12.5  | 11.8  | -   | -   | 12    | -   |
| HCM Lane LOS          | B     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.1   | 0.8   | -   | -   | 0.4   | -   |

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

22-1270: Black Mountain Village  
2024 Background PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 572  | 10   | 5    | 675  | 4    | 10   |
| Future Vol, veh/h        | 572  | 10   | 5    | 675  | 4    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 602  | 11   | 5    | 711  | 4    | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 613    |
| Stage 1              | -      | -      | 608    |
| Stage 2              | -      | -      | 294    |
| Critical Hdwy        | -      | 5.34   | 5.74   |
| Critical Hdwy Stg 1  | -      | -      | 6.64   |
| Critical Hdwy Stg 2  | -      | -      | 6.04   |
| Follow-up Hdwy       | -      | 3.12   | 3.82   |
| Pot Cap-1 Maneuver   | -      | 959    | 656    |
| Stage 1              | -      | -      | 779    |
| Stage 2              | -      | -      | 776    |
| Platoon blocked, %   | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | 959    | 653    |
| Mov Cap-2 Maneuver   | -      | -      | 653    |
| Stage 1              | -      | -      | 779    |
| Stage 2              | -      | -      | 772    |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.1 | 9.9 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 653   | 800   | -   | -   | 959   | -   |
| HCM Lane V/C Ratio    | 0.006 | 0.013 | -   | -   | 0.005 | -   |
| HCM Control Delay (s) | 10.5  | 9.6   | -   | -   | 8.8   | -   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   |

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

22-1270: Black Mountain Village  
2024 Background School PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 518  | 79   | 9    | 533  | 17   | 135  |
| Future Vol, veh/h        | 518  | 79   | 9    | 533  | 17   | 135  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 863  | 132  | 15   | 888  | 28   | 225  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |      |
|----------------------|--------|--------|--------|---|------|------|
| Conflicting Flow All | 0      | 0      | 995    | 0 | 1314 | 498  |
| Stage 1              | -      | -      | -      | - | 929  | -    |
| Stage 2              | -      | -      | -      | - | 385  | -    |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 | 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 | -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 | -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 | 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 569    | - | 305  | *814 |
| Stage 1              | -      | -      | -      | - | 443  | -    |
| Stage 2              | -      | -      | -      | - | 602  | -    |
| Platoon blocked, %   | -      | -      | 1      | - | 1    | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 569    | - | 297  | *814 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 297  | -    |
| Stage 1              | -      | -      | -      | - | 443  | -    |
| Stage 2              | -      | -      | -      | - | 586  | -    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 11.9 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 297   | 814   | -   | -   | 569   | -   |
| HCM Lane V/C Ratio    | 0.095 | 0.276 | -   | -   | 0.026 | -   |
| HCM Control Delay (s) | 18.4  | 11.1  | -   | -   | 11.5  | -   |
| HCM Lane LOS          | C     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.3   | 1.1   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
2024 Background AM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 10.9 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement                   | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations        |      | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |
| Traffic Vol, veh/h         | 2    | 11   | 0    | 32   | 0    | 122  | 0    | 10   | 19   | 320  | 32   | 0    |
| Future Vol, veh/h          | 2    | 11   | 0    | 32   | 0    | 122  | 0    | 10   | 19   | 320  | 32   | 0    |
| 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 |
| Heavy Vehicles, %          | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                  | 2    | 12   | 0    | 36   | 0    | 136  | 0    | 11   | 21   | 356  | 36   | 0    |
| Number of Lanes            | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |
| Approach                   | EB   |      |      | WB   |      |      | NB   |      |      | SB   |      |      |
| Opposing Approach          | WB   |      |      | EB   |      |      | SB   |      |      | NB   |      |      |
| Opposing Lanes             | 1    |      |      | 1    |      |      | 1    |      |      | 1    |      |      |
| Conflicting Approach Left  | SB   |      |      | NB   |      |      | EB   |      |      | WB   |      |      |
| Conflicting Lanes Left     | 1    |      |      | 1    |      |      | 1    |      |      | 1    |      |      |
| Conflicting Approach Right | NB   |      |      | SB   |      |      | WB   |      |      | EB   |      |      |
| Conflicting Lanes Right    | 1    |      |      | 1    |      |      | 1    |      |      | 1    |      |      |
| HCM Control Delay          | 8.4  |      |      | 8.8  |      |      | 7.7  |      |      | 12.1 |      |      |
| HCM LOS                    | A    |      |      | A    |      |      | A    |      |      | B    |      |      |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 15%   | 21%   | 91%   |
| Vol Thru, %            | 34%   | 85%   | 0%    | 9%    |
| Vol Right, %           | 66%   | 0%    | 79%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 29    | 13    | 154   | 352   |
| LT Vol                 | 0     | 2     | 32    | 320   |
| Through Vol            | 10    | 11    | 0     | 32    |
| RT Vol                 | 19    | 0     | 122   | 0     |
| Lane Flow Rate         | 32    | 14    | 171   | 391   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.04  | 0.021 | 0.215 | 0.498 |
| Departure Headway (Hd) | 4.421 | 5.194 | 4.528 | 4.582 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 807   | 687   | 792   | 786   |
| Service Time           | 2.465 | 3.24  | 2.56  | 2.614 |
| HCM Lane V/C Ratio     | 0.04  | 0.02  | 0.216 | 0.497 |
| HCM Control Delay      | 7.7   | 8.4   | 8.8   | 12.1  |
| HCM Lane LOS           | A     | A     | A     | B     |
| HCM 95th-tile Q        | 0.1   | 0.1   | 0.8   | 2.8   |

22-1270: Black Mountain Village  
2024 Background PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |     |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|-----|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 6.9 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | A   |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 4    | 0    | 9    | 18   | 11   | 4    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 4    | 0    | 9    | 18   | 11   | 4    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 6    | 0    | 13   | 26   | 16   | 6    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.1 | 6.8 | 6.7 | 7.3 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 33%   | 73%   |
| Vol Thru, %            | 33%   | 75%   | 0%    | 27%   |
| Vol Right, %           | 67%   | 0%    | 67%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 27    | 4     | 6     | 15    |
| LT Vol                 | 0     | 1     | 2     | 11    |
| Through Vol            | 9     | 3     | 0     | 4     |
| RT Vol                 | 18    | 0     | 4     | 0     |
| Lane Flow Rate         | 40    | 6     | 9     | 22    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.039 | 0.007 | 0.009 | 0.025 |
| Departure Headway (Hd) | 3.576 | 4.098 | 3.712 | 4.136 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 1005  | 875   | 965   | 869   |
| Service Time           | 1.586 | 2.117 | 1.731 | 2.145 |
| HCM Lane V/C Ratio     | 0.04  | 0.007 | 0.009 | 0.025 |
| HCM Control Delay      | 6.7   | 7.1   | 6.8   | 7.3   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0     | 0.1   |

22-1270: Black Mountain Village  
2024 Background School PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 11.3 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 41   | 34   | 1    | 15   | 0    | 81   | 0    | 30   | 46   | 84   | 4    | 0    |
| Future Vol, veh/h   | 41   | 34   | 1    | 15   | 0    | 81   | 0    | 30   | 46   | 84   | 4    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 111  | 92   | 3    | 41   | 0    | 219  | 0    | 81   | 124  | 227  | 11   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB | NB   | SB   |
|----------------------------|------|----|------|------|
| Opposing Approach          | WB   | EB | SB   | NB   |
| Opposing Lanes             | 1    | 1  | 1    | 1    |
| Conflicting Approach Left  | SB   | NB | EB   | WB   |
| Conflicting Lanes Left     | 1    | 1  | 1    | 1    |
| Conflicting Approach Right | NB   | SB | WB   | EB   |
| Conflicting Lanes Right    | 1    | 1  | 1    | 1    |
| HCM Control Delay          | 11.5 | 11 | 10.6 | 12.2 |
| HCM LOS                    | B    | B  | B    | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 54%   | 16%   | 95%   |
| Vol Thru, %            | 39%   | 45%   | 0%    | 5%    |
| Vol Right, %           | 61%   | 1%    | 84%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 76    | 76    | 96    | 88    |
| LT Vol                 | 0     | 41    | 15    | 84    |
| Through Vol            | 30    | 34    | 0     | 4     |
| RT Vol                 | 46    | 1     | 81    | 0     |
| Lane Flow Rate         | 205   | 205   | 259   | 238   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.3   | 0.324 | 0.364 | 0.378 |
| Departure Headway (Hd) | 5.25  | 5.681 | 5.051 | 5.718 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 682   | 631   | 708   | 628   |
| Service Time           | 3.303 | 3.737 | 3.104 | 3.769 |
| HCM Lane V/C Ratio     | 0.301 | 0.325 | 0.366 | 0.379 |
| HCM Control Delay      | 10.6  | 11.5  | 11    | 12.2  |
| HCM Lane LOS           | B     | B     | B     | B     |
| HCM 95th-tile Q        | 1.3   | 1.4   | 1.7   | 1.8   |

22-1270: Black Mountain Village  
2024 Background AM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔    |      | ↔    |      |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 0    | 344  | 6    | 10   | 155  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 344  | 6    | 10   | 155  | 0    | 0    | 0    | 0    | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 382  | 7    | 11   | 172  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 172    | 0      | 389    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1404   | -      | 1168   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1404   | -      | 1168   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL  | WBT | WBR | SBL | SBT | SBR |
|-----------------------|------|-----|-----|------|-----|-----|-----|-----|-----|
| Capacity (veh/h)      | 1404 | -   | -   | 1168 | -   | -   | -   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.01 | -   | -   | -   | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 8.1  | 0   | -   | 0   | -   | 0   |
| HCM Lane LOS          | A    | -   | -   | A    | A   | -   | A   | -   | A   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0    | -   | -   | -   | -   | -   |

22-1270: Black Mountain Village  
2024 Background PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔    |      | ↔    |      |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 0    | 23   | 9    | 9    | 7    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 23   | 9    | 9    | 7    | 0    | 0    | 0    | 0    | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 69   | 69   | 69   | 69   | 90   | 69   | 90   | 69   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 33   | 13   | 13   | 10   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 10     | 0      | 46     |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1609   | -      | 1561   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1609   | -      | 1561   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 4.1 | 0  |
| HCM LOS              | A  |     |    |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-----|-----|-----|-----|-----|
| Capacity (veh/h)      | 1609 | -   | -   | 1561  | -   | -   | -   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.008 | -   | -   | -   | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 7.3   | 0   | -   | 0   | -   | 0   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A   | -   | A   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | -   | -   | -   |

22-1270: Black Mountain Village  
2024 Background School PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 0    | 157  | 7    | 16   | 96   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 157  | 7    | 16   | 96   | 0    | 0    | 0    | 0    | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 38   | 38   | 38   | 38   | 90   | 38   | 90   | 38   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 413  | 18   | 42   | 253  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 253    | 0      | 431    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1311   | -      | 1127   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1311   | -      | 1127   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1311 | -   | -   | 1127  | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.037 | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | 8.3   | 0   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0.1   | -   | -   | -     |

22-1270: Black Mountain Village  
2024 Background AM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 0    | 342  | 0    | 0    | 163  | 0    | 2    | 0    | 60   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 342  | 0    | 0    | 163  | 0    | 2    | 0    | 60   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 380  | 0    | 0    | 181  | 0    | 2    | 0    | 67   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 181    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | *1425  | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *1425  | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB  | SB |
|----------------------|----|----|-----|----|
| HCM Control Delay, s | 0  | 0  | 9.8 | 0  |
| HCM LOS              |    |    | A   | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 812   | *1425 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.085 | -     | -   | -   | -   | -     |
| HCM Control Delay (s) | 9.8   | 0     | -   | -   | -   | 0     |
| HCM Lane LOS          | A     | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | -   | -     |

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

22-1270: Black Mountain Village  
2024 Background PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      | ↕↕   |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 0    | 22   | 0    | 0    | 14   | 0    | 3    | 0    | 20   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 22   | 0    | 0    | 14   | 0    | 3    | 0    | 20   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 78   | 78   | 78   | 78   | 90   | 78   | 90   | 78   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 28   | 0    | 0    | 18   | 0    | 4    | 0    | 26   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 18     | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1612   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1612   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1050  | 1612 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.028 | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 8.5   | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A     | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0    | -   | -   | -   | -     |

22-1270: Black Mountain Village  
2024 Background School PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      | ↕↕   |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 0    | 156  | 0    | 0    | 108  | 0    | 3    | 0    | 63   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 156  | 0    | 0    | 108  | 0    | 3    | 0    | 63   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 39   | 39   | 39   | 39   | 90   | 39   | 90   | 39   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 400  | 0    | 0    | 277  | 0    | 8    | 0    | 162  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 277    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1449   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1449   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 0  | 10.9 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 780   | 1449 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.217 | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 10.9  | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | B     | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.8   | 0    | -   | -   | -   | -     |

22-1270: Black Mountain Village  
2024 Background AM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↓   |      |      | ↑    | ↓    |      |
| Traffic Vol, veh/h       | 403  | 0    | 0    | 165  | 0    | 22   |
| Future Vol, veh/h        | 403  | 0    | 0    | 165  | 0    | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 448  | 0    | 0    | 183  | 0    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 448    | 0 | 631 224     |
| Stage 1              | -      | -      | -      | - | 448 -       |
| Stage 2              | -      | -      | -      | - | 183 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1111   | - | *593 780    |
| Stage 1              | -      | -      | -      | - | *612 -      |
| Stage 2              | -      | -      | -      | - | *898 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1 -         |
| Mov Cap-1 Maneuver   | -      | -      | 1111   | - | *593 780    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *593 -      |
| Stage 1              | -      | -      | -      | - | *612 -      |
| Stage 2              | -      | -      | -      | - | *898 -      |

| Approach             | EB | WB | NB  |
|----------------------|----|----|-----|
| HCM Control Delay, s | 0  | 0  | 9.8 |
| HCM LOS              |    |    | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 780   | -   | -   | 1111 | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | -    | -   |
| HCM Control Delay (s) | 9.8   | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0    | -   |

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

22-1270: Black Mountain Village  
2024 Background PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↓   |      |      | ↑    | ↓    |      |
| Traffic Vol, veh/h       | 41   | 1    | 1    | 16   | 0    | 19   |
| Future Vol, veh/h        | 41   | 1    | 1    | 16   | 0    | 19   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 51   | 1    | 1    | 20   | 0    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 52     | 0 | 74 26       |
| Stage 1              | -      | -      | -      | - | 52 -        |
| Stage 2              | -      | -      | -      | - | 22 -        |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1553   | - | 941 1044    |
| Stage 1              | -      | -      | -      | - | 964 -       |
| Stage 2              | -      | -      | -      | - | 1011 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1 -         |
| Mov Cap-1 Maneuver   | -      | -      | 1553   | - | 940 1044    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 940 -       |
| Stage 1              | -      | -      | -      | - | 964 -       |
| Stage 2              | -      | -      | -      | - | 1010 -      |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.4 | 8.5 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 1044  | -   | -   | 1553  | -   |
| HCM Lane V/C Ratio    | 0.023 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.5   | -   | -   | 7.3   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |



22-1270: Black Mountain Village  
2024 Background School PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 220  | 0    | 0    | 109  | 3    | 29   |
| Future Vol, veh/h        | 220  | 0    | 0    | 109  | 3    | 29   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 564  | 0    | 0    | 279  | 8    | 74   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 564    | 0      |
| Stage 1              | -      | -      | -      | 564    |
| Stage 2              | -      | -      | -      | 279    |
| Critical Hdwy        | -      | -      | 4.13   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83   |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43   |
| Follow-up Hdwy       | -      | -      | 2.219  | -      |
| Pot Cap-1 Maneuver   | -      | -      | 1006   | -      |
| Stage 1              | -      | -      | -      | 384    |
| Stage 2              | -      | -      | -      | 534    |
| Platoon blocked, %   | -      | -      | -      | 906    |
| Mov Cap-1 Maneuver   | -      | -      | 1006   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | 384    |
| Stage 1              | -      | -      | -      | 534    |
| Stage 2              | -      | -      | -      | 906    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.2 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 662   | -   | -   | 1006 | -   |
| HCM Lane V/C Ratio    | 0.124 | -   | -   | -    | -   |
| HCM Control Delay (s) | 11.2  | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0    | -   |

22-1270: Black Mountain Village  
2024 Background AM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 28   | 10   | 44   | 72   | 4    | 5    | 21   | 269  | 67   | 4    | 520  | 21   |
| Future Vol, veh/h        | 28   | 10   | 44   | 72   | 4    | 5    | 21   | 269  | 67   | 4    | 520  | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 31   | 11   | 49   | 80   | 4    | 6    | 23   | 299  | 74   | 4    | 578  | 23   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 796    | 1017   | 301    | 590    |
| Stage 1              | 598    | 598    | -      | 345    |
| Stage 2              | 198    | 419    | -      | 245    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 305    | 236    | 593    | 415    |
| Stage 1              | 387    | 489    | -      | 622    |
| Stage 2              | 756    | 588    | -      | 701    |
| Platoon blocked, %   | -      | -      | -      | 484    |
| Mov Cap-1 Maneuver   | 289    | 226    | 593    | 355    |
| Mov Cap-2 Maneuver   | 289    | 226    | -      | 355    |
| Stage 1              | 372    | 488    | -      | 598    |
| Stage 2              | 717    | 566    | -      | 626    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 15.8 | 17.6 | 0.7 | 0.1 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 607   | -   | -   | 289   | 456   | 355   | 409   | 1182  | -   | -   |
| HCM Lane V/C Ratio    | 0.038 | -   | -   | 0.108 | 0.132 | 0.225 | 0.024 | 0.004 | -   | -   |
| HCM Control Delay (s) | 11.2  | -   | -   | 19    | 14.1  | 18.1  | 14    | 8.1   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | B     | C     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.4   | 0.5   | 0.9   | 0.1   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Background PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 47   | 19   | 21   | 67   | 20   | 9    | 26   | 364  | 52   | 9    | 185  | 35   |
| Future Vol, veh/h        | 47   | 19   | 21   | 67   | 20   | 9    | 26   | 364  | 52   | 9    | 185  | 35   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 63   | 25   | 28   | 89   | 27   | 12   | 35   | 485  | 69   | 12   | 247  | 47   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 621    | 919    | 147    | 690    |
| Stage 1              | 295    | 295    | -      | 555    |
| Stage 2              | 326    | 624    | -      | 135    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 396    | 270    | 742    | 358    |
| Stage 1              | 622    | 668    | -      | 469    |
| Stage 2              | 638    | 476    | -      | 815    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 346    | 256    | 742    | 306    |
| Mov Cap-2 Maneuver   | 346    | 256    | -      | 306    |
| Stage 1              | 596    | 660    | -      | 450    |
| Stage 2              | 569    | 456    | -      | 745    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 16.8 | 20.1 | 0.6 | 0.3 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 845   | -   | -   | 346   | 390   | 306   | 340   | 1012  | -   | -   |
| HCM Lane V/C Ratio    | 0.041 | -   | -   | 0.181 | 0.137 | 0.292 | 0.114 | 0.012 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 17.7  | 15.7  | 21.5  | 16.9  | 8.6   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | C     | C     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.7   | 0.5   | 1.2   | 0.4   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Background School PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 11   | 6    | 24   | 49   | 6    | 9    | 21   | 210  | 47   | 2    | 213  | 22   |
| Future Vol, veh/h        | 11   | 6    | 24   | 49   | 6    | 9    | 21   | 210  | 47   | 2    | 213  | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 12   | 7    | 27   | 55   | 7    | 10   | 24   | 236  | 53   | 2    | 239  | 25   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 426    | 593    | 132    | 387    |
| Stage 1              | 256    | 256    | -      | 284    |
| Stage 2              | 170    | 337    | -      | 103    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *810   | *595   | *759   | *861   |
| Stage 1              | *661   | *694   | -      | *902   |
| Stage 2              | *902   | *824   | -      | *852   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *778   | *578   | *759   | *805   |
| Mov Cap-2 Maneuver   | *778   | *578   | -      | *805   |
| Stage 1              | *643   | *693   | -      | *878   |
| Stage 2              | *861   | *802   | -      | *813   |

| Approach             | EB   | WB  | NB  | SB  |
|----------------------|------|-----|-----|-----|
| HCM Control Delay, s | 10.1 | 9.8 | 0.7 | 0.1 |
| HCM LOS              | B    | A   |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 873   | -   | -   | 778   | 714   | 805   | 797   | *1492 | -   | -   |
| HCM Lane V/C Ratio    | 0.027 | -   | -   | 0.016 | 0.047 | 0.068 | 0.021 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.2   | -   | -   | 9.7   | 10.3  | 9.8   | 9.6   | 7.4   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | A     | B     | A     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | 0.1   | 0.2   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background AM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 25   | 3    | 130  | 7    | 1    | 0    | 91   | 332  | 11   | 0    | 629  | 6    |
| Future Vol, veh/h        | 25   | 3    | 130  | 7    | 1    | 0    | 91   | 332  | 11   | 0    | 629  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 28   | 3    | 144  | 8    | 1    | 0    | 101  | 369  | 12   | 0    | 699  | 7    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1053   | 1286   | 353    | 858    |
| Stage 1              | 703    | 703    | -      | 577    |
| Stage 2              | 350    | 583    | -      | 281    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 238    | 163    | 549    | 309    |
| Stage 1              | 319    | 438    | -      | 389    |
| Stage 2              | 586    | 497    | -      | 644    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 203    | 133    | 549    | 191    |
| Mov Cap-2 Maneuver   | 203    | 133    | -      | 191    |
| Stage 1              | 259    | 438    | -      | 316    |
| Stage 2              | 475    | 404    | -      | 471    |

| Approach             | EB | WB   | NB  | SB |
|----------------------|----|------|-----|----|
| HCM Control Delay, s | 20 | 25.9 | 2.8 | 0  |
| HCM LOS              | C  | D    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 541   | -   | -   | 413   | 181   | 770 | -   | -   |
| HCM Lane V/C Ratio    | 0.187 | -   | -   | 0.425 | 0.049 | -   | -   | -   |
| HCM Control Delay (s) | 13.2  | -   | -   | 20    | 25.9  | 0   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | D     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 2.1   | 0.2   | 0   | -   | -   |

22-1270: Black Mountain Village  
2024 Background PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 12   | 1    | 124  | 8    | 1    | 3    | 99   | 427  | 9    | 3    | 260  | 9    |
| Future Vol, veh/h        | 12   | 1    | 124  | 8    | 1    | 3    | 99   | 427  | 9    | 3    | 260  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 1    | 170  | 11   | 1    | 4    | 136  | 585  | 12   | 4    | 356  | 12   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 877    | 1239   | 184    | 1014   |
| Stage 1              | 370    | 370    | -      | 863    |
| Stage 2              | 507    | 869    | -      | 151    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 302    | 174    | 704    | 251    |
| Stage 1              | 536    | 619    | -      | 248    |
| Stage 2              | 472    | 367    | -      | 769    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 257    | 143    | 704    | 163    |
| Mov Cap-2 Maneuver   | 257    | 143    | -      | 163    |
| Stage 1              | 443    | 615    | -      | 205    |
| Stage 2              | 385    | 303    | -      | 578    |

| Approach             | EB   | WB | NB | SB  |
|----------------------|------|----|----|-----|
| HCM Control Delay, s | 13.8 | 25 | 2  | 0.1 |
| HCM LOS              | B    | D  |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 781   | -   | -   | 596   | 196   | 610   | -   | -   |
| HCM Lane V/C Ratio    | 0.174 | -   | -   | 0.315 | 0.084 | 0.007 | -   | -   |
| HCM Control Delay (s) | 10.6  | -   | -   | 13.8  | 25    | 10.9  | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | D     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.6   | -   | -   | 1.3   | 0.3   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Background School PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      | ↔    |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 6    | 0    | 74   | 11   | 0    | 7    | 88   | 264  | 7    | 3    | 282  | 1    |
| Future Vol, veh/h        | 6    | 0    | 74   | 11   | 0    | 7    | 88   | 264  | 7    | 3    | 282  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 0    | 84   | 13   | 0    | 8    | 100  | 300  | 8    | 3    | 320  | 1    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 647    | 835    | 161    | 638    |
| Stage 1              | 327    | 327    | -      | 504    |
| Stage 2              | 320    | 508    | -      | 134    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 519    | 380    | 728    | 525    |
| Stage 1              | 573    | 646    | -      | 590    |
| Stage 2              | 803    | 644    | -      | 787    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 465    | 332    | 728    | 420    |
| Mov Cap-2 Maneuver   | 465    | 332    | -      | 420    |
| Stage 1              | 503    | 644    | -      | 518    |
| Stage 2              | 699    | 565    | -      | 694    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.9 | 12.1 | 2.4 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 821   | -   | -   | 698   | 525   | 1020  | -   | -   |
| HCM Lane V/C Ratio    | 0.122 | -   | -   | 0.13  | 0.039 | 0.003 | -   | -   |
| HCM Control Delay (s) | 10    | -   | -   | 10.9  | 12.1  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.4   | 0.1   | 0     | -   | -   |

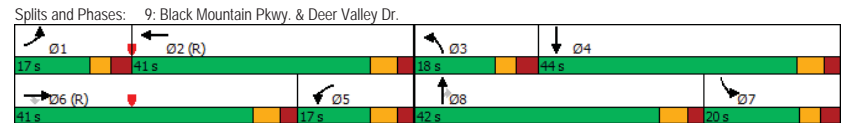
Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

22-1270: Black Mountain Village  
2024 Background AM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     |       | ↔     |       |       | ↔     |       |       | ↔     |       |
| Traffic Volume (vph) | 55    | 671   | 430   | 139   | 214   | 291   | 333   | 233   | 89    | 612   |
| Future Volume (vph)  | 55    | 671   | 430   | 139   | 214   | 291   | 333   | 233   | 89    | 612   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 1     | 6     |       | 5     | 2     | 3     | 8     |       | 7     | 4     |
| Permitted Phases     |       |       | 6     |       |       |       |       | 8     |       |       |
| Detector Phase       | 1     | 6     | 6     | 5     | 2     | 3     | 8     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 15.0  | 4.7   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   |
| Minimum Split (s)    | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  | 11.1  | 40.4  | 40.4  | 11.1  | 41.5  |
| Total Split (%)      | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  | 18.0  | 42.0  | 42.0  | 20.0  | 44.0  |
| Total Split (s)      | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% | 15.0% | 35.0% | 35.0% | 16.7% | 36.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.1   | 2.4   | 2.4   | 2.4   | 2.4   | 3.1   | 2.4   | 2.4   | 3.1   | 2.5   |
| 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)  | 6.1   | 6.4   | 6.4   | 6.4   | 6.4   | 6.1   | 6.4   | 6.4   | 6.1   | 6.5   |
| Lead/Lag             | Lead  | Lead  | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | Max   | C-Max | None  | Max   | Max   | None  | None  |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green, Master Intersection  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2024 Background PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔↔    |
| Traffic Volume (vph) | 25    | 357   | 201   | 144   | 455   | 175   | 422   | 173   | 77    | 264   |
| Future Volume (vph)  | 25    | 357   | 201   | 144   | 455   | 175   | 422   | 173   | 77    | 264   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       | 2     |       |       |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 2     | 1     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  |
| Minimum Split (s)    | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  | 11.1  | 41.5  | 41.5  | 11.1  | 40.4  |
| Total Split (s)      | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  |
| Total Split (%)      | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   | 3.1   | 2.5   | 2.5   | 3.1   | 2.4   |
| 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)  | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   | 6.1   | 6.5   | 6.5   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | None  | None  | None  | Max   |

Intersection Summary

Cycle Length: 120

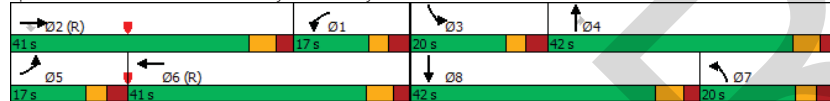
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Background School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔↔    |
| Traffic Volume (vph) | 60    | 335   | 258   | 120   | 257   | 249   | 252   | 182   | 49    | 282   |
| Future Volume (vph)  | 60    | 335   | 258   | 120   | 257   | 249   | 252   | 182   | 49    | 282   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (%)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary

Cycle Length: 120

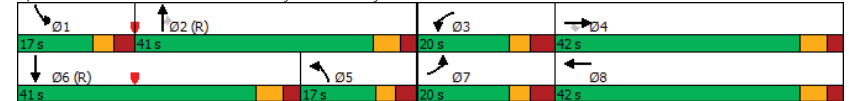
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.





22-1270: Black Mountain Village  
2024 Background School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 60   | 335  | 258  | 120  | 257  | 48    | 249  | 252  | 182  | 49   | 282  | 36   |
| Future Volume (veh/h)        | 60   | 335  | 258  | 120  | 257  | 48    | 249  | 252  | 182  | 49   | 282  | 36   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 87   | 486  | 0    | 174  | 372  | 53    | 361  | 365  | 0    | 71   | 409  | 39   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69  | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 137  | 650  |      | 232  | 700  | 98    | 1045 | 2836 |      | 130  | 1369 | 129  |
| Arrive On Green              | 0.04 | 0.13 | 0.00 | 0.07 | 0.15 | 0.15  | 0.30 | 0.56 | 0.00 | 0.04 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4530 | 631   | 3456 | 5106 | 1585 | 3456 | 4748 | 446  |
| Grp Volume(v), veh/h         | 87   | 486  | 0    | 174  | 277  | 148   | 361  | 365  | 0    | 71   | 291  | 157  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1757  | 1728 | 1702 | 1585 | 1728 | 1702 | 1790 |
| Q Serve(g_s), s              | 3.0  | 11.0 | 0.0  | 5.9  | 9.0  | 9.3   | 9.8  | 4.1  | 0.0  | 2.4  | 8.0  | 8.2  |
| Cycle Q Clear(g_c), s        | 3.0  | 11.0 | 0.0  | 5.9  | 9.0  | 9.3   | 9.8  | 4.1  | 0.0  | 2.4  | 8.0  | 8.2  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.36  | 1.00 |      | 1.00 | 1.00 |      | 0.25 |
| Lane Grp Cap(c), veh/h       | 137  | 650  |      | 232  | 526  | 272   | 1045 | 2836 |      | 130  | 982  | 516  |
| V/C Ratio(X)                 | 0.63 | 0.75 |      | 0.75 | 0.53 | 0.54  | 0.35 | 0.13 |      | 0.54 | 0.30 | 0.30 |
| Avail Cap(c_a), veh/h        | 389  | 1511 |      | 389  | 1007 | 520   | 1045 | 2836 |      | 314  | 982  | 516  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 56.8 | 50.5 | 0.0  | 55.0 | 46.7 | 46.8  | 32.6 | 12.8 | 0.0  | 56.7 | 33.2 | 33.3 |
| Incr Delay (d2), s/veh       | 1.8  | 0.7  | 0.0  | 1.8  | 0.3  | 0.6   | 0.1  | 0.1  | 0.0  | 1.3  | 0.8  | 1.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 2.4  | 8.3  | 0.0  | 4.8  | 6.9  | 7.4   | 7.4  | 2.9  | 0.0  | 1.9  | 6.2  | 6.8  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 58.6 | 51.2 | 0.0  | 56.8 | 47.0 | 47.4  | 32.7 | 12.9 | 0.0  | 58.0 | 34.0 | 34.8 |
| LnGrp LOS                    | E    | D    |      | E    | D    | D     | C    | B    |      | E    | C    | C    |
| Approach Vol, veh/h          |      | 573  |      |      | 599  |       |      | 726  |      |      | 519  |      |
| Approach Delay, s/veh        |      | 52.3 |      |      | 50.0 |       |      | 22.7 |      |      | 37.5 |      |
| Approach LOS                 |      | D    |      |      | D    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.6 | 73.0 | 14.6 | 21.8 | 42.7 | 41.0  | 11.3 | 25.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | * 35  | 13.5 | 35.5 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 4.4  | 6.1  | 7.9  | 13.0 | 11.8 | 10.2  | 5.0  | 11.3 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.7  | 0.1  | 2.3  | 0.0  | 1.9   | 0.1  | 1.8  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 39.7 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

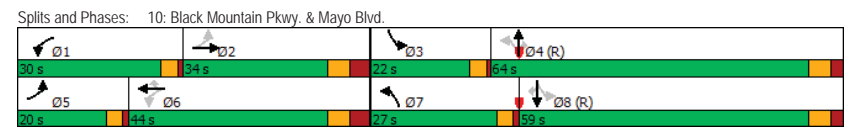
Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Background AM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 292   | 30    | 286   | 57    | 135   | 20    | 430   | 139   | 44    | 1049  | 88    |
| Future Volume (vph)  | 292   | 30    | 286   | 57    | 135   | 20    | 430   | 139   | 44    | 1049  | 88    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |       |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phases      | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 20.0  | 34.0  | 30.0  | 44.0  | 44.0  | 27.0  | 64.0  | 64.0  | 22.0  | 59.0  | 59.0  |
| Total Split (%)      | 13.3% | 22.7% | 20.0% | 29.3% | 29.3% | 18.0% | 42.7% | 42.7% | 14.7% | 39.3% | 39.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

| Intersection Summary   |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Cycle Length: 150  |  |  |  |  |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 150   |  |  |  |  |  |  |  |  |  |  |  |  |
| Offset: 69 (46%), Referenced to phase 4:NBT and 8:SBTL, Start of Green |  |  |  |  |  |  |  |  |  |  |  |  |
| Natural Cycle: 105   |  |  |  |  |  |  |  |  |  |  |  |  |
| Control Type: Actuated-Coordinated                                     |  |  |  |  |  |  |  |  |  |  |  |  |



22-1270: Black Mountain Village  
2024 Background PM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 29    | 10    | 171   | 3     | 95    | 6     | 646   | 141   | 65    | 537   | 7     |
| Future Volume (vph)  | 29    | 10    | 171   | 3     | 95    | 6     | 646   | 141   | 65    | 537   | 7     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 3     | 8     | 3     | 8     |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 15.0  | 45.0  | 15.0  | 45.0  | 45.0  | 15.0  | 55.0  | 55.0  | 35.0  | 75.0  | 75.0  |
| Total Split (%)      | 10.0% | 30.0% | 10.0% | 30.0% | 30.0% | 10.0% | 36.7% | 36.7% | 23.3% | 50.0% | 50.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150

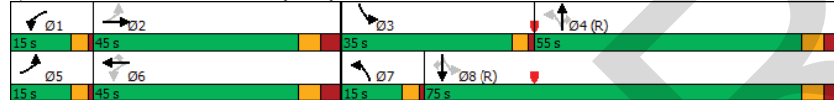
Actuated Cycle Length: 150

Offset: 116 (77%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2024 Background School PM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 126   | 29    | 111   | 9     | 98    | 32    | 459   | 148   | 97    | 495   | 68    |
| Future Volume (vph)  | 126   | 29    | 111   | 9     | 98    | 32    | 459   | 148   | 97    | 495   | 68    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 3     | 8     | 3     | 8     |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 35.0  | 60.0  | 35.0  | 60.0  | 60.0  | 15.0  | 40.0  | 40.0  | 15.0  | 40.0  | 40.0  |
| Total Split (%)      | 23.3% | 40.0% | 23.3% | 40.0% | 40.0% | 10.0% | 26.7% | 26.7% | 10.0% | 26.7% | 26.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.





22-1270: Black Mountain Village  
2024 Background AM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                  | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations       | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)    | 292  | 30   | 102  | 286  | 57   | 135  | 20   | 430  | 139  | 44   | 1049 | 88   |
| Future Volume (veh/h)     | 292  | 30   | 102  | 286  | 57   | 135  | 20   | 430  | 139  | 44   | 1049 | 88   |
| Initial Q (Ob), veh       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)       | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach     | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln    | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h      | 324  | 33   | 85   | 318  | 63   | 67   | 22   | 478  | 0    | 49   | 1166 | 49   |
| Peak Hour Factor          | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %      | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                | 484  | 91   | 233  | 491  | 453  | 384  | 190  | 2425 |      | 485  | 1720 | 767  |
| Arrive On Green           | 0.11 | 0.20 | 0.20 | 0.15 | 0.24 | 0.24 | 0.02 | 0.47 | 0.00 | 0.03 | 0.48 | 0.48 |
| Sat Flow, veh/h           | 1781 | 463  | 1193 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Grp Volume(v), veh/h      | 324  | 0    | 118  | 318  | 63   | 67   | 22   | 478  | 0    | 49   | 1166 | 49   |
| Grp Sat Flow(s),veh/h/ln  | 1781 | 0    | 1656 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s           | 16.0 | 0.0  | 9.3  | 20.8 | 4.0  | 5.0  | 0.9  | 8.1  | 0.0  | 2.1  | 37.8 | 2.5  |
| Cycle Q Clear(g_c), s     | 16.0 | 0.0  | 9.3  | 20.8 | 4.0  | 5.0  | 0.9  | 8.1  | 0.0  | 2.1  | 37.8 | 2.5  |
| Prop In Lane              | 1.00 |      | 0.72 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h    | 484  | 0    | 324  | 491  | 453  | 384  | 190  | 2425 |      | 485  | 1720 | 767  |
| V/C Ratio(X)              | 0.67 | 0.00 | 0.36 | 0.65 | 0.14 | 0.17 | 0.12 | 0.20 | 0.00 | 0.10 | 0.68 | 0.06 |
| Avail Cap(c_a), veh/h     | 484  | 0    | 324  | 527  | 453  | 384  | 428  | 2425 |      | 647  | 1720 | 767  |
| HCM Platoon Ratio         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)        | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh  | 45.1 | 0.0  | 52.3 | 37.7 | 44.6 | 45.0 | 24.0 | 22.8 | 0.0  | 19.2 | 29.7 | 20.6 |
| Incr Delay (d2), s/veh    | 2.9  | 0.0  | 3.2  | 1.8  | 0.6  | 1.0  | 0.1  | 0.2  | 0.0  | 0.0  | 2.2  | 0.2  |
| Initial Q Delay(d3),s/veh | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln  | 5.6  | 0.0  | 7.5  | 14.4 | 3.5  | 3.8  | 0.7  | 6.1  | 0.0  | 1.6  | 23.4 | 1.8  |

**Intersection Summary**

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 34.4 |
| HCM 6th LOS        | C    |

**Notes**  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Background PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                  | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations       | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)    | 29   | 10   | 20   | 171  | 3    | 95   | 6    | 646  | 141  | 65   | 537  | 7    |
| Future Volume (veh/h)     | 29   | 10   | 20   | 171  | 3    | 95   | 6    | 646  | 141  | 65   | 537  | 7    |
| Initial Q (Ob), veh       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)       | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach     | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln    | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h      | 33   | 11   | 16   | 192  | 3    | 54   | 7    | 726  | 0    | 73   | 603  | 4    |
| Peak Hour Factor          | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %      | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                | 427  | 171  | 249  | 506  | 556  | 471  | 408  | 2547 |      | 408  | 1856 | 828  |
| Arrive On Green           | 0.02 | 0.25 | 0.25 | 0.07 | 0.30 | 0.30 | 0.01 | 0.50 | 0.00 | 0.03 | 0.52 | 0.52 |
| Sat Flow, veh/h           | 1781 | 689  | 1002 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Grp Volume(v), veh/h      | 33   | 0    | 27   | 192  | 3    | 54   | 7    | 726  | 0    | 73   | 603  | 4    |
| Grp Sat Flow(s),veh/h/ln  | 1781 | 0    | 1690 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s           | 2.1  | 0.0  | 1.8  | 11.0 | 0.2  | 3.7  | 0.3  | 12.5 | 0.0  | 2.9  | 14.6 | 0.2  |
| Cycle Q Clear(g_c), s     | 2.1  | 0.0  | 1.8  | 11.0 | 0.2  | 3.7  | 0.3  | 12.5 | 0.0  | 2.9  | 14.6 | 0.2  |
| Prop In Lane              | 1.00 |      | 0.59 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h    | 427  | 0    | 420  | 506  | 556  | 471  | 408  | 2547 |      | 408  | 1856 | 828  |
| V/C Ratio(X)              | 0.08 | 0.00 | 0.06 | 0.38 | 0.01 | 0.11 | 0.02 | 0.29 | 0.00 | 0.18 | 0.32 | 0.00 |
| Avail Cap(c_a), veh/h     | 513  | 0    | 420  | 506  | 556  | 471  | 524  | 2547 |      | 719  | 1856 | 828  |
| HCM Platoon Ratio         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)        | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh  | 40.3 | 0.0  | 43.0 | 37.5 | 37.1 | 38.4 | 18.7 | 22.0 | 0.0  | 17.2 | 20.6 | 17.2 |
| Incr Delay (d2), s/veh    | 0.0  | 0.0  | 0.3  | 0.2  | 0.0  | 0.5  | 0.0  | 0.3  | 0.0  | 0.1  | 0.5  | 0.0  |
| Initial Q Delay(d3),s/veh | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln  | 1.7  | 0.0  | 1.5  | 9.1  | 0.1  | 2.8  | 0.2  | 8.9  | 0.0  | 2.2  | 10.4 | 0.1  |

**Intersection Summary**

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

**Notes**  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Background School PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     |      | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 126  | 29    | 94   | 111  | 9    | 98    | 32   | 459  | 148  | 97   | 495  | 68   |
| Future Volume (veh/h)        | 126  | 29    | 94   | 111  | 9    | 98    | 32   | 459  | 148  | 97   | 495  | 68   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 191  | 44    | 106  | 168  | 14   | 74    | 48   | 695  | 0    | 147  | 750  | 55   |
| Peak Hour Factor             | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 646  | 174   | 419  | 544  | 652  | 553   | 255  | 1821 |      | 354  | 1393 | 621  |
| Arrive On Green              | 0.08 | 0.36  | 0.36 | 0.07 | 0.35 | 0.35  | 0.03 | 0.36 | 0.00 | 0.06 | 0.39 | 0.39 |
| Sat Flow, veh/h              | 1781 | 487   | 1173 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 191  | 0     | 150  | 168  | 14   | 74    | 48   | 695  | 0    | 147  | 750  | 55   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0     | 1659 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 10.2 | 0.0   | 9.6  | 9.0  | 0.7  | 4.8   | 2.6  | 15.2 | 0.0  | 7.6  | 24.4 | 3.3  |
| Cycle Q Clear(g_c), s        | 10.2 | 0.0   | 9.6  | 9.0  | 0.7  | 4.8   | 2.6  | 15.2 | 0.0  | 7.6  | 24.4 | 3.3  |
| Prop In Lane                 | 1.00 |       | 0.71 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 646  | 0     | 593  | 544  | 652  | 553   | 255  | 1821 |      | 354  | 1393 | 621  |
| V/C Ratio(X)                 | 0.30 | 0.00  | 0.25 | 0.31 | 0.02 | 0.13  | 0.19 | 0.38 |      | 0.42 | 0.54 | 0.09 |
| Avail Cap(c_a), veh/h        | 866  | 0     | 593  | 779  | 652  | 553   | 334  | 1821 |      | 370  | 1393 | 621  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 27.1 | 0.0   | 34.1 | 27.8 | 32.1 | 33.4  | 30.4 | 35.9 | 0.0  | 27.4 | 35.1 | 28.7 |
| Incr Delay (d2), s/veh       | 0.1  | 0.0   | 1.0  | 0.1  | 0.1  | 0.5   | 0.1  | 0.6  | 0.0  | 0.3  | 1.5  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 7.9  | 0.0   | 7.4  | 7.1  | 0.6  | 3.5   | 2.0  | 10.7 | 0.0  | 6.0  | 16.4 | 2.4  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 27.2 | 0.0   | 35.1 | 27.9 | 32.1 | 33.9  | 30.6 | 36.5 | 0.0  | 27.7 | 36.6 | 29.0 |
| LnGrp LOS                    | C    | A     | D    | C    | C    | C     | C    | D    |      | C    | D    | C    |
| Approach Vol, veh/h          |      | 341   |      |      | 256  |       |      | 743  |      |      | 952  |      |
| Approach Delay, s/veh        |      | 30.7  |      |      | 29.9 |       |      | 36.2 |      |      | 34.8 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | D    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 15.2 | 61.3  | 13.6 | 59.9 | 16.5 | 60.0  | 8.3  | 65.2 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 31.0 | * 52  | 11.0 | 33.6 | 31.0 | * 52  | 11.0 | 33.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 11.0 | 11.6  | 9.6  | 17.2 | 12.2 | 6.8   | 4.6  | 26.4 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.2  | 0.6   | 0.0  | 3.1  | 0.2  | 0.2   | 0.0  | 2.3  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 34.1 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | C    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Background AM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 0    | 1    | 0    | 589  | 977  | 460  |
| Future Vol, veh/h        | 0    | 1    | 0    | 589  | 977  | 460  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1    | 0    | 654  | 1086 | 511  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 543  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *681 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *681 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 681     | - - | - - |
| HCM Lane V/C Ratio    | - 0.002   | - - | - - |
| HCM Control Delay (s) | - 10.3    | - - | - - |
| HCM Lane LOS          | - B       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Background PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 7    | 0    | 794  | 684  | 44   |
| Future Vol, veh/h        | 0    | 7    | 0    | 794  | 684  | 44   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 7    | 0    | 836  | 720  | 46   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 360  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *806 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *806 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.5 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 806     | - - | - - |
| HCM Lane V/C Ratio    | - 0.009   | - - | - - |
| HCM Control Delay (s) | - 9.5     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Background School PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 9    | 0    | 639  | 510  | 190  |
| Future Vol, veh/h        | 0    | 9    | 0    | 639  | 510  | 190  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 12   | 0    | 852  | 680  | 253  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 340  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *869 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *869 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 869     | - - | - - |
| HCM Lane V/C Ratio    | - 0.014   | - - | - - |
| HCM Control Delay (s) | - 9.2     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Background AM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 7.0   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 33    | 658   |       | 1359  |       |
| Demand Flow Rate, veh/h     | 33    | 672   |       | 1386  |       |
| Vehicles Circulating, veh/h | 1365  | 12    |       | 27    |       |
| Vehicles Exiting, veh/h     | 48    | 1386  |       | 657   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 9.1   | 4.8   |       | 8.1   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 33    | 316   | 356   | 651   | 735   |
| Cap Entry Lane, veh/h       | 445   | 1335  | 1406  | 1317  | 1388  |
| Entry HV Adj Factor         | 1.000 | 0.979 | 0.980 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 33    | 309   | 349   | 639   | 720   |
| Cap Entry, veh/h            | 445   | 1307  | 1378  | 1292  | 1360  |
| V/C Ratio                   | 0.074 | 0.237 | 0.253 | 0.494 | 0.530 |
| Control Delay, s/veh        | 9.1   | 4.8   | 4.8   | 8.0   | 8.2   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 3     | 3     |

22-1270: Black Mountain Village  
2024 Background PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.2   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 4     | 847   |       | 734   |       |
| Demand Flow Rate, veh/h     | 4     | 864   |       | 749   |       |
| Vehicles Circulating, veh/h | 745   | 1     |       | 3     |       |
| Vehicles Exiting, veh/h     | 7     | 748   |       | 862   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 4.8   | 5.4   |       | 5.0   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 406   | 458   | 352   | 397   |
| Cap Entry Lane, veh/h       | 754   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 4     | 398   | 449   | 345   | 389   |
| Cap Entry, veh/h            | 754   | 1322  | 1391  | 1320  | 1389  |
| V/C Ratio                   | 0.005 | 0.301 | 0.323 | 0.261 | 0.280 |
| Control Delay, s/veh        | 4.8   | 5.4   | 5.4   | 5.0   | 5.0   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 1     | 1     |

22-1270: Black Mountain Village  
2024 Background School PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 6.0   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 29    | 961   |       | 977   |       |
| Demand Flow Rate, veh/h     | 29    | 980   |       | 996   |       |
| Vehicles Circulating, veh/h | 989   | 7     |       | 15    |       |
| Vehicles Exiting, veh/h     | 22    | 1011  |       | 972   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 6.4   | 5.9   |       | 6.0   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 29    | 461   | 519   | 468   | 528   |
| Cap Entry Lane, veh/h       | 613   | 1341  | 1412  | 1331  | 1402  |
| Entry HV Adj Factor         | 1.000 | 0.980 | 0.981 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 29    | 452   | 509   | 459   | 518   |
| Cap Entry, veh/h            | 613   | 1314  | 1386  | 1306  | 1375  |
| V/C Ratio                   | 0.047 | 0.344 | 0.368 | 0.352 | 0.377 |
| Control Delay, s/veh        | 6.4   | 5.9   | 5.9   | 6.0   | 6.1   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 2     | 2     |

22-1270: Black Mountain Village  
2024 Background AM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection   |        |       |      |        |      |      |        |       |       |        |      |      |  |
|--|--------|-------|------|--------|------|------|--------|-------|-------|--------|------|------|--|
| Int Delay, s/veh   | 5.7    |       |      |        |      |      |        |       |       |        |      |      |  |
| Movement   | EBL    | EBT   | EBR  | WBL    | WBT  | WBR  | NBL    | NBT   | NBR   | SBL    | SBT  | SBR  |  |
| Lane Configurations  | ↔      |       | ↔    |        | ↔    |      | ↔      |       | ↔     |        | ↔    |      |  |
| Traffic Vol, veh/h   | 170    | 81    | 7    | 14     | 151  | 79   | 12     | 4     | 7     | 24     | 3    | 158  |  |
| Future Vol, veh/h  | 170    | 81    | 7    | 14     | 151  | 79   | 12     | 4     | 7     | 24     | 3    | 158  |  |
| Conflicting Peds, #/hr   | 0      | 0     | 0    | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 0    | 0    |  |
| Sign Control   | Free   | Free  | Free | Free   | Free | Free | Stop   | Stop  | Stop  | Stop   | Stop | Stop |  |
| RT Channelized   | -      | -     | None | -      | -    | None | -      | -     | None  | -      | -    | None |  |
| Storage Length   | 150    | -     | -    | 145    | -    | -    | -      | -     | -     | -      | -    | -    |  |
| Veh in Median Storage, #   | -      | 0     | -    | -      | 0    | -    | -      | -     | 0     | -      | -    | 0    |  |
| Grade, %   | -      | 0     | -    | -      | 0    | -    | -      | -     | 0     | -      | -    | 0    |  |
| Peak Hour Factor   | 90     | 90    | 90   | 90     | 90   | 90   | 90     | 90    | 90    | 90     | 90   | 90   |  |
| Heavy Vehicles, %  | 2      | 2     | 2    | 2      | 2    | 2    | 2      | 2     | 2     | 2      | 2    | 2    |  |
| Mvmt Flow  | 189    | 90    | 8    | 16     | 168  | 88   | 13     | 4     | 8     | 27     | 3    | 176  |  |
| Major/Minor  | Major1 |       |      | Major2 |      |      | Minor1 |       |       | Minor2 |      |      |  |
| Conflicting Flow All   | 256    | 0     | 0    | 98     | 0    | 0    | 590    | 760   | 49    | 669    | 720  | 128  |  |
| Stage 1  | -      | -     | -    | -      | -    | -    | 472    | 472   | -     | 244    | 244  | -    |  |
| Stage 2  | -      | -     | -    | -      | -    | -    | 118    | 288   | -     | 425    | 476  | -    |  |
| Critical Hdwy  | 4.14   | -     | -    | 4.14   | -    | -    | 7.54   | 6.54  | 6.94  | 7.54   | 6.54 | 6.94 |  |
| Critical Hdwy Stg 1  | -      | -     | -    | -      | -    | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Critical Hdwy Stg 2  | -      | -     | -    | -      | -    | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Follow-up Hdwy   | 2.22   | -     | -    | 2.22   | -    | -    | 3.52   | 4.02  | 3.32  | 3.52   | 4.02 | 3.32 |  |
| Pot Cap-1 Maneuver   | 1306   | -     | -    | 1550   | -    | -    | 422    | 351   | *1056 | 370    | 372  | 898  |  |
| Stage 1  | -      | -     | -    | -      | -    | -    | 576    | 580   | -     | 738    | 703  | -    |  |
| Stage 2  | -      | -     | -    | -      | -    | -    | 874    | 672   | -     | 615    | 578  | -    |  |
| Platoon blocked, %   | -      | -     | -    | 1      | -    | -    | 1      | 1     | 1     | 1      | 1    | 1    |  |
| Mov Cap-1 Maneuver   | 1306   | -     | -    | 1550   | -    | -    | 297    | 297   | *1056 | 320    | 314  | 898  |  |
| Mov Cap-2 Maneuver   | -      | -     | -    | -      | -    | -    | 297    | 297   | -     | 320    | 314  | -    |  |
| Stage 1  | -      | -     | -    | -      | -    | -    | 493    | 496   | -     | 631    | 696  | -    |  |
| Stage 2  | -      | -     | -    | -      | -    | -    | 693    | 665   | -     | 518    | 494  | -    |  |
| Approach   | EB     |       |      | WB     |      |      | NB     |       |       | SB     |      |      |  |
| HCM Control Delay, s   | 5.4    |       |      | 0.4    |      |      | 15.2   |       |       | 12.1   |      |      |  |
| HCM LOS  |        |       |      |        |      |      | C      |       |       | B      |      |      |  |
| Minor Lane/Major Mvmt  | NBLn1  | EBL   | EBT  | EBR    | WBL  | WBT  | WBR    | SBLn1 |       |        |      |      |  |
| Capacity (veh/h)   | 380    | 1306  | -    | -      | 1550 | -    | -      | 710   |       |        |      |      |  |
| HCM Lane V/C Ratio   | 0.067  | 0.145 | -    | -      | 0.01 | -    | -      | 0.29  |       |        |      |      |  |
| HCM Control Delay (s)  | 15.2   | 8.2   | -    | -      | 7.3  | -    | -      | 12.1  |       |        |      |      |  |
| HCM Lane LOS   | C      | A     | -    | -      | A    | -    | -      | B     |       |        |      |      |  |
| HCM 95th %tile Q(veh)  | 0.2    | 0.5   | -    | -      | 0    | -    | -      | 1.2   |       |        |      |      |  |
| Notes  |        |       |      |        |      |      |        |       |       |        |      |      |  |
| -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |        |       |      |        |      |      |        |       |       |        |      |      |  |

22-1270: Black Mountain Village  
2024 Background PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 77   | 129  | 10   | 24   | 120  | 27   | 9    | 4    | 3    | 28   | 4    | 132  |
| Future Vol, veh/h        | 77   | 129  | 10   | 24   | 120  | 27   | 9    | 4    | 3    | 28   | 4    | 132  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 105  | 177  | 14   | 33   | 164  | 37   | 12   | 5    | 4    | 38   | 5    | 181  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 201    | 0      | 0      | 191    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1368   | -      | -      | 1472   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1368   | -      | -      | 1472   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 2.8 | 1.1 | 14.2 | 11.7 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 415   | 1368  | -   | -   | 1472  | -   | -   | 762   |
| HCM Lane V/C Ratio    | 0.053 | 0.077 | -   | -   | 0.022 | -   | -   | 0.295 |
| HCM Control Delay (s) | 14.2  | 7.9   | -   | -   | 7.5   | -   | -   | 11.7  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.2   | -   | -   | 0.1   | -   | -   | 1.2   |

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

22-1270: Black Mountain Village  
2024 Background School PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 111  | 146  | 17   | 12   | 126  | 41   | 10   | 3    | 6    | 7    | 3    | 48   |
| Future Vol, veh/h        | 111  | 146  | 17   | 12   | 126  | 41   | 10   | 3    | 6    | 7    | 3    | 48   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 135  | 178  | 21   | 15   | 154  | 50   | 12   | 4    | 7    | 9    | 4    | 59   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 204    | 0      | 0      | 199    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1365   | -      | -      | 1462   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1365   | -      | -      | 1462   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.2 | 0.5 | 12.8 | 10.2 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 483   | 1365  | -   | -   | 1462 | -   | -   | 760   |
| HCM Lane V/C Ratio    | 0.048 | 0.099 | -   | -   | 0.01 | -   | -   | 0.093 |
| HCM Control Delay (s) | 12.8  | 7.9   | -   | -   | 7.5  | -   | -   | 10.2  |
| HCM Lane LOS          | B     | A     | -   | -   | A    | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0    | -   | -   | 0.3   |

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

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| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 5.1   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 44    | 786  | 62    | 59   | 447   | 25   | 46    | 6    | 88    | 38   | 7     | 33   |
| Future Vol, veh/h        | 44    | 786  | 62    | 59   | 447   | 25   | 46    | 6    | 88    | 38   | 7     | 33   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 49    | 873  | 69    | 66   | 497   | 28   | 51    | 7    | 98    | 42   | 8     | 37   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 525    | 0      | 0      | 942    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 659    | -      | -      | 417    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 659    | -      | -      | 417    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.5 | 1.7 | 32.7 | 31.5 |
| HCM LOS              |     |     | D    | D    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 115   | 347   | 659   | -   | -   | 417   | -   | -   | 137   | 269   |
| HCM Lane V/C Ratio    | 0.444 | 0.301 | 0.074 | -   | -   | 0.157 | -   | -   | 0.308 | 0.165 |
| HCM Control Delay (s) | 59.2  | 19.8  | 10.9  | -   | -   | 15.2  | -   | -   | 42.6  | 21    |
| HCM Lane LOS          | F     | C     | B     | -   | -   | C     | -   | -   | E     | C     |
| HCM 95th %tile Q(veh) | 1.9   | 1.2   | 0.2   | -   | -   | 0.6   | -   | -   | 1.2   | 0.6   |

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| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 5.3   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 62    | 529  | 31    | 55   | 618   | 58   | 58    | 4    | 84    | 26   | 4     | 42   |
| Future Vol, veh/h        | 62    | 529  | 31    | 55   | 618   | 58   | 58    | 4    | 84    | 26   | 4     | 42   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 73    | 622  | 36    | 65   | 727   | 68   | 68    | 5    | 99    | 31   | 5     | 49   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 795    | 0      | 0      | 658    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 491    | -      | -      | 570    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 491    | -      | -      | 570    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 1.4 | 0.9 | 32.3 | 29.6 |
| HCM LOS              |     |     | D    | D    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 134   | 426   | 491   | -   | -   | 570   | -   | -   | 110   | 329   |
| HCM Lane V/C Ratio    | 0.509 | 0.243 | 0.149 | -   | -   | 0.114 | -   | -   | 0.278 | 0.164 |
| HCM Control Delay (s) | 56.9  | 16.1  | 13.6  | -   | -   | 12.1  | -   | -   | 49.9  | 18.1  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | B     | -   | -   | E     | C     |
| HCM 95th %tile Q(veh) | 2.4   | 0.9   | 0.5   | -   | -   | 0.4   | -   | -   | 1     | 0.6   |

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| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 3.1   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 44    | 466  | 42    | 40   | 408   | 46   | 8     | 4    | 37    | 28   | 10    | 26   |
| Future Vol, veh/h        | 44    | 466  | 42    | 40   | 408   | 46   | 8     | 4    | 37    | 28   | 10    | 26   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 74    | 74   | 74    | 74   | 74    | 74   | 74    | 74   | 74    | 74   | 74    | 74   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 59    | 630  | 57    | 54   | 551   | 62   | 11    | 5    | 50    | 38   | 14    | 35   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 613    | 0      | 0      | 687    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 599    | -      | -      | 553    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 599    | -      | -      | 553    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.9 | 1  | 18.2 | 26.5 |
| HCM LOS              | C   |    | D    |      |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 159   | 382   | 599   | -   | -   | 553   | -   | -   | 176   | 248   |
| HCM Lane V/C Ratio    | 0.068 | 0.145 | 0.099 | -   | -   | 0.098 | -   | -   | 0.215 | 0.196 |
| HCM Control Delay (s) | 29.3  | 16    | 11.7  | -   | -   | 12.2  | -   | -   | 31    | 23    |
| HCM Lane LOS          | D     | C     | B     | -   | -   | B     | -   | -   | D     | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.5   | 0.3   | -   | -   | 0.3   | -   | -   | 0.8   | 0.7   |

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2024 Background AM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 3.8   |      |       |      |       |      |
| Movement                 | EBL   | EBR  | NBL   | NBT  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 145   | 12   | 35    | 51   | 24    | 231  |
| Future Vol, veh/h        | 145   | 12   | 35    | 51   | 24    | 231  |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Stop  | Stop | Free  | Free | Free  | Free |
| RT Channelized           | -     | None | -     | None | -     | None |
| Storage Length           | 335   | 0    | 175   | -    | -     | 300  |
| Veh in Median Storage, # | 0     | -    | -     | 0    | 0     | -    |
| Grade, %                 | 0     | -    | -     | 0    | 0     | -    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90    | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 161   | 13   | 39    | 57   | 27    | 257  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 162    | 27     | 284    |
| Stage 1              | 27     | -      | -      |
| Stage 2              | 135    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 829    | 1048   | 1278   |
| Stage 1              | 996    | -      | -      |
| Stage 2              | 891    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 803    | 1048   | 1278   |
| Mov Cap-2 Maneuver   | 803    | -      | -      |
| Stage 1              | 965    | -      | -      |
| Stage 2              | 891    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.4 | 3.2 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1278 | -   | 803   | 1048  | -   | -   |
| HCM Lane V/C Ratio    | 0.03 | -   | 0.201 | 0.013 | -   | -   |
| HCM Control Delay (s) | 7.9  | -   | 10.6  | 8.5   | -   | -   |
| HCM Lane LOS          | A    | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 0.7   | 0     | -   | -   |



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2024 Background PM

15: 40th St. & Mayo Blvd.  
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| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 85   | 32   | 21   | 43   | 56   | 137  |
| Future Vol, veh/h        | 85   | 32   | 21   | 43   | 56   | 137  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 94   | 36   | 23   | 48   | 62   | 152  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 156    | 62     | 214    |
| Stage 1              | 62     | -      | -      |
| Stage 2              | 94     | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 835    | 1003   | 1356   |
| Stage 1              | 961    | -      | -      |
| Stage 2              | 930    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 821    | 1003   | 1356   |
| Mov Cap-2 Maneuver   | 821    | -      | -      |
| Stage 1              | 945    | -      | -      |
| Stage 2              | 930    | -      | -      |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.6 | 2.5 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1356  | -   | 821   | 1003  | -   | -   |
| HCM Lane V/C Ratio    | 0.017 | -   | 0.115 | 0.035 | -   | -   |
| HCM Control Delay (s) | 7.7   | -   | 10    | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.4   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
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15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 104  | 17   | 19   | 48   | 47   | 105  |
| Future Vol, veh/h        | 104  | 17   | 19   | 48   | 47   | 105  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 149  | 24   | 27   | 69   | 67   | 150  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 190    | 67     | 217    |
| Stage 1              | 67     | -      | -      |
| Stage 2              | 123    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 799    | 997    | 1353   |
| Stage 1              | 956    | -      | -      |
| Stage 2              | 902    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 783    | 997    | 1353   |
| Mov Cap-2 Maneuver   | 783    | -      | -      |
| Stage 1              | 937    | -      | -      |
| Stage 2              | 902    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.4 | 2.2 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1353 | -   | 783   | 997   | -   | -   |
| HCM Lane V/C Ratio    | 0.02 | -   | 0.19  | 0.024 | -   | -   |
| HCM Control Delay (s) | 7.7  | -   | 10.7  | 8.7   | -   | -   |
| HCM Lane LOS          | A    | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 0.7   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Background AM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 0    | 0    | 134  | 0    | 0    | 353  |
| Future Vol, veh/h        | 0    | 0    | 134  | 0    | 0    | 353  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 149  | 0    | 0    | 392  |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 541    | 149    | 0      |
| Stage 1              | 149    | -      | -      |
| Stage 2              | 392    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 502    | 898    | -      |
| Stage 1              | 879    | -      | -      |
| Stage 2              | 683    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 502    | 898    | -      |
| Mov Cap-2 Maneuver   | 502    | -      | -      |
| Stage 1              | 879    | -      | -      |
| Stage 2              | 683    | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h)      | -   | -        | 1432 | -   |
| HCM Lane V/C Ratio    | -   | -        | -    | -   |
| HCM Control Delay (s) | -   | -        | 0    | 0   |
| HCM Lane LOS          | -   | -        | A    | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0    | -   |

22-1270: Black Mountain Village  
2024 Background PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 0    | 0    | 14   | 0    | 0    | 15   |
| Future Vol, veh/h        | 0    | 0    | 14   | 0    | 0    | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 16   | 0    | 0    | 17   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 33     | 16     | 0      |
| Stage 1              | 16     | -      | -      |
| Stage 2              | 17     | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 980    | 1063   | -      |
| Stage 1              | 1007   | -      | -      |
| Stage 2              | 1006   | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 980    | 1063   | -      |
| Mov Cap-2 Maneuver   | 980    | -      | -      |
| Stage 1              | 1007   | -      | -      |
| Stage 2              | 1006   | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h)      | -   | -        | 1602 | -   |
| HCM Lane V/C Ratio    | -   | -        | -    | -   |
| HCM Control Delay (s) | -   | -        | 0    | 0   |
| HCM Lane LOS          | -   | -        | A    | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0    | -   |

22-1270: Black Mountain Village  
2024 Background School PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    |      | ↔    |      |      | ↔    |
| Traffic Vol, veh/h       | 0    | 0    | 152  | 0    | 0    | 88   |
| Future Vol, veh/h        | 0    | 0    | 152  | 0    | 0    | 88   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 169  | 0    | 0    | 98   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 267    | 169    | 0      |
| Stage 1              | 169    | -      | -      |
| Stage 2              | 98     | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 722    | 875    | -      |
| Stage 1              | 861    | -      | -      |
| Stage 2              | 926    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 722    | 875    | -      |
| Mov Cap-2 Maneuver   | 722    | -      | -      |
| Stage 1              | 861    | -      | -      |
| Stage 2              | 926    | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h)      | -   | -        | 1409 | -   |
| HCM Lane V/C Ratio    | -   | -        | -    | -   |
| HCM Control Delay (s) | -   | -        | 0    | 0   |
| HCM Lane LOS          | -   | -        | A    | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0    | -   |

22-1270: Black Mountain Village  
2024 Background AM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔↔↔  | ↔    | ↔    | ↔↔↔  |      | ↔    |
| Traffic Vol, veh/h       | 1156 | 0    | 0    | 571  | 0    | 0    |
| Future Vol, veh/h        | 1156 | 0    | 0    | 571  | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1284 | 0    | 0    | 634  | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | -      | -      |
| Pot Cap-1 Maneuver   | -      | -      | 0      |
| Stage 1              | -      | 0      | 0      |
| Stage 2              | -      | 0      | 0      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | 357    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | -     | -   | -   | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -   |
| HCM Control Delay (s) | 0     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | -   |

22-1270: Black Mountain Village  
2024 Background PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 583  | 0    | 0    | 681  | 0    | 0    |
| Future Vol, veh/h        | 583  | 0    | 0    | 681  | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 648  | 0    | 0    | 757  | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 324    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *800 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *800   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | -     | -   | -   | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -   |
| HCM Control Delay (s) | 0     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background School PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 653  | 0    | 0    | 542  | 0    | 0    |
| Future Vol, veh/h        | 653  | 0    | 0    | 542  | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 726  | 0    | 0    | 602  | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 363    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *766 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *766   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | -     | -   | -   | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -   |
| HCM Control Delay (s) | 0     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background AM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 344  | 165  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 344  | 165  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 382  | 183  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 183    | 0      | 0      | 374   | 183   |
| Stage 1              | -      | -      | -      | 183   | -     |
| Stage 2              | -      | -      | -      | 191   | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1391   | -      | -      | 613   | 859   |
| Stage 1              | -      | -      | -      | 848   | -     |
| Stage 2              | -      | -      | -      | 823   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1391   | -      | -      | 613   | 859   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 613   | -     |
| Stage 1              | -      | -      | -      | 848   | -     |
| Stage 2              | -      | -      | -      | 823   | -     |

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

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1391 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

22-1270: Black Mountain Village  
2024 Background PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 23   | 16   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 23   | 16   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 26   | 18   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 18     | 0      | 0      | 31    | 18    |
| Stage 1              | -      | -      | -      | 18    | -     |
| Stage 2              | -      | -      | -      | 13    | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1612   | -      | -      | 997   | 1077  |
| Stage 1              | -      | -      | -      | 1016  | -     |
| Stage 2              | -      | -      | -      | 1008  | -     |
| Platoon blocked, %   | 1      | -      | -      | 1     | 1     |
| Mov Cap-1 Maneuver   | 1612   | -      | -      | 997   | 1077  |
| Mov Cap-2 Maneuver   | -      | -      | -      | 997   | -     |
| Stage 1              | -      | -      | -      | 1016  | -     |
| Stage 2              | -      | -      | -      | 1008  | -     |

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

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1612 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

22-1270: Black Mountain Village  
2024 Background School PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 157  | 112  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 157  | 112  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 174  | 124  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 124    | 0      | 211    |
| Stage 1              | -      | -      | 124    |
| Stage 2              | -      | -      | 87     |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2.219  | -      | 3.519  |
| Pot Cap-1 Maneuver   | *1487  | -      | *938   |
| Stage 1              | -      | -      | *938   |
| Stage 2              | -      | -      | *927   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *1487  | -      | *938   |
| Mov Cap-2 Maneuver   | -      | -      | *938   |
| Stage 1              | -      | -      | *938   |
| Stage 2              | -      | -      | *927   |

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

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1487 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -     | -   | -   | -   | -     |
| HCM Control Delay (s) | 0     | -   | -   | -   | 0     |
| HCM Lane LOS          | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | -     |

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

22-1270: Black Mountain Village  
2024 Background AM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      | ↕↕↕  | ↕↕↕  |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 857  | 1181 | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 857  | 1181 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 952  | 1312 | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 656    | 0      | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 7.14   | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 3.92   | -      | -      |
| Pot Cap-1 Maneuver   | *646   | 0      | -      |
| Stage 1              | 0      | 0      | -      |
| Stage 2              | 0      | 0      | -      |
| Platoon blocked, %   | 1      | -      | -      |
| Mov Cap-1 Maneuver   | *646   | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -     | -   | -   |
| HCM Control Delay (s) | -   | 0     | -   | -   |
| HCM Lane LOS          | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | -   | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 770  | 609  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 770  | 609  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 856  | 677  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 339  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 7.14 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.92 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *778 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *778 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | -         | -   | -   |
| HCM Lane V/C Ratio    | -         | -   | -   |
| HCM Control Delay (s) | - 0       | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | -         | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background School PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 683  | 660  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 683  | 660  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 759  | 733  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 367  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 7.14 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.92 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *778 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *778 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | -         | -   | -   |
| HCM Lane V/C Ratio    | -         | -   | -   |
| HCM Control Delay (s) | - 0       | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | -         | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background AM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 857  | 1181 | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 857  | 1181 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 952  | 1312 | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1693   | 656    | 1312   |
| Stage 1              | 1312   | -      | -      |
| Stage 2              | 381    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *136   | *646   | *812   |
| Stage 1              | *663   | -      | -      |
| Stage 2              | *737   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *136   | *646   | *812   |
| Mov Cap-2 Maneuver   | *136   | -      | -      |
| Stage 1              | *663   | -      | -      |
| Stage 2              | *737   | -      | -      |

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

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | *812 | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | 0    | -   | 0     | 0     | -   | -   |
| HCM Lane LOS          | A    | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 770  | 609  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 770  | 609  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 856  | 677  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1019   | 339    | 677    |
| Stage 1              | 677    | -      | -      |
| Stage 2              | 342    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *304   | *778   | *979   |
| Stage 1              | *799   | -      | -      |
| Stage 2              | *755   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *304   | *778   | *979   |
| Mov Cap-2 Maneuver   | *304   | -      | -      |
| Stage 1              | *799   | -      | -      |
| Stage 2              | *755   | -      | -      |

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

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | *979 | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | 0    | -   | 0     | 0     | -   | -   |
| HCM Lane LOS          | A    | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -     | -     | -   | -   |

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



22-1270: Black Mountain Village  
2024 Background AM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 857  | 1181 | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 857  | 1181 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 952  | 1312 | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 656    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *580   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *580   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -     | -   | -   |
| HCM Control Delay (s) | -   | 0     | -   | -   |
| HCM Lane LOS          | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | -   | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background School PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗    | ↗↗   | ↗↗   | ↗↗   |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 683  | 660  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 683  | 660  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 759  | 733  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1037   | 367    | 733    |
| Stage 1              | 733    | -      | -      |
| Stage 2              | 304    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *297   | *778   | 917    |
| Stage 1              | *738   | -      | -      |
| Stage 2              | *773   | -      | -      |
| Platoon blocked, %   | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | *297   | *778   | 917    |
| Mov Cap-2 Maneuver   | *297   | -      | -      |
| Stage 1              | *738   | -      | -      |
| Stage 2              | *773   | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBL | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 917 | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | 0   | -   | 0     | 0     | -   | -   |
| HCM Lane LOS          | A   | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0   | -   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗↗   | ↗↗   | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 770  | 609  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 770  | 609  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 856  | 677  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 339  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *841 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *841 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -     | -   | -   |
| HCM Control Delay (s) | -   | 0     | -   | -   |
| HCM Lane LOS          | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | -   | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Background School PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗↗   | ↗↗   | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 683  | 660  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 683  | 660  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 759  | 733  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 367  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *815 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *815 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -     | -   | -   |
| HCM Control Delay (s) | -   | 0     | -   | -   |
| HCM Lane LOS          | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | -   | -     | -   | -   |

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

**APPENDIX I**

**2029 NO BUILD PEAK HOUR ANALYSIS**

DRAFT

22-1270: Black Mountain Village  
2029 Background AM

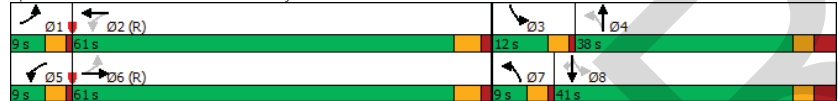
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 25    | 1318  | 13    | 519   | 13    | 3     | 118   | 2     | 22    |
| Future Volume (vph)  | 25    | 1318  | 13    | 519   | 13    | 3     | 118   | 2     | 22    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 9.0   | 61.0  | 9.0   | 61.0  | 9.0   | 38.0  | 12.0  | 41.0  | 41.0  |
| Total Split (%)      | 7.5%  | 50.8% | 7.5%  | 50.8% | 7.5%  | 31.7% | 10.0% | 34.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Background School PM

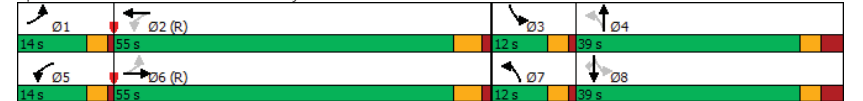
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 17    | 577   | 6     | 530   | 8     | 5     | 74    | 1     | 20    |
| Future Volume (vph)  | 17    | 577   | 6     | 530   | 8     | 5     | 74    | 1     | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Background PM

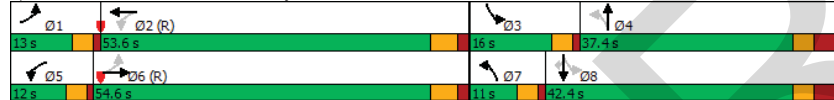
1: 32nd St. & Deer Valley Dr.  
Timings

|                      | ↖     | →     | ↗     | ↖     | ↖     | ↑     | ↗     | ↓     | ↖     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 33    | 550   | 17    | 639   | 7     | 3     | 85    | 3     | 44    |
| Future Volume (vph)  | 33    | 550   | 17    | 639   | 7     | 3     | 85    | 3     | 44    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     |       |       |       |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 13.0  | 54.6  | 12.0  | 53.6  | 11.0  | 37.4  | 16.0  | 42.4  | 42.4  |
| Total Split (%)      | 10.8% | 45.5% | 10.0% | 44.7% | 9.2%  | 31.2% | 13.3% | 35.3% | 35.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Background AM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

|                              | ↖    | →     | ↗    | ↖    | ↖    | ↑     | ↗    | ↓    | ↖    |      |      |      |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  |
| Traffic Volume (veh/h)       | 25   | 1318  | 7    | 13   | 519  | 39    | 13   | 3    | 22   | 118  | 2    | 22   |
| Future Volume (veh/h)        | 25   | 1318  | 7    | 13   | 519  | 39    | 13   | 3    | 22   | 118  | 2    | 22   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 28   | 1464  | 6    | 14   | 577  | 32    | 14   | 3    | 18   | 131  | 2    | 12   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 436  | 2556  | 10   | 192  | 2363 | 130   | 460  | 61   | 366  | 532  | 588  | 498  |
| Arrive On Green              | 0.03 | 0.49  | 0.49 | 0.02 | 0.48 | 0.48  | 0.02 | 0.26 | 0.26 | 0.07 | 0.31 | 0.31 |
| Sat Flow, veh/h              | 1781 | 5249  | 22   | 1781 | 4952 | 273   | 1781 | 231  | 1389 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 28   | 949   | 521  | 14   | 395  | 214   | 14   | 0    | 21   | 131  | 2    | 12   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702  | 1866 | 1781 | 1702 | 1821  | 1781 | 0    | 1620 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 1.0  | 23.8  | 23.8 | 0.5  | 8.2  | 8.3   | 0.7  | 0.0  | 1.2  | 6.2  | 0.1  | 0.6  |
| Cycle Q Clear(g_c), s        | 1.0  | 23.8  | 23.8 | 0.5  | 8.2  | 8.3   | 0.7  | 0.0  | 1.2  | 6.2  | 0.1  | 0.6  |
| Prop In Lane                 | 1.00 | 1.00  | 0.01 | 1.00 | 1.00 | 0.15  | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 436  | 1658  | 909  | 192  | 1624 | 869   | 460  | 0    | 427  | 532  | 588  | 498  |
| V/C Ratio(X)                 | 0.06 | 0.57  | 0.57 | 0.07 | 0.24 | 0.25  | 0.03 | 0.00 | 0.05 | 0.25 | 0.00 | 0.02 |
| Avail Cap(c_a), veh/h        | 465  | 1658  | 909  | 238  | 1624 | 869   | 507  | 0    | 427  | 532  | 588  | 498  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.4 | 21.9  | 21.9 | 17.8 | 18.6 | 18.6  | 31.4 | 0.0  | 33.0 | 27.7 | 28.2 | 28.4 |
| Incr Delay (d2), s/veh       | 0.0  | 1.4   | 2.6  | 0.1  | 0.4  | 0.7   | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.7  | 14.8  | 16.3 | 0.4  | 6.0  | 6.6   | 0.5  | 0.0  | 0.9  | 4.8  | 0.1  | 0.5  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.4 | 23.3  | 24.5 | 17.8 | 18.9 | 19.2  | 31.5 | 0.0  | 33.2 | 27.8 | 28.2 | 28.5 |
| LnGrp LOS                    | B    | C     | C    | B    | B    | B     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 1498 |       |      | 623  |      |       | 35   |      | 145  |      |      |      |
| Approach Delay, s/veh        | 23.6 |       |      | 19.0 |      |       | 32.5 |      | 27.8 |      |      |      |
| Approach LOS                 | C    |       |      | B    |      |       | C    |      | C    |      |      |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 7.0  | 63.0  | 12.0 | 38.0 | 5.9  | 64.1  | 5.9  | 44.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.0  | * 55  | 8.0  | 31.6 | 5.0  | * 55  | 5.0  | 34.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 3.0  | 10.3  | 8.2  | 3.2  | 2.5  | 25.8  | 2.7  | 2.6  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.8   | 0.0  | 0.0  | 0.0  | 8.2   | 0.0  | 0.0  |      |      |      |      |

Intersection Summary

HCM 6th Ctrl Delay: 22.8  
 HCM 6th LOS: C

Notes

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

22-1270: Black Mountain Village  
2029 Background PM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 33   | 550  | 8    | 17   | 639  | 94   | 7    | 3    | 8    | 85   | 3    | 44   |
| Future Volume (veh/h)        | 33   | 550  | 8    | 17   | 639  | 94   | 7    | 3    | 8    | 85   | 3    | 44   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |      | No   |      |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 35   | 585  | 7    | 18   | 680  | 76   | 7    | 3    | 7    | 90   | 3    | 24   |
| Peak Hour Factor             | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 400  | 2627 | 31   | 458  | 2310 | 256  | 433  | 129  | 300  | 506  | 561  | 476  |
| Arrive On Green              | 0.03 | 0.51 | 0.51 | 0.02 | 0.50 | 0.50 | 0.01 | 0.26 | 0.26 | 0.05 | 0.30 | 0.30 |
| Sat Flow, veh/h              | 1781 | 5201 | 62   | 1781 | 4664 | 517  | 1781 | 498  | 1163 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 35   | 383  | 209  | 18   | 495  | 261  | 7    | 0    | 10   | 90   | 3    | 24   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702 | 1859 | 1781 | 1702 | 1777 | 1781 | 0    | 1661 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 1.1  | 7.5  | 7.5  | 0.6  | 10.3 | 10.4 | 0.3  | 0.0  | 0.5  | 4.3  | 0.1  | 1.3  |
| Cycle Q Clear(g_c), s        | 1.1  | 7.5  | 7.5  | 0.6  | 10.3 | 10.4 | 0.3  | 0.0  | 0.5  | 4.3  | 0.1  | 1.3  |
| Prop In Lane                 | 1.00 |      | 0.03 | 1.00 |      | 0.29 | 1.00 |      | 0.70 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 400  | 1719 | 939  | 458  | 1685 | 880  | 433  | 0    | 429  | 506  | 561  | 476  |
| V/C Ratio(X)                 | 0.09 | 0.22 | 0.22 | 0.04 | 0.29 | 0.30 | 0.02 | 0.00 | 0.02 | 0.18 | 0.01 | 0.05 |
| Avail Cap(c_a), veh/h        | 483  | 1719 | 939  | 544  | 1685 | 880  | 521  | 0    | 429  | 595  | 561  | 476  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 14.4 | 16.6 | 16.6 | 14.5 | 17.9 | 17.9 | 32.4 | 0.0  | 33.2 | 28.8 | 29.4 | 29.9 |
| Incr Delay (d2), s/veh       | 0.0  | 0.3  | 0.5  | 0.0  | 0.4  | 0.9  | 0.0  | 0.0  | 0.1  | 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(95%),veh/ln     | 0.8  | 5.4  | 6.0  | 0.4  | 7.4  | 7.9  | 0.3  | 0.0  | 0.4  | 3.4  | 0.1  | 0.9  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 14.4 | 16.9 | 17.1 | 14.5 | 18.3 | 18.8 | 32.4 | 0.0  | 33.3 | 28.9 | 29.5 | 30.1 |
| LnGrp LOS                    | B    | B    | B    | B    | B    | B    | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 627  |      |      | 774  |      |      | 17   |      |      | 117  |      |      |
| Approach Delay, s/veh        | 16.8 |      |      | 18.4 |      |      | 32.9 |      |      | 29.1 |      |      |
| Approach LOS                 | B    |      |      | B    |      |      | C    |      |      | C    |      |      |

| Timer - Assigned Phs         | 1   | 2     | 3    | 4    | 5   | 6     | 7   | 8    |
|------------------------------|-----|-------|------|------|-----|-------|-----|------|
| Phs Duration (G+Y+Rc), s     | 7.4 | 65.1  | 10.0 | 37.4 | 6.3 | 66.3  | 5.0 | 42.4 |
| Change Period (Y+Rc), s      | 4.0 | * 5.7 | 4.0  | 6.4  | 4.0 | * 5.7 | 4.0 | 6.4  |
| Max Green Setting (Gmax), s  | 9.0 | * 48  | 12.0 | 31.0 | 8.0 | * 49  | 7.0 | 36.0 |
| Max Q Clear Time (g_c+I1), s | 3.1 | 12.4  | 6.3  | 2.5  | 2.6 | 9.5   | 2.3 | 3.3  |
| Green Ext Time (p_c), s      | 0.0 | 3.6   | 0.0  | 0.0  | 0.0 | 2.7   | 0.0 | 0.0  |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 18.7 |
| HCM 6th LOS          | B    |
| <b>Notes</b>         |      |

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

22-1270: Black Mountain Village  
2029 Background School PM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 17   | 577  | 9    | 6    | 530  | 71   | 8    | 5    | 9    | 74   | 1    | 20   |
| Future Volume (veh/h)        | 17   | 577  | 9    | 6    | 530  | 71   | 8    | 5    | 9    | 74   | 1    | 20   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |      | No   |      |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 25   | 861  | 10   | 9    | 791  | 79   | 12   | 7    | 10   | 110  | 1    | 15   |
| Peak Hour Factor             | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 340  | 2559 | 30   | 328  | 2262 | 225  | 464  | 189  | 270  | 533  | 591  | 501  |
| Arrive On Green              | 0.02 | 0.49 | 0.49 | 0.01 | 0.48 | 0.48 | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 |
| Sat Flow, veh/h              | 1781 | 5203 | 60   | 1781 | 4721 | 469  | 1781 | 696  | 995  | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 25   | 563  | 308  | 9    | 569  | 301  | 12   | 0    | 17   | 110  | 1    | 15   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702 | 1859 | 1781 | 1702 | 1786 | 1781 | 0    | 1691 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 0.8  | 12.1 | 12.1 | 0.3  | 12.6 | 12.7 | 0.6  | 0.0  | 0.9  | 5.2  | 0.0  | 0.8  |
| Cycle Q Clear(g_c), s        | 0.8  | 12.1 | 12.1 | 0.3  | 12.6 | 12.7 | 0.6  | 0.0  | 0.9  | 5.2  | 0.0  | 0.8  |
| Prop In Lane                 | 1.00 |      | 0.03 | 1.00 |      | 0.26 | 1.00 |      | 0.59 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 340  | 1674 | 915  | 328  | 1631 | 856  | 464  | 0    | 459  | 533  | 591  | 501  |
| V/C Ratio(X)                 | 0.07 | 0.34 | 0.34 | 0.03 | 0.35 | 0.35 | 0.03 | 0.00 | 0.04 | 0.21 | 0.00 | 0.03 |
| Avail Cap(c_a), veh/h        | 446  | 1674 | 915  | 457  | 1631 | 856  | 558  | 0    | 459  | 548  | 591  | 501  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.8 | 18.6 | 18.6 | 16.2 | 19.6 | 19.6 | 30.8 | 0.0  | 32.2 | 27.3 | 28.1 | 28.3 |
| Incr Delay (d2), s/veh       | 0.0  | 0.5  | 1.0  | 0.0  | 0.6  | 1.1  | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.6  | 8.5  | 9.3  | 0.2  | 8.8  | 9.4  | 0.5  | 0.0  | 0.7  | 4.0  | 0.0  | 0.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.8 | 19.1 | 19.6 | 16.2 | 20.1 | 20.7 | 30.9 | 0.0  | 32.3 | 27.4 | 28.1 | 28.4 |
| LnGrp LOS                    | B    | B    | B    | B    | C    | C    | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 896  |      |      | 879  |      |      | 29   |      |      | 126  |      |      |
| Approach Delay, s/veh        | 19.2 |      |      | 20.3 |      |      | 31.7 |      |      | 27.5 |      |      |
| Approach LOS                 | B    |      |      | C    |      |      | C    |      |      | C    |      |      |

| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7   | 8    |
|------------------------------|------|-------|------|------|------|-------|-----|------|
| Phs Duration (G+Y+Rc), s     | 6.8  | 63.2  | 11.0 | 39.0 | 5.3  | 64.7  | 5.6 | 44.3 |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0 | 6.4  |
| Max Green Setting (Gmax), s  | 10.0 | * 49  | 8.0  | 32.6 | 10.0 | * 49  | 8.0 | 32.6 |
| Max Q Clear Time (g_c+I1), s | 2.8  | 14.7  | 7.2  | 2.9  | 2.3  | 14.1  | 2.6 | 2.8  |
| Green Ext Time (p_c), s      | 0.0  | 4.2   | 0.0  | 0.0  | 0.0  | 4.2   | 0.0 | 0.0  |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 20.4 |
| HCM 6th LOS          | C    |
| <b>Notes</b>         |      |

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

22-1270: Black Mountain Village  
2029 Background AM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 1142 | 316  | 74   | 557  | 14   | 134  |
| Future Vol, veh/h        | 1142 | 316  | 74   | 557  | 14   | 134  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1269 | 351  | 82   | 619  | 16   | 149  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 1620   | 0 | 1857 |
| Stage 1              | -      | -      | -      | - | 1445 |
| Stage 2              | -      | -      | -      | - | 412  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 525    | - | 292  |
| Stage 1              | -      | -      | -      | - | 535  |
| Stage 2              | -      | -      | -      | - | 583  |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 525    | - | 246  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 401  |
| Stage 1              | -      | -      | -      | - | 535  |
| Stage 2              | -      | -      | -      | - | 492  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.5 | 12.4 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 401   | 646   | -   | -   | 525   | -   |
| HCM Lane V/C Ratio    | 0.039 | 0.23  | -   | -   | 0.157 | -   |
| HCM Control Delay (s) | 14.3  | 12.2  | -   | -   | 13.1  | -   |
| HCM Lane LOS          | B     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.1   | 0.9   | -   | -   | 0.6   | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 632  | 11   | 6    | 745  | 5    | 11   |
| Future Vol, veh/h        | 632  | 11   | 6    | 745  | 5    | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 665  | 12   | 6    | 784  | 5    | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 677    | 0 | 997  |
| Stage 1              | -      | -      | -      | - | 671  |
| Stage 2              | -      | -      | -      | - | 326  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | *979   | - | *535 |
| Stage 1              | -      | -      | -      | - | *799 |
| Stage 2              | -      | -      | -      | - | *645 |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | *979   | - | *531 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *597 |
| Stage 1              | -      | -      | -      | - | *799 |
| Stage 2              | -      | -      | -      | - | *641 |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.1 | 10.1 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 597   | 778   | -   | -   | *979  | -   |
| HCM Lane V/C Ratio    | 0.009 | 0.015 | -   | -   | 0.006 | -   |
| HCM Control Delay (s) | 11.1  | 9.7   | -   | -   | 8.7   | -   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   |

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

22-1270: Black Mountain Village  
2029 Background School PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 572  | 87   | 10   | 588  | 18   | 149  |
| Future Vol, veh/h        | 572  | 87   | 10   | 588  | 18   | 149  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 953  | 145  | 17   | 980  | 30   | 248  |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1098   |
| Stage 1              | -      | -      | 1026   |
| Stage 2              | -      | -      | 426    |
| Critical Hdwy        | -      | 5.34   | 5.74   |
| Critical Hdwy Stg 1  | -      | -      | 6.64   |
| Critical Hdwy Stg 2  | -      | -      | 6.04   |
| Follow-up Hdwy       | -      | 3.12   | 3.82   |
| Pot Cap-1 Maneuver   | -      | 529    | 269    |
| Stage 1              | -      | -      | 410    |
| Stage 2              | -      | -      | 573    |
| Platoon blocked, %   | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | 529    | 260    |
| Mov Cap-2 Maneuver   | -      | -      | 368    |
| Stage 1              | -      | -      | 410    |
| Stage 2              | -      | -      | 555    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 11.9 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 368   | 800   | -   | -   | 529   | -   |
| HCM Lane V/C Ratio    | 0.082 | 0.31  | -   | -   | 0.032 | -   |
| HCM Control Delay (s) | 15.6  | 11.5  | -   | -   | 12    | -   |
| HCM Lane LOS          | C     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.3   | 1.3   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
2029 Background AM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 11.9 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement                   | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations        |      | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |
| Traffic Vol, veh/h         | 2    | 13   | 0    | 36   | 0    | 134  | 0    | 11   | 21   | 354  | 36   | 0    |
| Future Vol, veh/h          | 2    | 13   | 0    | 36   | 0    | 134  | 0    | 11   | 21   | 354  | 36   | 0    |
| 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 |
| Heavy Vehicles, %          | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                  | 2    | 14   | 0    | 40   | 0    | 149  | 0    | 12   | 23   | 393  | 40   | 0    |
| Number of Lanes            | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |
| Approach                   | EB   |      |      | WB   |      |      | NB   |      |      | SB   |      |      |
| Opposing Approach          | WB   |      |      | EB   |      |      | SB   |      |      | NB   |      |      |
| Opposing Lanes             | 1    |      |      | 1    |      |      | 1    |      |      | 1    |      |      |
| Conflicting Approach Left  | SB   |      |      | NB   |      |      | EB   |      |      | WB   |      |      |
| Conflicting Lanes Left     | 1    |      |      | 1    |      |      | 1    |      |      | 1    |      |      |
| Conflicting Approach Right | NB   |      |      | SB   |      |      | WB   |      |      | EB   |      |      |
| Conflicting Lanes Right    | 1    |      |      | 1    |      |      | 1    |      |      | 1    |      |      |
| HCM Control Delay          | 8.5  |      |      | 9.2  |      |      | 7.8  |      |      | 13.5 |      |      |
| HCM LOS                    | A    |      |      | A    |      |      | A    |      |      | B    |      |      |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 13%   | 21%   | 91%   |
| Vol Thru, %            | 34%   | 87%   | 0%    | 9%    |
| Vol Right, %           | 66%   | 0%    | 79%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 32    | 15    | 170   | 390   |
| LT Vol                 | 0     | 2     | 36    | 354   |
| Through Vol            | 11    | 13    | 0     | 36    |
| RT Vol                 | 21    | 0     | 134   | 0     |
| Lane Flow Rate         | 36    | 17    | 189   | 433   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.045 | 0.025 | 0.244 | 0.559 |
| Departure Headway (Hd) | 4.536 | 5.342 | 4.654 | 4.643 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 784   | 667   | 771   | 776   |
| Service Time           | 2.594 | 3.401 | 2.694 | 2.683 |
| HCM Lane V/C Ratio     | 0.046 | 0.025 | 0.245 | 0.558 |
| HCM Control Delay      | 7.8   | 8.5   | 9.2   | 13.5  |
| HCM Lane LOS           | A     | A     | A     | B     |
| HCM 95th-tile Q        | 0.1   | 0.1   | 1     | 3.5   |



22-1270: Black Mountain Village  
2029 Background PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |   |
|---------------------------|---|
| Intersection Delay, s/veh | 7 |
| Intersection LOS          | A |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 5    | 0    | 10   | 20   | 13   | 5    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 5    | 0    | 10   | 20   | 13   | 5    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 7    | 0    | 15   | 29   | 19   | 7    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.2 | 6.8 | 6.8 | 7.3 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 29%   | 72%   |
| Vol Thru, %            | 33%   | 75%   | 0%    | 28%   |
| Vol Right, %           | 67%   | 0%    | 71%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 30    | 4     | 7     | 18    |
| LT Vol                 | 0     | 1     | 2     | 13    |
| Through Vol            | 10    | 3     | 0     | 5     |
| RT Vol                 | 20    | 0     | 5     | 0     |
| Lane Flow Rate         | 44    | 6     | 10    | 26    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.044 | 0.007 | 0.011 | 0.03  |
| Departure Headway (Hd) | 3.581 | 4.115 | 3.689 | 4.139 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 1002  | 870   | 970   | 868   |
| Service Time           | 1.594 | 2.138 | 1.712 | 2.151 |
| HCM Lane V/C Ratio     | 0.044 | 0.007 | 0.01  | 0.03  |
| HCM Control Delay      | 6.8   | 7.2   | 6.8   | 7.3   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0     | 0.1   |

22-1270: Black Mountain Village  
2029 Background School PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 12.6 |
| Intersection LOS          | B    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 45   | 38   | 1    | 16   | 0    | 90   | 0    | 33   | 51   | 93   | 5    | 0    |
| Future Vol, veh/h   | 45   | 38   | 1    | 16   | 0    | 90   | 0    | 33   | 51   | 93   | 5    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 122  | 103  | 3    | 43   | 0    | 243  | 0    | 89   | 138  | 251  | 14   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB   | SB   |
|----------------------------|------|------|------|------|
| Opposing Approach          | WB   | EB   | SB   | NB   |
| Opposing Lanes             | 1    | 1    | 1    | 1    |
| Conflicting Approach Left  | SB   | NB   | EB   | WB   |
| Conflicting Lanes Left     | 1    | 1    | 1    | 1    |
| Conflicting Approach Right | NB   | SB   | WB   | EB   |
| Conflicting Lanes Right    | 1    | 1    | 1    | 1    |
| HCM Control Delay          | 12.6 | 12.3 | 11.6 | 13.7 |
| HCM LOS                    | B    | B    | B    | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 54%   | 15%   | 95%   |
| Vol Thru, %            | 39%   | 45%   | 0%    | 5%    |
| Vol Right, %           | 61%   | 1%    | 85%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 84    | 84    | 106   | 98    |
| LT Vol                 | 0     | 45    | 16    | 93    |
| Through Vol            | 33    | 38    | 0     | 5     |
| RT Vol                 | 51    | 1     | 90    | 0     |
| Lane Flow Rate         | 227   | 227   | 286   | 265   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.348 | 0.375 | 0.422 | 0.439 |
| Departure Headway (Hd) | 5.519 | 5.95  | 5.302 | 5.967 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 647   | 599   | 673   | 599   |
| Service Time           | 3.601 | 4.032 | 3.38  | 4.044 |
| HCM Lane V/C Ratio     | 0.351 | 0.379 | 0.425 | 0.442 |
| HCM Control Delay      | 11.6  | 12.6  | 12.3  | 13.7  |
| HCM Lane LOS           | B     | B     | B     | B     |
| HCM 95th-tile Q        | 1.6   | 1.7   | 2.1   | 2.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      | -    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 380  | 7    | 11   | 171  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 380  | 7    | 11   | 171  | 0    | 0    | 0    | 0    | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 422  | 8    | 12   | 190  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 190    | 0      | 430    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1382   | -      | 1128   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1382   | -      | 1128   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-----|-----|-----|-----|-----|
| Capacity (veh/h)      | 1382 | -   | -   | 1128  | -   | -   | -   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.011 | -   | -   | -   | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 8.2   | 0   | -   | 0   | -   | 0   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A   | -   | A   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | -   | -   | -   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      | -    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 25   | 10   | 10   | 8    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 25   | 10   | 10   | 8    | 0    | 0    | 0    | 0    | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 69   | 69   | 69   | 69   | 90   | 69   | 90   | 69   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 36   | 14   | 14   | 12   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 12     | 0      | 50     |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1606   | -      | 1556   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1606   | -      | 1556   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 4.1 | 0  |
| HCM LOS              | A  |     |    |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-----|-----|-----|-----|-----|
| Capacity (veh/h)      | 1606 | -   | -   | 1556  | -   | -   | -   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.009 | -   | -   | -   | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 7.3   | 0   | -   | 0   | -   | 0   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A   | -   | A   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | -   | -   | -   |

22-1270: Black Mountain Village  
2029 Background School PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      |      |      | ↕    |      |      |      |
| Traffic Vol, veh/h       | 0    | 173  | 8    | 17   | 106  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 173  | 8    | 17   | 106  | 0    | 0    | 0    | 0    | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 38   | 38   | 38   | 38   | 90   | 38   | 90   | 38   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 455  | 21   | 45   | 279  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 279    | 0      | 476    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1282   | -      | 1084   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1282   | -      | 1084   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1282 | -   | -   | 1084  | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.041 | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | 8.5   | 0   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0.1   | -   | -   | -     |

22-1270: Black Mountain Village  
2029 Background AM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      |      |      | ↕    |      |      |      |
| Traffic Vol, veh/h       | 0    | 378  | 0    | 0    | 180  | 0    | 2    | 0    | 67   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 378  | 0    | 0    | 180  | 0    | 2    | 0    | 67   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 420  | 0    | 0    | 200  | 0    | 2    | 0    | 74   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 200    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | *1415  | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *1415  | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 0  | 10.1 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 788   | *1415 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.097 | -     | -   | -   | -   | -     |
| HCM Control Delay (s) | 10.1  | 0     | -   | -   | -   | 0     |
| HCM Lane LOS          | B     | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | -   | -     |

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

22-1270: Black Mountain Village  
2029 Background PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      | ↕↕   |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 0    | 24   | 0    | 0    | 15   | 0    | 3    | 0    | 22   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 24   | 0    | 0    | 15   | 0    | 3    | 0    | 22   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 78   | 78   | 78   | 78   | 90   | 78   | 90   | 78   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 31   | 0    | 0    | 19   | 0    | 4    | 0    | 28   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 19     | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | *1610  | -      | 0      | 0      |
| Stage 1              | -      | 0      | 0      | -      |
| Stage 2              | -      | 0      | 0      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *1610  | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1048  | *1610 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.031 | -     | -   | -   | -   | -     |
| HCM Control Delay (s) | 8.5   | 0     | -   | -   | -   | 0     |
| HCM Lane LOS          | A     | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | -   | -     |

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

22-1270: Black Mountain Village  
2029 Background School PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      | ↕↕   |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 0    | 172  | 0    | 0    | 119  | 0    | 3    | 0    | 70   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 172  | 0    | 0    | 119  | 0    | 3    | 0    | 70   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 39   | 39   | 39   | 39   | 90   | 39   | 90   | 39   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 441  | 0    | 0    | 305  | 0    | 8    | 0    | 179  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 305    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1404   | -      | 0      | 0      |
| Stage 1              | -      | 0      | 0      | -      |
| Stage 2              | -      | 0      | 0      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1404   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 0  | 11.4 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 753   | 1404 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.249 | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 11.4  | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | B     | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 1     | 0    | -   | -   | -   | -     |

22-1270: Black Mountain Village  
2029 Background AM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 445  | 0    | 0    | 183  | 0    | 24   |
| Future Vol, veh/h        | 445  | 0    | 0    | 183  | 0    | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 494  | 0    | 0    | 203  | 0    | 27   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 494    | 0 | 247         |
| Stage 1              | -      | -      | -      | - | 494         |
| Stage 2              | -      | -      | -      | - | 203         |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83        |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43        |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1068   | - | *545 754    |
| Stage 1              | -      | -      | -      | - | *580        |
| Stage 2              | -      | -      | -      | - | *892        |
| Platoon blocked, %   | -      | -      | -      | - | 1           |
| Mov Cap-1 Maneuver   | -      | -      | 1068   | - | *545 754    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *545        |
| Stage 1              | -      | -      | -      | - | *580        |
| Stage 2              | -      | -      | -      | - | *892        |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 10 |
| HCM LOS              |    |    | B  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 754   | -   | -   | 1068 | -   |
| HCM Lane V/C Ratio    | 0.035 | -   | -   | -    | -   |
| HCM Control Delay (s) | 10    | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0    | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 45   | 1    | 1    | 17   | 0    | 21   |
| Future Vol, veh/h        | 45   | 1    | 1    | 17   | 0    | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 56   | 1    | 1    | 21   | 0    | 26   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 57     | 0 | 80 29       |
| Stage 1              | -      | -      | -      | - | 57          |
| Stage 2              | -      | -      | -      | - | 23          |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83        |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43        |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1547   | - | 937 1040    |
| Stage 1              | -      | -      | -      | - | 959         |
| Stage 2              | -      | -      | -      | - | 1014        |
| Platoon blocked, %   | -      | -      | -      | - | 1           |
| Mov Cap-1 Maneuver   | -      | -      | 1547   | - | 937 1040    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 937         |
| Stage 1              | -      | -      | -      | - | 959         |
| Stage 2              | -      | -      | -      | - | 1013        |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.4 | 8.6 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 1040  | -   | -   | 1547  | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.6   | -   | -   | 7.3   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

22-1270: Black Mountain Village  
2029 Background School PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |  |
|--------------------------|------|------|------|------|------|------|--|
| Int Delay, s/veh         | 1    |      |      |      |      |      |  |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    |      |  |
| Traffic Vol, veh/h       | 242  | 0    | 0    | 121  | 3    | 32   |  |
| Future Vol, veh/h        | 242  | 0    | 0    | 121  | 3    | 32   |  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |  |
| RT Channelized           | -    | None | -    | None | -    | None |  |
| Storage Length           | -    | -    | -    | -    | 0    | -    |  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |  |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |  |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |  |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Mvmt Flow                | 621  | 0    | 0    | 310  | 8    | 82   |  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 621    | 0 | 931   |
| Stage 1              | -      | -      | -      | - | 621   |
| Stage 2              | -      | -      | -      | - | 310   |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43  |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 |
| Pot Cap-1 Maneuver   | -      | -      | 958    | - | 332   |
| Stage 1              | -      | -      | -      | - | 499   |
| Stage 2              | -      | -      | -      | - | 869   |
| Platoon blocked, %   | -      | -      | -      | - | 1     |
| Mov Cap-1 Maneuver   | -      | -      | 958    | - | 332   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 332   |
| Stage 1              | -      | -      | -      | - | 499   |
| Stage 2              | -      | -      | -      | - | 869   |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.7 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-----|-----|
| Capacity (veh/h)      | 629   | -   | -   | 958 | -   |
| HCM Lane V/C Ratio    | 0.143 | -   | -   | -   | -   |
| HCM Control Delay (s) | 11.7  | -   | -   | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | A   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0   | -   |

22-1270: Black Mountain Village  
2029 Background AM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 31   | 11   | 48   | 79   | 5    | 6    | 23   | 298  | 74   | 5    | 574  | 23   |
| Future Vol, veh/h        | 31   | 11   | 48   | 79   | 5    | 6    | 23   | 298  | 74   | 5    | 574  | 23   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 34   | 12   | 53   | 88   | 6    | 7    | 26   | 331  | 82   | 6    | 638  | 26   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |
|----------------------|--------|--------|--------|--------|------|------|
| Conflicting Flow All | 884    | 1128   | 332    | 656    | 1059 | 166  |
| Stage 1              | 663    | 663    | -      | 383    | 383  | -    |
| Stage 2              | 221    | 465    | -      | 273    | 676  | -    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   | 5.54 | -    |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | *446   | 308    | 566    | *647   | *341 | *971 |
| Stage 1              | *349   | 457    | -      | *879   | *803 | -    |
| Stage 2              | *879   | 803    | -      | *674   | *451 | -    |
| Platoon blocked, %   | 1      | 1      | -      | 1      | 1    | -    |
| Mov Cap-1 Maneuver   | *420   | 292    | 566    | *546   | *324 | *971 |
| Mov Cap-2 Maneuver   | *420   | 292    | -      | *546   | *324 | -    |
| Stage 1              | *333   | 455    | -      | *838   | *766 | -    |
| Stage 2              | *827   | 766    | -      | *592   | *449 | -    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 13.8 | 12.8 | 0.7 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 567   | -   | -   | 420   | 482   | 546   | 509   | *1453 | -   | -   |
| HCM Lane V/C Ratio    | 0.045 | -   | -   | 0.082 | 0.136 | 0.161 | 0.024 | 0.004 | -   | -   |
| HCM Control Delay (s) | 11.6  | -   | -   | 14.3  | 13.6  | 12.9  | 12.2  | 7.5   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.3   | 0.5   | 0.6   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 52   | 21   | 23   | 74   | 22   | 10   | 29   | 402  | 57   | 10   | 204  | 39   |
| Future Vol, veh/h        | 52   | 21   | 23   | 74   | 22   | 10   | 29   | 402  | 57   | 10   | 204  | 39   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 69   | 28   | 31   | 99   | 29   | 13   | 39   | 536  | 76   | 13   | 272  | 52   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 685    | 1014   | 162    | 763    |
| Stage 1              | 324    | 324    | -      | 614    |
| Stage 2              | 361    | 690    | -      | 149    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *827   | 460    | *726   | *497   |
| Stage 1              | *595   | 648    | -      | *832   |
| Stage 2              | *832   | 752    | -      | *800   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *742   | 434    | *726   | *631   |
| Mov Cap-2 Maneuver   | *742   | 434    | -      | *631   |
| Stage 1              | *566   | 642    | -      | *792   |
| Stage 2              | *749   | 716    | -      | *726   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 11.3 | 11.9 | 0.6 | 0.3 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 818   | -   | -   | 742   | 550   | 631   | 553   | *1375 | -   | -   |
| HCM Lane V/C Ratio    | 0.047 | -   | -   | 0.093 | 0.107 | 0.156 | 0.077 | 0.01  | -   | -   |
| HCM Control Delay (s) | 9.6   | -   | -   | 10.4  | 12.3  | 11.8  | 12.1  | 7.6   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.3   | 0.4   | 0.6   | 0.2   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background School PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 13   | 7    | 26   | 54   | 7    | 10   | 23   | 232  | 52   | 2    | 235  | 24   |
| Future Vol, veh/h        | 13   | 7    | 26   | 54   | 7    | 10   | 23   | 232  | 52   | 2    | 235  | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 8    | 29   | 61   | 8    | 11   | 26   | 261  | 58   | 2    | 264  | 27   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 469    | 653    | 146    | 427    |
| Stage 1              | 282    | 282    | -      | 313    |
| Stage 2              | 187    | 371    | -      | 114    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *757   | 547    | *744   | *809   |
| Stage 1              | *635   | 676    | -      | *902   |
| Stage 2              | *902   | 811    | -      | *839   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *722   | 530    | *744   | *750   |
| Mov Cap-2 Maneuver   | *722   | 530    | -      | *750   |
| Stage 1              | *615   | 675    | -      | *874   |
| Stage 2              | *856   | 786    | -      | *796   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.5 | 10.1 | 0.7 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 848  | -   | -   | 722   | 685   | 750   | 757   | *1492 | -   | -   |
| HCM Lane V/C Ratio    | 0.03 | -   | -   | 0.02  | 0.054 | 0.081 | 0.025 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.4  | -   | -   | 10.1  | 10.6  | 10.2  | 9.9   | 7.4   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | B     | B     | B     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | -   | 0.1   | 0.2   | 0.3   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background AM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 28   | 3    | 144  | 8    | 1    | 0    | 100  | 366  | 13   | 0    | 695  | 7    |
| Future Vol, veh/h        | 28   | 3    | 144  | 8    | 1    | 0    | 100  | 366  | 13   | 0    | 695  | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 31   | 3    | 160  | 9    | 1    | 0    | 111  | 407  | 14   | 0    | 772  | 8    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1161   | 1419   | 390    | 946    |
| Stage 1              | 776    | 776    | -      | 636    |
| Stage 2              | 385    | 643    | -      | 310    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 279    | 180    | 520    | 380    |
| Stage 1              | 284    | 406    | -      | 546    |
| Stage 2              | 832    | 604    | -      | 619    |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | 230    | 140    | 520    | 215    |
| Mov Cap-2 Maneuver   | 230    | 140    | -      | 215    |
| Stage 1              | 221    | 406    | -      | 425    |
| Stage 2              | 645    | 470    | -      | 425    |

| Approach             | EB | WB   | NB | SB |
|----------------------|----|------|----|----|
| HCM Control Delay, s | 21 | 23.7 | 3  | 0  |
| HCM LOS              | C  | C    |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h)      | 499   | -   | -   | 417        | 203   | 986 | -   |
| HCM Lane V/C Ratio    | 0.223 | -   | -   | 0.466      | 0.049 | -   | -   |
| HCM Control Delay (s) | 14.3  | -   | -   | 21         | 23.7  | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | C          | C     | A   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | 2.4        | 0.2   | 0   | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 14   | 1    | 137  | 9    | 1    | 3    | 109  | 471  | 10   | 3    | 287  | 10   |
| Future Vol, veh/h        | 14   | 1    | 137  | 9    | 1    | 3    | 109  | 471  | 10   | 3    | 287  | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 19   | 1    | 188  | 12   | 1    | 4    | 149  | 645  | 14   | 4    | 393  | 14   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 965    | 1365   | 204    | 1116   |
| Stage 1              | 408    | 408    | -      | 950    |
| Stage 2              | 557    | 957    | -      | 166    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 413    | 215    | 683    | 330    |
| Stage 1              | 505    | 595    | -      | 369    |
| Stage 2              | 735    | 461    | -      | 753    |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | 344    | 172    | 683    | 201    |
| Mov Cap-2 Maneuver   | 344    | 172    | -      | 201    |
| Stage 1              | 405    | 592    | -      | 295    |
| Stage 2              | 584    | 369    | -      | 542    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 13.8 | 21.2 | 2  | 0.1 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 749   | -   | -   | 615        | 240   | 822   | -   |
| HCM Lane V/C Ratio    | 0.199 | -   | -   | 0.339      | 0.074 | 0.005 | -   |
| HCM Control Delay (s) | 11    | -   | -   | 13.8       | 21.2  | 9.4   | -   |
| HCM Lane LOS          | B     | -   | -   | B          | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 1.5        | 0.2   | 0     | -   |

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



22-1270: Black Mountain Village  
2029 Background School PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th WSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      |
| Traffic Vol, veh/h       | 7    | 0    | 82   | 13   | 0    | 8    | 98   | 292  | 8    | 3    | 311  | 1    |
| Future Vol, veh/h        | 7    | 0    | 82   | 13   | 0    | 8    | 98   | 292  | 8    | 3    | 311  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8    | 0    | 93   | 15   | 0    | 9    | 111  | 332  | 9    | 3    | 353  | 1    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 715    | 923    | 177    | 706    |
| Stage 1              | 360    | 360    | -      | 559    |
| Stage 2              | 355    | 563    | -      | 147    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 472    | 335    | 711    | 478    |
| Stage 1              | 544    | 625    | -      | 540    |
| Stage 2              | 764    | 607    | -      | 773    |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | 416    | 287    | 711    | 370    |
| Mov Cap-2 Maneuver   | 416    | 287    | -      | 370    |
| Stage 1              | 468    | 623    | -      | 464    |
| Stage 2              | 651    | 522    | -      | 670    |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 11.3 | 13 | 2.5 | 0.1 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 793  | -   | -   | 673   | 473   | 983   | -   | -   |
| HCM Lane V/C Ratio    | 0.14 | -   | -   | 0.15  | 0.05  | 0.003 | -   | -   |
| HCM Control Delay (s) | 10.3 | -   | -   | 11.3  | 13    | 8.7   | -   | -   |
| HCM Lane LOS          | B    | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.5  | -   | -   | 0.5   | 0.2   | 0     | -   | -   |

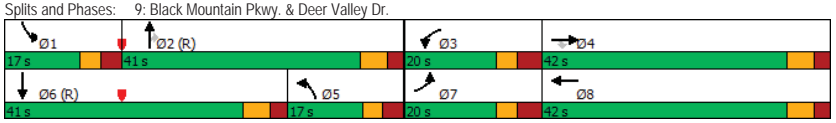
Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

22-1270: Black Mountain Village  
2029 Background AM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 61    | 741   | 474   | 154   | 237   | 322   | 368   | 257   | 99    | 675   |
| Future Volume (vph)  | 61    | 741   | 474   | 154   | 237   | 322   | 368   | 257   | 99    | 675   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (%)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (s)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 68 (57%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2029 Background PM

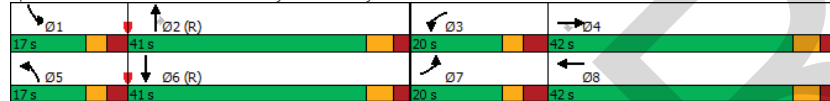
9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 28    | 394   | 222   | 159   | 502   | 193   | 466   | 191   | 85    | 292   |
| Future Volume (vph)  | 28    | 394   | 222   | 159   | 502   | 193   | 466   | 191   | 85    | 292   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (%)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max | None  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 34 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Background School PM

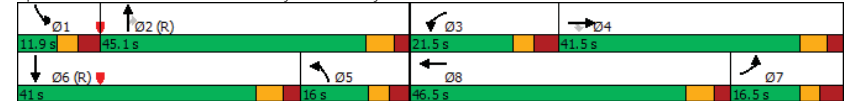
9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL  | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗  | ↖ ↗   |
| Traffic Volume (vph) | 67    | 370   | 285   | 132   | 284   | 275   | 278   | 201   | 54   | 311   |
| Future Volume (vph)  | 67    | 370   | 285   | 132   | 284   | 275   | 278   | 201   | 54   | 311   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1    | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |      |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1    | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |      |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 5.0  | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1 | 40.4  |
| Total Split (s)      | 16.5  | 41.5  | 41.5  | 16.5  | 41.5  | 16.0  | 45.1  | 45.1  | 11.9 | 41.0  |
| Total Split (%)      | 13.8% | 34.6% | 34.6% | 17.9% | 38.8% | 13.3% | 37.6% | 37.6% | 9.9% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1  | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1  | 6.4   |
| Lead/Lag             | Lag   | Lag   | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   | Lead | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None | C-Max |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Background AM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↑↑↑  | ↔    | ↔    | ↑↑↑  | ↔    | ↔    | ↑↑↑  | ↔    | ↔    | ↑↑↑  | ↔    |
| Traffic Volume (veh/h)       | 61   | 741  | 474  | 154  | 237  | 51   | 322  | 368  | 257  | 99   | 675  | 72   |
| Future Volume (veh/h)        | 61   | 741  | 474  | 154  | 237  | 51   | 322  | 368  | 257  | 99   | 675  | 72   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 68   | 823  | 0    | 171  | 263  | 43   | 358  | 409  | 0    | 110  | 750  | 60   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 129  | 1046 |      | 229  | 1039 | 164  | 779  | 2395 |      | 163  | 1390 | 111  |
| Arrive On Green              | 0.01 | 0.07 | 0.00 | 0.07 | 0.23 | 0.23 | 0.38 | 0.78 | 0.00 | 0.05 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4445 | 703  | 3456 | 5106 | 1585 | 3456 | 4822 | 384  |
| Grp Volume(v), veh/h         | 68   | 823  | 0    | 171  | 199  | 107  | 358  | 409  | 0    | 110  | 528  | 282  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702 | 1585 | 1728 | 1702 | 1744 | 1728 | 1702 | 1585 | 1728 | 1702 | 1801 |
| Q Serve(g_s), s              | 2.3  | 19.0 | 0.0  | 5.8  | 5.7  | 6.0  | 9.4  | 2.4  | 0.0  | 3.8  | 15.7 | 15.8 |
| Cycle Q Clear(g_c), s        | 2.3  | 19.0 | 0.0  | 5.8  | 5.7  | 6.0  | 9.4  | 2.4  | 0.0  | 3.8  | 15.7 | 15.8 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.40 | 1.00 |      | 1.00 | 1.00 |      | 0.21 |
| Lane Grp Cap(c), veh/h       | 129  | 1046 |      | 229  | 796  | 408  | 779  | 2395 |      | 163  | 982  | 519  |
| V/C Ratio(X)                 | 0.53 | 0.79 |      | 0.75 | 0.25 | 0.26 | 0.46 | 0.17 |      | 0.67 | 0.54 | 0.54 |
| Avail Cap(c_a), veh/h        | 389  | 1511 |      | 389  | 1007 | 516  | 779  | 2395 |      | 314  | 982  | 519  |
| HCM Platoon Ratio            | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 58.2 | 53.4 | 0.0  | 55.0 | 37.4 | 37.5 | 31.9 | 7.2  | 0.0  | 56.2 | 36.0 | 36.0 |
| Incr Delay (d2), s/veh       | 1.2  | 1.0  | 0.0  | 1.8  | 0.1  | 0.1  | 0.2  | 0.2  | 0.0  | 1.8  | 2.1  | 4.0  |
| 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(95%),veh/ln     | 1.9  | 13.7 | 0.0  | 4.7  | 4.3  | 4.7  | 6.5  | 1.6  | 0.0  | 3.0  | 11.1 | 12.0 |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 59.4 | 54.4 | 0.0  | 56.9 | 37.5 | 37.6 | 32.0 | 7.3  | 0.0  | 58.0 | 38.1 | 40.0 |
| LnGrp LOS                    | E    | D    |      | E    | D    | D    | C    | A    |      | E    | D    | D    |
| Approach Vol, veh/h          |      | 891  |      |      | 477  |      |      | 767  |      |      | 920  |      |
| Approach Delay, s/veh        |      | 54.8 |      |      | 44.5 |      |      | 18.9 |      |      | 41.1 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | B    |      |      | D    |      |

| Timer - Assigned Phs        | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|-----------------------------|------|------|------|------|------|------|------|------|
| Phs Duration (G+Y+Rc), s    | 11.8 | 62.7 | 14.4 | 31.1 | 33.5 | 41.0 | 11.0 | 34.6 |
| Change Period (Y+Rc), s     | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | 6.4  | 6.5  | 6.5  |
| Max Green Setting (Gmax), s | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | 35   | 13.5 | 35.5 |
| Max Q Clear Time (g_c+1), s | 5.8  | 4.4  | 7.8  | 21.0 | 11.4 | 17.8 | 4.3  | 8.0  |
| Green Ext Time (p_c), s     | 0.1  | 2.0  | 0.1  | 3.5  | 0.0  | 3.4  | 0.1  | 1.3  |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 40.0 |
| HCM 6th LOS        | D    |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Background PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↑↑↑  | ↔    | ↔    | ↑↑↑  | ↔    | ↔    | ↑↑↑  | ↔    | ↔    | ↑↑↑  | ↔    |
| Traffic Volume (veh/h)       | 28   | 394  | 222  | 159  | 502  | 96   | 193  | 466  | 191  | 85   | 292  | 56   |
| Future Volume (veh/h)        | 28   | 394  | 222  | 159  | 502  | 96   | 193  | 466  | 191  | 85   | 292  | 56   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 32   | 453  | 0    | 183  | 577  | 82   | 222  | 536  | 0    | 98   | 336  | 48   |
| Peak Hour Factor             | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 94   | 622  |      | 241  | 743  | 104  | 274  | 2821 |      | 150  | 2341 | 326  |
| Arrive On Green              | 0.01 | 0.04 | 0.00 | 0.07 | 0.16 | 0.16 | 0.16 | 1.00 | 0.00 | 0.04 | 0.52 | 0.52 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4526 | 634  | 3456 | 5106 | 1585 | 3456 | 4530 | 631  |
| Grp Volume(v), veh/h         | 32   | 453  | 0    | 183  | 432  | 227  | 222  | 536  | 0    | 98   | 250  | 134  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702 | 1585 | 1728 | 1702 | 1756 | 1728 | 1702 | 1585 | 1728 | 1702 | 1757 |
| Q Serve(g_s), s              | 1.1  | 10.5 | 0.0  | 6.2  | 14.6 | 14.9 | 7.4  | 0.0  | 0.0  | 3.4  | 4.6  | 4.8  |
| Cycle Q Clear(g_c), s        | 1.1  | 10.5 | 0.0  | 6.2  | 14.6 | 14.9 | 7.4  | 0.0  | 0.0  | 3.4  | 4.6  | 4.8  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.36 | 1.00 |      | 1.00 | 1.00 |      | 0.36 |
| Lane Grp Cap(c), veh/h       | 94   | 622  |      | 241  | 559  | 288  | 274  | 2821 |      | 150  | 1759 | 908  |
| V/C Ratio(X)                 | 0.34 | 0.73 |      | 0.76 | 0.77 | 0.79 | 0.81 | 0.19 |      | 0.65 | 0.14 | 0.15 |
| Avail Cap(c_a), veh/h        | 389  | 1511 |      | 389  | 1007 | 520  | 314  | 2821 |      | 314  | 1759 | 908  |
| HCM Platoon Ratio            | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 58.4 | 55.6 | 0.0  | 54.8 | 48.0 | 48.1 | 49.6 | 0.0  | 0.0  | 56.5 | 15.1 | 15.2 |
| Incr Delay (d2), s/veh       | 0.8  | 0.6  | 0.0  | 1.9  | 0.9  | 1.8  | 11.5 | 0.1  | 0.0  | 1.8  | 0.2  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.9  | 8.5  | 0.0  | 5.0  | 10.3 | 10.9 | 6.2  | 0.1  | 0.0  | 2.7  | 3.3  | 3.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 59.2 | 56.2 | 0.0  | 56.7 | 48.9 | 49.9 | 61.1 | 0.1  | 0.0  | 58.3 | 15.3 | 15.5 |
| LnGrp LOS                    | E    | E    |      | E    | D    | D    | E    | A    |      | E    | B    | B    |
| Approach Vol, veh/h          |      | 485  |      |      | 842  |      |      | 758  |      |      | 482  |      |
| Approach Delay, s/veh        |      | 56.4 |      |      | 50.9 |      |      | 18.0 |      |      | 24.1 |      |
| Approach LOS                 |      | E    |      |      | D    |      |      | B    |      |      | C    |      |

| Timer - Assigned Phs        | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|-----------------------------|------|------|------|------|------|------|------|------|
| Phs Duration (G+Y+Rc), s    | 11.3 | 72.7 | 14.9 | 21.1 | 15.6 | 68.4 | 9.8  | 26.2 |
| Change Period (Y+Rc), s     | 6.1  | 6.4  | 6.5  | 6.5  | 6.1  | 6.4  | 6.5  | 6.5  |
| Max Green Setting (Gmax), s | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | 34.6 | 13.5 | 35.5 |
| Max Q Clear Time (g_c+1), s | 5.4  | 2.0  | 8.2  | 12.5 | 9.4  | 6.8  | 3.1  | 16.9 |
| Green Ext Time (p_c), s     | 0.1  | 2.7  | 0.1  | 2.1  | 0.1  | 1.6  | 0.0  | 2.8  |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 37.2 |
| HCM 6th LOS        | D    |

Notes  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Background School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔↔   | ↔    | ↔↔   | ↔↔   | ↔    | ↔    | ↔↔   | ↔    | ↔    | ↔↔   | ↔    |
| Traffic Volume (veh/h)       | 67   | 370  | 285  | 132  | 284  | 53   | 275  | 278  | 201  | 54   | 311  | 40   |
| Future Volume (veh/h)        | 67   | 370  | 285  | 132  | 284  | 53   | 275  | 278  | 201  | 54   | 311  | 40   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 97   | 536  | 0    | 191  | 412  | 58   | 399  | 403  | 0    | 78   | 451  | 44   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 288  | 687  |      | 250  | 559  | 77   | 1002 | 2768 |      | 133  | 1366 | 131  |
| Arrive On Green              | 0.17 | 0.27 | 0.00 | 0.07 | 0.12 | 0.12 | 0.10 | 0.18 | 0.00 | 0.04 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4536 | 625  | 3456 | 5106 | 1585 | 3456 | 4737 | 456  |
| Grp Volume(v), veh/h         | 97   | 536  | 0    | 191  | 307  | 163  | 399  | 403  | 0    | 78   | 322  | 173  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702 | 1585 | 1728 | 1702 | 1758 | 1728 | 1702 | 1585 | 1728 | 1702 | 1788 |
| Q Serve(g_s), s              | 3.0  | 11.7 | 0.0  | 6.5  | 10.4 | 10.8 | 13.0 | 8.0  | 0.0  | 2.7  | 8.9  | 9.1  |
| Cycle Q Clear(g_c), s        | 3.0  | 11.7 | 0.0  | 6.5  | 10.4 | 10.8 | 13.0 | 8.0  | 0.0  | 2.7  | 8.9  | 9.1  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.36 | 1.00 |      | 1.00 | 1.00 |      | 0.25 |
| Lane Grp Cap(c), veh/h       | 288  | 687  |      | 250  | 420  | 217  | 1002 | 2768 |      | 133  | 982  | 516  |
| V/C Ratio(X)                 | 0.34 | 0.78 |      | 0.76 | 0.73 | 0.75 | 0.40 | 0.15 |      | 0.59 | 0.33 | 0.33 |
| Avail Cap(c_a), veh/h        | 288  | 1489 |      | 432  | 1135 | 586  | 1002 | 2768 |      | 167  | 982  | 516  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 47.0 | 42.2 | 0.0  | 54.7 | 50.7 | 50.8 | 44.4 | 25.8 | 0.0  | 56.7 | 33.6 | 33.6 |
| Incr Delay (d2), s/veh       | 0.3  | 0.7  | 0.0  | 1.8  | 0.9  | 2.0  | 0.1  | 0.1  | 0.0  | 1.5  | 0.9  | 1.7  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 2.3  | 7.8  | 0.0  | 5.2  | 8.0  | 8.5  | 10.1 | 6.3  | 0.0  | 2.1  | 6.9  | 7.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 47.3 | 43.0 | 0.0  | 56.5 | 51.6 | 52.8 | 44.5 | 25.9 | 0.0  | 58.3 | 34.5 | 35.4 |
| LnGrp LOS                    | D    | D    |      | E    | D    | D    | D    | C    |      | E    | C    | D    |
| Approach Vol, veh/h          |      | 633  |      |      | 661  |      |      | 802  |      |      | 573  |      |
| Approach Delay, s/veh        |      | 43.6 |      |      | 53.3 |      |      | 35.2 |      |      | 38.0 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | D    |      |      | D    |      |

| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |
|------------------------------|------|------|------|------|------|-------|------|------|
| Phs Duration (G+Y+Rc), s     | 10.7 | 71.5 | 15.2 | 22.6 | 41.2 | 41.0  | 16.5 | 21.3 |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |
| Max Green Setting (Gmax), s  | 5.8  | 38.7 | 15.0 | 35.0 | 9.9  | * 35  | 10.0 | 40.0 |
| Max Q Clear Time (g_c+I1), s | 4.7  | 10.0 | 8.5  | 13.7 | 15.0 | 11.1  | 5.0  | 12.8 |
| Green Ext Time (p_c), s      | 0.0  | 1.9  | 0.2  | 2.5  | 0.0  | 2.1   | 0.1  | 2.0  |

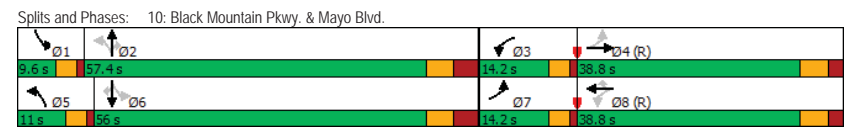
Intersection Summary  
 HCM 6th Ctrl Delay 42.3  
 HCM 6th LOS D  
 Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Background AM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT | WBL   | WBT | WBR  | NBL   | NBT | NBR  | SBL   | SBT  | SBR  |
|----------------------|-------|-----|-------|-----|------|-------|-----|------|-------|------|------|
| Lane Configurations  | ↔     | ↔   | ↔     | ↔   | ↔    | ↔↔    | ↔↔  | ↔    | ↔     | ↔↔   | ↔    |
| Traffic Volume (vph) | 323   | 33  | 316   | 63  | 149  | 22    | 474 | 154  | 48    | 1158 | 98   |
| Future Volume (vph)  | 323   | 33  | 316   | 63  | 149  | 22    | 474 | 154  | 48    | 1158 | 98   |
| Turn Type            | pm+pt | NA  | pm+pt | NA  | Perm | pm+pt | NA  | Perm | pm+pt | NA   | Perm |
| Protected Phases     | 7     | 4   | 3     | 8   |      | 5     | 2   |      | 1     | 6    |      |
| Permitted Phases     | 4     |     | 8     |     | 8    | 2     |     | 2    | 6     |      | 6    |
| Detector Phases      | 7     | 4   | 3     | 8   | 8    | 5     | 2   | 2    | 1     | 6    | 6    |

| Switch Phase         | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0  | 5.0   | 5.0   | 5.0  | 5.0   | 5.0   |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Minimum Initial (s)  | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5  | 25.7  | 25.7  | 9.5  | 43.7  | 43.7  |
| Minimum Split (s)    | 14.2  | 38.8  | 14.2  | 38.8  | 38.8  | 11.0 | 57.4  | 57.4  | 9.6  | 56.0  | 56.0  |
| Total Split (%)      | 11.8% | 32.3% | 11.8% | 32.3% | 32.3% | 9.2% | 47.8% | 47.8% | 8.0% | 46.7% | 46.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   | 4.0   | 3.0  | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0  | 3.7   | 3.7   | 1.0  | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0  | 7.7   | 7.7   | 4.0  | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead | Lag   | Lag   | Lead | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes  | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None | Max   | Max   | None | Max   | Max   |



22-1270: Black Mountain Village  
2029 Background PM

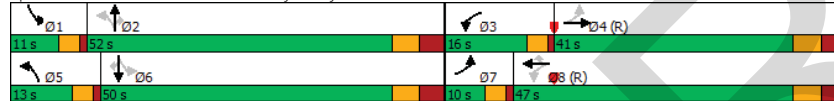
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 32    | 11    | 188   | 3     | 105   | 7     | 713   | 156   | 71    | 593   | 8     |
| Future Volume (vph)  | 32    | 11    | 188   | 3     | 105   | 7     | 713   | 156   | 71    | 593   | 8     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 10.0  | 41.0  | 16.0  | 47.0  | 47.0  | 13.0  | 52.0  | 52.0  | 11.0  | 50.0  | 50.0  |
| Total Split (%)      | 8.3%  | 34.2% | 13.3% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 9.2%  | 41.7% | 41.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2029 Background School PM

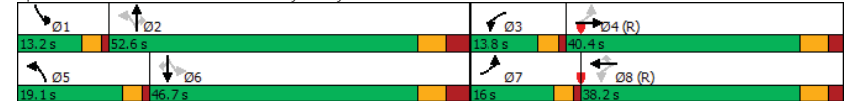
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 139   | 32    | 123   | 10    | 108   | 36    | 507   | 163   | 107   | 547   | 75    |
| Future Volume (vph)  | 139   | 32    | 123   | 10    | 108   | 36    | 507   | 163   | 107   | 547   | 75    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 16.0  | 40.4  | 13.8  | 38.2  | 38.2  | 19.1  | 52.6  | 52.6  | 13.2  | 46.7  | 46.7  |
| Total Split (%)      | 13.3% | 33.7% | 11.5% | 31.8% | 31.8% | 15.9% | 43.8% | 43.8% | 11.0% | 38.9% | 38.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2029 Background AM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | [Diagrammatic icons for lane configurations] |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 323  | 33   | 113  | 316  | 63   | 149  | 22   | 474  | 154  | 48   | 1158 | 98   |
| Future Volume (veh/h)        | 323  | 33   | 113  | 316  | 63   | 149  | 22   | 474  | 154  | 48   | 1158 | 98   |
| Initial Q (Ob), veh          | 0  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00   |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |      | No   |      |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1870   | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 359  | 37   | 95   | 351  | 70   | 83   | 24   | 527  | 0    | 53   | 1287 | 55   |
| Peak Hour Factor             | 0.90   | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2  | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 525  | 131  | 336  | 488  | 528  | 447  | 135  | 2115 |      | 425  | 1513 | 675  |
| Arrive On Green              | 0.09   | 0.28 | 0.28 | 0.09 | 0.28 | 0.28 | 0.02 | 0.41 | 0.00 | 0.02 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 1781   | 464  | 1192 | 1781 | 1870 | 1585 | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 359  | 0    | 132  | 351  | 70   | 83   | 24   | 527  | 0    | 53   | 1287 | 55   |
| Grp Sat Flow(s),veh/h/ln     | 1781   | 0    | 1656 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 10.2   | 0.0  | 7.5  | 10.2 | 3.3  | 4.8  | 0.9  | 8.1  | 0.0  | 2.0  | 41.0 | 3.0  |
| Cycle Q Clear(g_c), s        | 10.2   | 0.0  | 7.5  | 10.2 | 3.3  | 4.8  | 0.9  | 8.1  | 0.0  | 2.0  | 41.0 | 3.0  |
| Prop In Lane                 | 1.00   |      | 0.72 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 525  | 0    | 467  | 488  | 528  | 447  | 135  | 2115 |      | 425  | 1513 | 675  |
| V/C Ratio(X)                 | 0.68   | 0.00 | 0.28 | 0.72 | 0.13 | 0.19 | 0.18 | 0.25 |      | 0.12 | 0.85 | 0.08 |
| Avail Cap(c_a), veh/h        | 525  | 0    | 467  | 488  | 528  | 447  | 198  | 2115 |      | 447  | 1513 | 675  |
| HCM Platoon Ratio            | 1.00   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 |
| Upstream Filter(I)           | 1.00   | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 32.4   | 0.0  | 33.6 | 33.9 | 32.1 | 32.6 | 26.2 | 23.0 | 0.0  | 19.3 | 39.3 | 25.7 |
| Incr Delay (d2), s/veh       | 3.0  | 0.0  | 1.5  | 4.4  | 0.5  | 0.9  | 0.2  | 0.3  | 0.0  | 0.0  | 6.2  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 7.9  | 0.0  | 5.8  | 8.5  | 2.9  | 3.5  | 0.7  | 6.0  | 0.0  | 1.5  | 27.2 | 2.2  |
| Unsig. Movement Delay, s/veh |  |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 35.4   | 0.0  | 35.1 | 38.3 | 32.6 | 33.5 | 26.5 | 23.2 | 0.0  | 19.4 | 45.5 | 26.0 |
| LnGrp LOS                    | D  | A    | D    | D    | C    | C    | C    | C    |      | B    | D    | C    |
| Approach Vol, veh/h          | 491  |      |      | 504  |      |      | 551  |      |      | 1395 |      |      |
| Approach Delay, s/veh        | 35.3   |      |      | 36.8 |      |      | 23.4 |      |      | 43.7 |      |      |
| Approach LOS                 | D  |      |      | D    |      |      | C    |      |      | D    |      |      |

| Timer - Assigned Phs         | 1   | 2     | 3    | 4    | 5   | 6     | 7    | 8    |
|------------------------------|-----|-------|------|------|-----|-------|------|------|
| Phs Duration (G+Y+Rc), s     | 8.1 | 57.4  | 14.2 | 40.3 | 6.8 | 58.8  | 14.2 | 40.3 |
| Change Period (Y+Rc), s      | 4.0 | * 7.7 | 4.0  | 6.4  | 4.0 | * 7.7 | 4.0  | 6.4  |
| Max Green Setting (Gmax), s  | 5.6 | * 50  | 10.2 | 32.4 | 7.0 | * 48  | 10.2 | 32.4 |
| Max Q Clear Time (g_c+I1), s | 4.0 | 10.1  | 12.2 | 9.5  | 2.9 | 43.0  | 12.2 | 6.8  |
| Green Ext Time (p_c), s      | 0.0 | 2.6   | 0.0  | 0.5  | 0.0 | 4.2   | 0.0  | 0.4  |

**Intersection Summary**  
HCM 6th Ctrl Delay: 37.3  
HCM 6th LOS: D

**Notes**  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Background PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | [Diagrammatic icons for lane configurations] |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 32   | 11   | 22   | 188  | 3    | 105  | 7    | 713  | 156  | 71   | 593  | 8    |
| Future Volume (veh/h)        | 32   | 11   | 22   | 188  | 3    | 105  | 7    | 713  | 156  | 71   | 593  | 8    |
| Initial Q (Ob), veh          | 0  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00   |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |      | No   |      |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1870   | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 36   | 12   | 16   | 211  | 3    | 58   | 8    | 801  | 0    | 80   | 666  | 5    |
| Peak Hour Factor             | 0.89   | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %         | 2  | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 530  | 226  | 302  | 643  | 704  | 597  | 338  | 1885 |      | 304  | 1423 | 635  |
| Arrive On Green              | 0.03   | 0.31 | 0.31 | 0.09 | 0.38 | 0.38 | 0.01 | 0.37 | 0.00 | 0.08 | 0.80 | 0.80 |
| Sat Flow, veh/h              | 1781   | 727  | 969  | 1781 | 1870 | 1585 | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 36   | 0    | 28   | 211  | 3    | 58   | 8    | 801  | 0    | 80   | 666  | 5    |
| Grp Sat Flow(s),veh/h/ln     | 1781   | 0    | 1696 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 1.6  | 0.0  | 1.4  | 9.3  | 0.1  | 2.8  | 0.3  | 14.1 | 0.0  | 3.3  | 7.2  | 0.1  |
| Cycle Q Clear(g_c), s        | 1.6  | 0.0  | 1.4  | 9.3  | 0.1  | 2.8  | 0.3  | 14.1 | 0.0  | 3.3  | 7.2  | 0.1  |
| Prop In Lane                 | 1.00   |      | 0.57 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 530  | 0    | 528  | 643  | 704  | 597  | 338  | 1885 |      | 304  | 1423 | 635  |
| V/C Ratio(X)                 | 0.07   | 0.00 | 0.05 | 0.33 | 0.00 | 0.10 | 0.02 | 0.42 |      | 0.26 | 0.47 | 0.01 |
| Avail Cap(c_a), veh/h        | 567  | 0    | 528  | 653  | 704  | 597  | 455  | 1885 |      | 335  | 1423 | 635  |
| HCM Platoon Ratio            | 1.00   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I)           | 1.00   | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 26.6   | 0.0  | 28.9 | 22.8 | 23.4 | 24.2 | 23.3 | 28.3 | 0.0  | 21.0 | 7.9  | 7.2  |
| Incr Delay (d2), s/veh       | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.3  | 0.0  | 0.7  | 0.0  | 0.2  | 1.1  | 0.0  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 1.3  | 0.0  | 1.1  | 7.1  | 0.1  | 2.0  | 0.3  | 9.8  | 0.0  | 2.4  | 4.0  | 0.1  |
| Unsig. Movement Delay, s/veh |  |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 26.7   | 0.0  | 29.1 | 22.9 | 23.4 | 24.5 | 23.3 | 29.0 | 0.0  | 21.2 | 9.0  | 7.2  |
| LnGrp LOS                    | C  | A    | C    | C    | C    | C    | C    | C    |      | C    | A    | A    |
| Approach Vol, veh/h          | 64   |      |      | 272  |      |      | 809  |      |      | 751  |      |      |
| Approach Delay, s/veh        | 27.7   |      |      | 23.2 |      |      | 29.0 |      |      | 10.3 |      |      |
| Approach LOS                 | C  |      |      | C    |      |      | C    |      |      | B    |      |      |

| Timer - Assigned Phs         | 1   | 2     | 3    | 4    | 5   | 6     | 7   | 8    |
|------------------------------|-----|-------|------|------|-----|-------|-----|------|
| Phs Duration (G+Y+Rc), s     | 8.9 | 52.0  | 15.3 | 43.8 | 5.2 | 55.7  | 7.5 | 51.6 |
| Change Period (Y+Rc), s      | 4.0 | * 7.7 | 4.0  | 6.4  | 4.0 | * 7.7 | 4.0 | 6.4  |
| Max Green Setting (Gmax), s  | 7.0 | * 44  | 12.0 | 34.6 | 9.0 | * 42  | 6.0 | 40.6 |
| Max Q Clear Time (g_c+I1), s | 5.3 | 16.1  | 11.3 | 3.4  | 2.3 | 9.2   | 3.6 | 4.8  |
| Green Ext Time (p_c), s      | 0.0 | 4.1   | 0.0  | 0.1  | 0.0 | 3.3   | 0.0 | 0.1  |

**Intersection Summary**  
HCM 6th Ctrl Delay: 20.7  
HCM 6th LOS: C

**Notes**  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Background School PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 139  | 32    | 103  | 123  | 10   | 108   | 36   | 507  | 163  | 107  | 547  | 75   |
| Future Volume (veh/h)        | 139  | 32    | 103  | 123  | 10   | 108   | 36   | 507  | 163  | 107  | 547  | 75   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 211  | 48    | 117  | 186  | 15   | 82    | 55   | 768  | 0    | 162  | 829  | 56   |
| Peak Hour Factor             | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 584  | 140   | 342  | 464  | 509  | 431   | 242  | 1911 |      | 368  | 1453 | 648  |
| Arrive On Green              | 0.10 | 0.29  | 0.29 | 0.08 | 0.27 | 0.27  | 0.04 | 0.37 | 0.00 | 0.02 | 0.13 | 0.13 |
| Sat Flow, veh/h              | 1781 | 483   | 1176 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 211  | 0     | 165  | 186  | 15   | 82    | 55   | 768  | 0    | 162  | 829  | 56   |
| Grp Sat Flow(s), veh/h/ln    | 1781 | 0     | 1659 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 10.1 | 0.0   | 9.4  | 9.0  | 0.7  | 4.8   | 2.3  | 13.3 | 0.0  | 6.4  | 26.2 | 3.7  |
| Cycle Q Clear(g_c), s        | 10.1 | 0.0   | 9.4  | 9.0  | 0.7  | 4.8   | 2.3  | 13.3 | 0.0  | 6.4  | 26.2 | 3.7  |
| Prop In Lane                 | 1.00 |       | 0.71 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 584  | 0     | 482  | 464  | 509  | 431   | 242  | 1911 |      | 368  | 1453 | 648  |
| V/C Ratio(X)                 | 0.36 | 0.00  | 0.34 | 0.40 | 0.03 | 0.19  | 0.23 | 0.40 |      | 0.44 | 0.57 | 0.09 |
| Avail Cap(c_a), veh/h        | 584  | 0     | 482  | 464  | 509  | 431   | 404  | 1911 |      | 381  | 1453 | 648  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 26.7 | 0.0   | 33.6 | 28.2 | 32.1 | 33.5  | 23.8 | 27.7 | 0.0  | 21.5 | 42.0 | 32.3 |
| Incr Delay (d2), s/veh       | 0.1  | 0.0   | 1.9  | 0.2  | 0.1  | 1.0   | 0.2  | 0.6  | 0.0  | 0.3  | 1.6  | 0.3  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 7.7  | 0.0   | 7.3  | 7.0  | 0.6  | 3.5   | 1.7  | 9.4  | 0.0  | 5.2  | 18.7 | 2.7  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 26.8 | 0.0   | 35.5 | 28.4 | 32.2 | 34.5  | 24.0 | 28.3 | 0.0  | 21.8 | 43.7 | 32.6 |
| LnGrp LOS                    | C    | A     | D    | C    | C    | C     | C    | C    |      | C    | D    | C    |
| Approach Vol, veh/h          |      | 376   |      |      | 283  |       |      | 823  |      |      | 1047 |      |
| Approach Delay, s/veh        |      | 30.6  |      |      | 30.4 |       |      | 28.0 |      |      | 39.7 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.4 | 52.6  | 13.8 | 41.2 | 8.2  | 56.8  | 16.0 | 39.0 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.2  | * 45  | 9.8  | 34.0 | 15.1 | * 39  | 12.0 | 31.8 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 8.4  | 15.3  | 11.0 | 11.4 | 4.3  | 28.2  | 12.1 | 6.8  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 4.0   | 0.0  | 0.6  | 0.0  | 3.2   | 0.0  | 0.2  |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 33.5 |
| HCM 6th LOS        | C    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Background AM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

Intersection

|                          |        |        |        |        |        |        |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Int Delay, s/veh         | 0      |        |        |        |        |        |
| Movement                 | EBL    | EBR    | NBL    | NBT    | SBT    | SBR    |
| Lane Configurations      |        | ↔      |        | ↔      | ↔      | ↔      |
| Traffic Vol, veh/h       | 0      | 1      | 0      | 650    | 1079   | 508    |
| Future Vol, veh/h        | 0      | 1      | 0      | 650    | 1079   | 508    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop   | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None | - None | - None | - None | - None |
| Storage Length           | - 0    | - -    | - -    | - -    | - 150  | - -    |
| Veh in Median Storage, # | 0      | -      | -      | 0      | 0      | -      |
| Grade, %                 | 0      | -      | -      | 0      | 0      | -      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1      | 0      | 722    | 1199   | 564    |

Major/Minor

|                      |        |        |     |
|----------------------|--------|--------|-----|
| Minor2               | Major1 | Major2 |     |
| Conflicting Flow All | - 600  | - 0    | - 0 |
| Stage 1              | - -    | - -    | - - |
| Stage 2              | - -    | - -    | - - |
| Critical Hdwy        | - 6.94 | - -    | - - |
| Critical Hdwy Stg 1  | - -    | - -    | - - |
| Critical Hdwy Stg 2  | - -    | - -    | - - |
| Follow-up Hdwy       | - 3.32 | - -    | - - |
| Pot Cap-1 Maneuver   | 0 *633 | 0 -    | - - |
| Stage 1              | 0 -    | 0 -    | - - |
| Stage 2              | 0 -    | 0 -    | - - |
| Platoon blocked, %   | - 1    | - -    | - - |
| Mov Cap-1 Maneuver   | - *633 | - -    | - - |
| Mov Cap-2 Maneuver   | - -    | - -    | - - |
| Stage 1              | - -    | - -    | - - |
| Stage 2              | - -    | - -    | - - |

Approach

|                      |      |    |   |
|----------------------|------|----|---|
| EB                   | NB   | SB |   |
| HCM Control Delay, s | 10.7 | 0  | 0 |
| HCM LOS              | B    |    |   |

Minor Lane/Major Mvmt

|                       |         |     |     |
|-----------------------|---------|-----|-----|
| NBT                   | EBLn1   | SBT | SBR |
| Capacity (veh/h)      | - 633   | - - | - - |
| HCM Lane V/C Ratio    | - 0.002 | - - | - - |
| HCM Control Delay (s) | - 10.7  | - - | - - |
| HCM Lane LOS          | - B     | - - | - - |
| HCM 95th %tile Q(veh) | - 0     | - - | - - |

Notes

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

22-1270: Black Mountain Village  
2029 Background PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 8    | 0    | 876  | 755  | 48   |
| Future Vol, veh/h        | 0    | 8    | 0    | 876  | 755  | 48   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 8    | 0    | 922  | 795  | 51   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 398  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *763 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *763 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.8 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 763     | - - | - - |
| HCM Lane V/C Ratio    | - 0.011   | - - | - - |
| HCM Control Delay (s) | - 9.8     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2029 Background School PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 10   | 0    | 705  | 563  | 210  |
| Future Vol, veh/h        | 0    | 10   | 0    | 705  | 563  | 210  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 13   | 0    | 940  | 751  | 280  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 376  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *867 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *867 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 867     | - - | - - |
| HCM Lane V/C Ratio    | - 0.015   | - - | - - |
| HCM Control Delay (s) | - 9.2     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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



22-1270: Black Mountain Village  
2029 Background AM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 7.8   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 37    | 726   |       | 1500  |       |
| Demand Flow Rate, veh/h     | 37    | 741   |       | 1530  |       |
| Vehicles Circulating, veh/h | 1507  | 14    |       | 29    |       |
| Vehicles Exiting, veh/h     | 52    | 1530  |       | 726   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 10.5  | 5.0   |       | 9.1   |       |
| Approach LOS                | B     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 37    | 348   | 393   | 719   | 811   |
| Cap Entry Lane, veh/h       | 394   | 1333  | 1403  | 1314  | 1386  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.979 | 0.981 | 0.981 |
| Flow Entry, veh/h           | 37    | 341   | 385   | 705   | 795   |
| Cap Entry, veh/h            | 394   | 1307  | 1374  | 1289  | 1359  |
| V/C Ratio                   | 0.094 | 0.261 | 0.280 | 0.547 | 0.585 |
| Control Delay, s/veh        | 10.5  | 5.0   | 5.0   | 8.8   | 9.2   |
| LOS                         | B     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 3     | 4     |

22-1270: Black Mountain Village  
2029 Background PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.5   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 4     | 934   |       | 810   |       |
| Demand Flow Rate, veh/h     | 4     | 953   |       | 826   |       |
| Vehicles Circulating, veh/h | 821   | 1     |       | 3     |       |
| Vehicles Exiting, veh/h     | 8     | 824   |       | 951   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 5.2   | 5.8   |       | 5.3   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 448   | 505   | 388   | 438   |
| Cap Entry Lane, veh/h       | 707   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.980 | 0.981 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 4     | 439   | 495   | 381   | 429   |
| Cap Entry, veh/h            | 707   | 1322  | 1391  | 1321  | 1388  |
| V/C Ratio                   | 0.006 | 0.332 | 0.356 | 0.288 | 0.309 |
| Control Delay, s/veh        | 5.2   | 5.7   | 5.8   | 5.3   | 5.3   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 2     | 1     | 1     |

22-1270: Black Mountain Village  
2029 Background School PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 6.5   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 33    | 1061  |       | 1081  |       |
| Demand Flow Rate, veh/h     | 33    | 1082  |       | 1102  |       |
| Vehicles Circulating, veh/h | 1093  | 9     |       | 16    |       |
| Vehicles Exiting, veh/h     | 25    | 1117  |       | 1075  |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 7.1   | 6.4   |       | 6.5   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 33    | 509   | 573   | 518   | 584   |
| Cap Entry Lane, veh/h       | 561   | 1339  | 1409  | 1330  | 1401  |
| Entry HV Adj Factor         | 1.000 | 0.980 | 0.981 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 33    | 499   | 562   | 508   | 573   |
| Cap Entry, veh/h            | 561   | 1312  | 1383  | 1304  | 1374  |
| V/C Ratio                   | 0.059 | 0.380 | 0.407 | 0.389 | 0.417 |
| Control Delay, s/veh        | 7.1   | 6.3   | 6.4   | 6.5   | 6.6   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 2     | 2     |

22-1270: Black Mountain Village  
2029 Background AM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |  |       |      |        |       |      |        |       |       |        |      |      |  |
|--------------------------|--|-------|------|--------|-------|------|--------|-------|-------|--------|------|------|--|
| Int Delay, s/veh         | 6.1  |       |      |        |       |      |        |       |       |        |      |      |  |
| Movement                 | EBL  | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR   | SBL    | SBT  | SBR  |  |
| Lane Configurations      | ↔  | ↔     | ↔    | ↔      | ↔     | ↔    | ↔      | ↔     | ↔     | ↔      | ↔    | ↔    |  |
| Traffic Vol, veh/h       | 187  | 90    | 8    | 15     | 167   | 87   | 14     | 5     | 8     | 26     | 3    | 175  |  |
| Future Vol, veh/h        | 187  | 90    | 8    | 15     | 167   | 87   | 14     | 5     | 8     | 26     | 3    | 175  |  |
| Conflicting Peds, #/hr   | 0  | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0     | 0      | 0    | 0    |  |
| Sign Control             | Free   | Free  | Free | Free   | Free  | Free | Stop   | Stop  | Stop  | Stop   | Stop | Stop |  |
| RT Channelized           | -  | -     | None | -      | -     | None | -      | -     | None  | -      | -    | None |  |
| Storage Length           | 150  | -     | -    | 145    | -     | -    | -      | -     | -     | -      | -    | -    |  |
| Veh in Median Storage, # | -  | 0     | -    | -      | 0     | -    | -      | -     | 0     | -      | -    | 0    |  |
| Grade, %                 | -  | 0     | -    | -      | 0     | -    | -      | -     | 0     | -      | -    | 0    |  |
| Peak Hour Factor         | 90   | 90    | 90   | 90     | 90    | 90   | 90     | 90    | 90    | 90     | 90   | 90   |  |
| Heavy Vehicles, %        | 2  | 2     | 2    | 2      | 2     | 2    | 2      | 2     | 2     | 2      | 2    | 2    |  |
| Mvmt Flow                | 208  | 100   | 9    | 17     | 186   | 97   | 16     | 6     | 9     | 29     | 3    | 194  |  |
| Major/Minor              | Major1   |       |      | Major2 |       |      | Minor1 |       |       | Minor2 |      |      |  |
| Conflicting Flow All     | 283  | 0     | 0    | 109    | 0     | 0    | 650    | 838   | 55    | 738    | 794  | 142  |  |
| Stage 1                  | -  | -     | -    | -      | -     | -    | 521    | 521   | -     | 269    | 269  | -    |  |
| Stage 2                  | -  | -     | -    | -      | -     | -    | 129    | 317   | -     | 469    | 525  | -    |  |
| Critical Hdwy            | 4.14   | -     | -    | 4.14   | -     | -    | 7.54   | 6.54  | 6.94  | 7.54   | 6.54 | 6.94 |  |
| Critical Hdwy Stg 1      | -  | -     | -    | -      | -     | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Critical Hdwy Stg 2      | -  | -     | -    | -      | -     | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Follow-up Hdwy           | 2.22   | -     | -    | 2.22   | -     | -    | 3.52   | 4.02  | 3.32  | 3.52   | 4.02 | 3.32 |  |
| Pot Cap-1 Maneuver       | 1276   | -     | -    | 1549   | -     | -    | 389    | 320   | *1049 | 334    | 340  | 880  |  |
| Stage 1                  | -  | -     | -    | -      | -     | -    | 547    | 557   | -     | 713    | 685  | -    |  |
| Stage 2                  | -  | -     | -    | -      | -     | -    | 861    | 653   | -     | 588    | 554  | -    |  |
| Platoon blocked, %       | -  | -     | -    | 1      | -     | -    | 1      | 1     | 1     | 1      | 1    | 1    |  |
| Mov Cap-1 Maneuver       | 1276   | -     | -    | 1549   | -     | -    | 260    | 265   | *1049 | 283    | 282  | 880  |  |
| Mov Cap-2 Maneuver       | -  | -     | -    | -      | -     | -    | 260    | 265   | -     | 283    | 282  | -    |  |
| Stage 1                  | -  | -     | -    | -      | -     | -    | 458    | 466   | -     | 597    | 677  | -    |  |
| Stage 2                  | -  | -     | -    | -      | -     | -    | 660    | 646   | -     | 482    | 464  | -    |  |
| Approach                 | EB   |       |      | WB     |       |      | NB     |       |       | SB     |      |      |  |
| HCM Control Delay, s     | 5.5  |       |      | 0.4    |       |      | 16.8   |       |       | 13     |      |      |  |
| HCM LOS                  | A  |       |      | C      |       |      | C      |       |       | B      |      |      |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |       |        |      |      |  |
| Capacity (veh/h)         | 336  | 1276  | -    | -      | 1549  | -    | -      | 677   |       |        |      |      |  |
| HCM Lane V/C Ratio       | 0.089  | 0.163 | -    | -      | 0.011 | -    | -      | 0.335 |       |        |      |      |  |
| HCM Control Delay (s)    | 16.8   | 8.4   | -    | -      | 7.3   | -    | -      | 13    |       |        |      |      |  |
| HCM Lane LOS             | C  | A     | -    | -      | A     | -    | -      | B     |       |        |      |      |  |
| HCM 95th %tile Q(veh)    | 0.3  | 0.6   | -    | -      | 0     | -    | -      | 1.5   |       |        |      |      |  |
| Notes                    | -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |       |      |        |       |      |        |       |       |        |      |      |  |

22-1270: Black Mountain Village  
2029 Background PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      |
| Traffic Vol, veh/h       | 85   | 142  | 11   | 26   | 132  | 30   | 10   | 5    | 3    | 31   | 5    | 146  |
| Future Vol, veh/h        | 85   | 142  | 11   | 26   | 132  | 30   | 10   | 5    | 3    | 31   | 5    | 146  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 116  | 195  | 15   | 36   | 181  | 41   | 14   | 7    | 4    | 42   | 7    | 200  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 222    | 0      | 0      | 210    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1344   | -      | -      | 1420   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1344   | -      | -      | 1420   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 2.8 | 1.1 | 16.1 | 12.8 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 349   | 1344  | -   | -   | 1420  | -   | -   | 711   |
| HCM Lane V/C Ratio    | 0.071 | 0.087 | -   | -   | 0.025 | -   | -   | 0.351 |
| HCM Control Delay (s) | 16.1  | 7.9   | -   | -   | 7.6   | -   | -   | 12.8  |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0.1   | -   | -   | 1.6   |

22-1270: Black Mountain Village  
2029 Background School PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      |
| Traffic Vol, veh/h       | 123  | 161  | 18   | 14   | 139  | 45   | 11   | 3    | 7    | 8    | 3    | 53   |
| Future Vol, veh/h        | 123  | 161  | 18   | 14   | 139  | 45   | 11   | 3    | 7    | 8    | 3    | 53   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 150  | 196  | 22   | 17   | 170  | 55   | 13   | 4    | 9    | 10   | 4    | 65   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 225    | 0      | 0      | 218    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1341   | -      | -      | 1462   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1341   | -      | -      | 1462   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.3 | 0.5 | 13.4 | 10.5 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 454   | 1341  | -   | -   | 1462  | -   | -   | 732   |
| HCM Lane V/C Ratio    | 0.056 | 0.112 | -   | -   | 0.012 | -   | -   | 0.107 |
| HCM Control Delay (s) | 13.4  | 8     | -   | -   | 7.5   | -   | -   | 10.5  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.4   | -   | -   | 0     | -   | -   | 0.4   |

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

22-1270: Black Mountain Village  
2029 Background AM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |      |       |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.5   |      |      |       |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      |      | ↔ ↗ ↘ |      |      | ↔ ↗  |      |      | ↔ ↗  |      |      |
| Traffic Vol, veh/h       | 48    | 867  | 69   | 65    | 494  | 28   | 51   | 7    | 98   | 43   | 8    | 37   |
| Future Vol, veh/h        | 48    | 867  | 69   | 65    | 494  | 28   | 51   | 7    | 98   | 43   | 8    | 37   |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free  | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -     | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -    | 125   | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90    | 90   | 90   | 90    | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 53    | 963  | 77   | 72    | 549  | 31   | 57   | 8    | 109  | 48   | 9    | 41   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 580    | 0      | 1040   | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 621    | -      | 374    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 621    | -      | 374    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 0.6 | 1.9 | 50.5 | 46 |
| HCM LOS              |     |     | F    | E  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 87    | 295   | 621   | -   | -   | 374   | -   | -   | 104   | 215   |
| HCM Lane V/C Ratio    | 0.651 | 0.395 | 0.086 | -   | -   | 0.193 | -   | -   | 0.459 | 0.233 |
| HCM Control Delay (s) | 103.1 | 25    | 11.3  | -   | -   | 16.9  | -   | -   | 66.1  | 26.7  |
| HCM Lane LOS          | F     | D     | B     | -   | -   | C     | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 3.1   | 1.8   | 0.3   | -   | -   | 0.7   | -   | -   | 2     | 0.9   |

22-1270: Black Mountain Village  
2029 Background PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |      |       |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 8.1   |      |      |       |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      |      | ↔ ↗ ↘ |      |      | ↔ ↗  |      |      | ↔ ↗  |      |      |
| Traffic Vol, veh/h       | 69    | 584  | 34   | 61    | 682  | 64   | 64   | 5    | 93   | 29   | 5    | 46   |
| Future Vol, veh/h        | 69    | 584  | 34   | 61    | 682  | 64   | 64   | 5    | 93   | 29   | 5    | 46   |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free  | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -     | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -    | 125   | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 85    | 85   | 85   | 85    | 85   | 85   | 85   | 85   | 85   | 85   | 85   | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 81    | 687  | 40   | 72    | 802  | 75   | 75   | 6    | 109  | 34   | 6    | 54   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 877    | 0      | 727    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 449    | -      | 529    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 449    | -      | 529    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 1.5 | 1  | 54.2 | 43.1 |
| HCM LOS              |     |    | F    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 101   | 357   | 449   | -   | -   | 529   | -   | -   | 81    | 261   |
| HCM Lane V/C Ratio    | 0.745 | 0.323 | 0.181 | -   | -   | 0.136 | -   | -   | 0.421 | 0.23  |
| HCM Control Delay (s) | 106.8 | 19.8  | 14.8  | -   | -   | 12.9  | -   | -   | 78.5  | 22.9  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | B     | -   | -   | F     | C     |
| HCM 95th %tile Q(veh) | 3.9   | 1.4   | 0.7   | -   | -   | 0.5   | -   | -   | 1.7   | 0.9   |

22-1270: Black Mountain Village  
2029 Background School PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔↔  |      | ↔↔↔  |      | ↔↔↔  |      | ↔↔   |      | ↔↔   |      | ↔↔   |      |
| Traffic Vol, veh/h       | 48   | 515  | 46   | 44   | 450  | 51   | 9    | 5    | 41   | 31   | 11   | 29   |
| Future Vol, veh/h        | 48   | 515  | 46   | 44   | 450  | 51   | 9    | 5    | 41   | 31   | 11   | 29   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130  | -    | -    | 125  | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 65   | 696  | 62   | 59   | 608  | 69   | 12   | 7    | 55   | 42   | 15   | 39   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 677    | 0      | 0      | 758    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 559    | -      | -      | 511    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 559    | -      | -      | 511    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 1  | 1  | 21.8 | 34 |
| HCM LOS              |    |    | C    | D  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 125   | 323   | 559   | -   | -   | 511   | -   | -   | 141   | 206   |
| HCM Lane V/C Ratio    | 0.097 | 0.192 | 0.116 | -   | -   | 0.116 | -   | -   | 0.297 | 0.262 |
| HCM Control Delay (s) | 36.9  | 18.8  | 12.3  | -   | -   | 13    | -   | -   | 41    | 28.6  |
| HCM Lane LOS          | E     | C     | B     | -   | -   | B     | -   | -   | E     | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0.7   | 0.4   | -   | -   | 0.4   | -   | -   | 1.2   | 1     |

22-1270: Black Mountain Village  
2029 Background AM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔↔   |      | ↔↔   |      |
| Traffic Vol, veh/h       | 160  | 14   | 39   | 56   | 26   | 255  |
| Future Vol, veh/h        | 160  | 14   | 39   | 56   | 26   | 255  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 178  | 16   | 43   | 62   | 29   | 283  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 177    | 29     | 312    |
| Stage 1              | 29     | -      | -      |
| Stage 2              | 148    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 813    | 1046   | 1248   |
| Stage 1              | 994    | -      | -      |
| Stage 2              | 880    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 785    | 1046   | 1248   |
| Mov Cap-2 Maneuver   | 785    | -      | -      |
| Stage 1              | 960    | -      | -      |
| Stage 2              | 880    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 3.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1248  | -   | 785   | 1046  | -   | -   |
| HCM Lane V/C Ratio    | 0.035 | -   | 0.226 | 0.015 | -   | -   |
| HCM Control Delay (s) | 8     | -   | 10.9  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.9   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 94   | 36   | 23   | 47   | 62   | 152  |
| Future Vol, veh/h        | 94   | 36   | 23   | 47   | 62   | 152  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 104  | 40   | 26   | 52   | 69   | 169  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 173    | 69     | 238    |
| Stage 1              | 69     | -      | -      |
| Stage 2              | 104    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 817    | 994    | 1329   |
| Stage 1              | 954    | -      | -      |
| Stage 2              | 920    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 801    | 994    | 1329   |
| Mov Cap-2 Maneuver   | 801    | -      | -      |
| Stage 1              | 935    | -      | -      |
| Stage 2              | 920    | -      | -      |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.8 | 2.6 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1329  | -   | 801   | 994   | -   | -   |
| HCM Lane V/C Ratio    | 0.019 | -   | 0.13  | 0.04  | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 10.2  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.4   | 0.1   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 115  | 18   | 21   | 53   | 52   | 116  |
| Future Vol, veh/h        | 115  | 18   | 21   | 53   | 52   | 116  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 164  | 26   | 30   | 76   | 74   | 166  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 210    | 74     | 240    |
| Stage 1              | 74     | -      | -      |
| Stage 2              | 136    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 778    | 988    | 1327   |
| Stage 1              | 949    | -      | -      |
| Stage 2              | 890    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 760    | 988    | 1327   |
| Mov Cap-2 Maneuver   | 760    | -      | -      |
| Stage 1              | 927    | -      | -      |
| Stage 2              | 890    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 2.2 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1327  | -   | 760   | 988   | -   | -   |
| HCM Lane V/C Ratio    | 0.023 | -   | 0.216 | 0.026 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 11    | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.8   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2029 Background AM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 0    | 0    | 148  | 0    | 0    | 390  |
| Future Vol, veh/h        | 0    | 0    | 148  | 0    | 0    | 390  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 164  | 0    | 0    | 433  |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 597    | 164    | 0      |
| Stage 1              | 164    | -      | -      |
| Stage 2              | 433    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 466    | 881    | -      |
| Stage 1              | 865    | -      | -      |
| Stage 2              | 654    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 466    | 881    | -      |
| Mov Cap-2 Maneuver   | 466    | -      | -      |
| Stage 1              | 865    | -      | -      |
| Stage 2              | 654    | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h)      | -   | -        | 1414 | -   |
| HCM Lane V/C Ratio    | -   | -        | -    | -   |
| HCM Control Delay (s) | -   | -        | 0    | 0   |
| HCM Lane LOS          | -   | -        | A    | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0    | -   |

22-1270: Black Mountain Village  
2029 Background PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    |      | T    |      |      | T    |
| Traffic Vol, veh/h       | 0    | 0    | 16   | 0    | 0    | 17   |
| Future Vol, veh/h        | 0    | 0    | 16   | 0    | 0    | 17   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 18   | 0    | 0    | 19   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 37     | 18     | 0      |
| Stage 1              | 18     | -      | -      |
| Stage 2              | 19     | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 975    | 1061   | -      |
| Stage 1              | 1005   | -      | -      |
| Stage 2              | 1004   | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 975    | 1061   | -      |
| Mov Cap-2 Maneuver   | 975    | -      | -      |
| Stage 1              | 1005   | -      | -      |
| Stage 2              | 1004   | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h)      | -   | -        | 1599 | -   |
| HCM Lane V/C Ratio    | -   | -        | -    | -   |
| HCM Control Delay (s) | -   | -        | 0    | 0   |
| HCM Lane LOS          | -   | -        | A    | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0    | -   |

22-1270: Black Mountain Village  
2029 Background School PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    |      | ↔    |      |      | ↔    |
| Traffic Vol, veh/h       | 0    | 0    | 167  | 0    | 0    | 97   |
| Future Vol, veh/h        | 0    | 0    | 167  | 0    | 0    | 97   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 186  | 0    | 0    | 108  |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 294    | 186    | 0      |
| Stage 1              | 186    | -      | -      |
| Stage 2              | 108    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 697    | 856    | -      |
| Stage 1              | 846    | -      | -      |
| Stage 2              | 916    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 697    | 856    | -      |
| Mov Cap-2 Maneuver   | 697    | -      | -      |
| Stage 1              | 846    | -      | -      |
| Stage 2              | 916    | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h)      | -   | -        | 1388 | -   |
| HCM Lane V/C Ratio    | -   | -        | -    | -   |
| HCM Control Delay (s) | -   | -        | 0    | 0   |
| HCM Lane LOS          | -   | -        | A    | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0    | -   |

22-1270: Black Mountain Village  
2029 Background AM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔↔↔  | ↔    | ↔    | ↔↔↔  |      | ↔    |
| Traffic Vol, veh/h       | 1276 | 0    | 0    | 631  | 0    | 0    |
| Future Vol, veh/h        | 1276 | 0    | 0    | 631  | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1418 | 0    | 0    | 701  | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | -      | -      |
| Pot Cap-1 Maneuver   | -      | -      | 0      |
| Stage 1              | -      | 0      | 0      |
| Stage 2              | -      | 0      | 0      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | -     | -   | -   | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -   |
| HCM Control Delay (s) | 0     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | -   |



22-1270: Black Mountain Village  
2029 Background PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 644  | 0    | 0    | 751  | 0    | 0    |
| Future Vol, veh/h        | 644  | 0    | 0    | 751  | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 716  | 0    | 0    | 834  | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 358    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *778 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *778   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | -     | -   | -   | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -   |
| HCM Control Delay (s) | 0     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background School PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 722  | 0    | 0    | 599  | 0    | 0    |
| Future Vol, veh/h        | 722  | 0    | 0    | 599  | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 802  | 0    | 0    | 666  | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 401    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *756 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *756   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | -     | -   | -   | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -   |
| HCM Control Delay (s) | 0     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background AM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 380  | 182  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 380  | 182  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 422  | 202  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 202    | 0      | 0      | 413   | 202   |
| Stage 1              | -      | -      | -      | 202   | -     |
| Stage 2              | -      | -      | -      | 211   | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1369   | -      | -      | 581   | 838   |
| Stage 1              | -      | -      | -      | 831   | -     |
| Stage 2              | -      | -      | -      | 804   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1369   | -      | -      | 581   | 838   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 581   | -     |
| Stage 1              | -      | -      | -      | 831   | -     |
| Stage 2              | -      | -      | -      | 804   | -     |

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

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1369 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

22-1270: Black Mountain Village  
2029 Background PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 25   | 18   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 25   | 18   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 28   | 20   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 20     | 0      | 0      | 34    | 20    |
| Stage 1              | -      | -      | -      | 20    | -     |
| Stage 2              | -      | -      | -      | 14    | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | *1610  | -      | -      | *998  | *1075 |
| Stage 1              | -      | -      | -      | *1015 | -     |
| Stage 2              | -      | -      | -      | *1007 | -     |
| Platoon blocked, %   | 1      | -      | -      | 1     | 1     |
| Mov Cap-1 Maneuver   | *1610  | -      | -      | *998  | *1075 |
| Mov Cap-2 Maneuver   | -      | -      | -      | *998  | -     |
| Stage 1              | -      | -      | -      | *1015 | -     |
| Stage 2              | -      | -      | -      | *1007 | -     |

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

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1610 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -     | -   | -   | -   | -     |
| HCM Control Delay (s) | 0     | -   | -   | -   | 0     |
| HCM Lane LOS          | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | -     |

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

22-1270: Black Mountain Village  
2029 Background School PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 173  | 123  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 173  | 123  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 192  | 137  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 137    | 0      | 233    |
| Stage 1              | -      | -      | 137    |
| Stage 2              | -      | -      | 96     |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2.219  | -      | 3.519  |
| Pot Cap-1 Maneuver   | *1493  | -      | *941   |
| Stage 1              | -      | -      | *941   |
| Stage 2              | -      | -      | *917   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *1493  | -      | *941   |
| Mov Cap-2 Maneuver   | -      | -      | *941   |
| Stage 1              | -      | -      | *941   |
| Stage 2              | -      | -      | *917   |

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

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1493 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -     | -   | -   | -   | -     |
| HCM Control Delay (s) | 0     | -   | -   | -   | 0     |
| HCM Lane LOS          | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | -     |

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

22-1270: Black Mountain Village  
2029 Background AM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      | ↕↕↕  | ↕↕↕  |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 947  | 1303 | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 947  | 1303 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 1052 | 1448 | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 724    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *624   | 0      |
| Stage 1              | 0      | 0      | -      |
| Stage 2              | 0      | 0      | -      |
| Platoon blocked, %   |        | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *624   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -     | -   | -   |
| HCM Control Delay (s) | -   | 0     | -   | -   |
| HCM Lane LOS          | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | -   | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 850  | 673  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 850  | 673  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 944  | 748  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 374  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 7.14 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.92 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *778 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *778 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | -         | -   | -   |
| HCM Lane V/C Ratio    | -         | -   | -   |
| HCM Control Delay (s) | - 0       | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | -         | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background School PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 754  | 728  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 754  | 728  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 838  | 809  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 405  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 7.14 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.92 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *756 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *756 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | -         | -   | -   |
| HCM Lane V/C Ratio    | -         | -   | -   |
| HCM Control Delay (s) | - 0       | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | -         | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background AM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 947  | 1303 | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 947  | 1303 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 1052 | 1448 | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1869   | 724    | 1448   |
| Stage 1              | 1448   | -      | -      |
| Stage 2              | 421    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *407   | *624   | 774    |
| Stage 1              | *629   | -      | -      |
| Stage 2              | *708   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *407   | *624   | 774    |
| Mov Cap-2 Maneuver   | *407   | -      | -      |
| Stage 1              | *629   | -      | -      |
| Stage 2              | *708   | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 774 | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | 0   | -   | 0     | 0     | -   | -   |
| HCM Lane LOS          | A   | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0   | -   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 850  | 673  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 850  | 673  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 944  | 748  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1126   | 374    | 748    |
| Stage 1              | 748    | -      | -      |
| Stage 2              | 378    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *611   | *778   | 901    |
| Stage 1              | *721   | -      | -      |
| Stage 2              | *753   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *611   | *778   | 901    |
| Mov Cap-2 Maneuver   | *611   | -      | -      |
| Stage 1              | *721   | -      | -      |
| Stage 2              | *753   | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 901 | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | 0   | -   | 0     | 0     | -   | -   |
| HCM Lane LOS          | A   | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0   | -   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background School PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 754  | 728  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 754  | 728  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 838  | 809  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1144   | 405    | 809    |
| Stage 1              | 809    | -      | -      |
| Stage 2              | 335    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *588   | *756   | 928    |
| Stage 1              | *753   | -      | -      |
| Stage 2              | *776   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *588   | *756   | 928    |
| Mov Cap-2 Maneuver   | *588   | -      | -      |
| Stage 1              | *753   | -      | -      |
| Stage 2              | *776   | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 928 | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | 0   | -   | 0     | 0     | -   | -   |
| HCM Lane LOS          | A   | -   | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0   | -   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background AM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↔    | ↔    | ↔↔↔  | ↔↔↔  |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 947  | 1303 | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 947  | 1303 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 1052 | 1448 | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 724    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *528   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *528   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | -   | -   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | -   | -     | -     | -   | -   |
| HCM Control Delay (s) | -   | 0   | -     | -     | -   | -   |
| HCM Lane LOS          | -   | A   | -     | -     | -   | -   |
| HCM 95th %tile Q(veh) | -   | -   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 850  | 673  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 850  | 673  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 944  | 748  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 374  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *815 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *815 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | -         | -   | -   |
| HCM Lane V/C Ratio    | -         | -   | -   |
| HCM Control Delay (s) | - 0       | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | -         | -   | -   |

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

22-1270: Black Mountain Village  
2029 Background School PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 754  | 728  | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 754  | 728  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 0    | 838  | 809  | 0    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 405  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *789 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *789 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

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

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | -         | -   | -   |
| HCM Lane V/C Ratio    | -         | -   | -   |
| HCM Control Delay (s) | - 0       | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | -         | -   | -   |

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

**APPENDIX J**

**2024 BUILD PEAK HOUR ANALYSIS**

DRAFT



22-1270: Black Mountain Village  
2024 Total AM

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 23    | 1330  | 11    | 581   | 11    | 3     | 111   | 2     | 20    |
| Future Volume (vph)  | 23    | 1330  | 11    | 581   | 11    | 3     | 111   | 2     | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

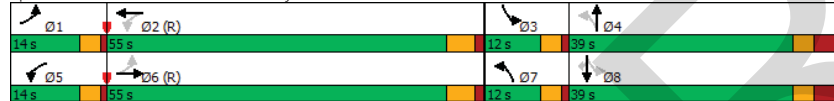
Actuated Cycle Length: 120

Offset: 25 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Spplits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total PM

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 30    | 625   | 16    | 697   | 6     | 3     | 81    | 3     | 40    |
| Future Volume (vph)  | 30    | 625   | 16    | 697   | 6     | 3     | 81    | 3     | 40    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

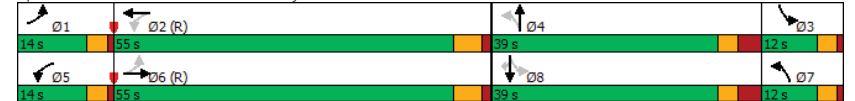
Actuated Cycle Length: 120

Offset: 56 (47%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Spplits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total School PM

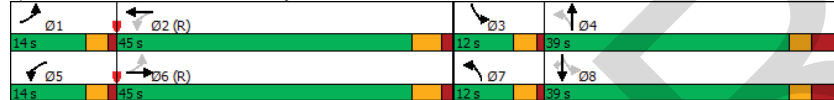
1: 32nd St. & Deer Valley Dr.  
Timings

|                      | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 16    | 649   | 5     | 599   | 7     | 4     | 71    | 1     | 18    |
| Future Volume (vph)  | 16    | 649   | 5     | 599   | 7     | 4     | 71    | 1     | 18    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 2     | 4     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 45.0  | 14.0  | 45.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 12.7% | 40.9% | 12.7% | 40.9% | 10.9% | 35.5% | 10.9% | 35.5% | 35.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 59 (54%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total AM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔↔    | ↔    | ↔    | ↔↔   | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 23   | 1330  | 6    | 11   | 581  | 38    | 11   | 3    | 20   | 111  | 2    | 20   |
| Future Volume (veh/h)        | 23   | 1330  | 6    | 11   | 581  | 38    | 11   | 3    | 20   | 111  | 2    | 20   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 26   | 1478  | 6    | 12   | 646  | 32    | 12   | 3    | 16   | 123  | 2    | 11   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 456  | 2538  | 10   | 184  | 2358 | 116   | 469  | 70   | 372  | 540  | 602  | 510  |
| Arrive On Green              | 0.02 | 0.48  | 0.48 | 0.03 | 0.95 | 0.95  | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 |
| Sat Flow, veh/h              | 1781 | 5249  | 21   | 1781 | 4984 | 246   | 1781 | 256  | 1368 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 26   | 958   | 526  | 12   | 440  | 238   | 12   | 0    | 19   | 123  | 2    | 11   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702  | 1867 | 1781 | 1702 | 1826  | 1781 | 0    | 1624 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 0.9  | 24.3  | 24.3 | 0.4  | 1.1  | 1.1   | 0.6  | 0.0  | 1.0  | 5.8  | 0.1  | 0.6  |
| Cycle Q Clear(g_c), s        | 0.9  | 24.3  | 24.3 | 0.4  | 1.1  | 1.1   | 0.6  | 0.0  | 1.0  | 5.8  | 0.1  | 0.6  |
| Prop In Lane                 | 1.00 | 1.00  | 0.01 | 1.00 | 1.00 | 0.13  | 1.00 | 1.00 | 0.84 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 456  | 1646  | 902  | 184  | 1610 | 864   | 469  | 0    | 441  | 540  | 602  | 510  |
| V/C Ratio(X)                 | 0.06 | 0.58  | 0.58 | 0.07 | 0.27 | 0.28  | 0.03 | 0.00 | 0.04 | 0.23 | 0.00 | 0.02 |
| Avail Cap(c_a), veh/h        | 561  | 1646  | 902  | 308  | 1610 | 864   | 563  | 0    | 441  | 545  | 602  | 510  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 2.00 | 2.00 | 2.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.4 | 22.3  | 22.3 | 17.9 | 1.7  | 1.7   | 30.8 | 0.0  | 32.2 | 27.1 | 27.6 | 27.8 |
| Incr Delay (d2), s/veh       | 0.0  | 1.5   | 2.7  | 0.1  | 0.4  | 0.8   | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.7  | 15.1  | 16.7 | 0.3  | 0.8  | 1.0   | 0.5  | 0.0  | 0.8  | 4.5  | 0.1  | 0.4  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.4 | 23.8  | 25.0 | 18.0 | 2.2  | 2.5   | 30.9 | 0.0  | 32.4 | 27.2 | 27.7 | 27.9 |
| LnGrp LOS                    | B    | C     | C    | B    | A    | A     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 1510  |      |      | 690  |       |      | 31   |      |      |      | 136  |
| Approach Delay, s/veh        |      | 24.1  |      |      | 2.6  |       |      | 31.8 |      |      |      | 27.2 |
| Approach LOS                 |      | C     |      |      | A    |       |      | C    |      |      |      | C    |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 6.9  | 62.5  | 11.6 | 39.0 | 5.6  | 63.7  | 5.6  | 45.0 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.0 | * 49  | 8.0  | 32.6 | 10.0 | * 49  | 8.0  | 32.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 2.9  | 3.1   | 7.8  | 3.0  | 2.4  | 26.3  | 2.6  | 2.6  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.2   | 0.0  | 0.0  | 0.0  | 7.7   | 0.0  | 0.0  |      |      |      |      |

Intersection Summary

HCM 6th Ctrl Delay: 18.1  
HCM 6th LOS: B

Notes

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



22-1270: Black Mountain Village  
2024 Total AM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 1109 | 352  | 87   | 529  | 102  | 136  |
| Future Vol, veh/h        | 1109 | 352  | 87   | 529  | 102  | 136  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1232 | 391  | 97   | 588  | 113  | 151  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 1623   | 0 | 1857 |
| Stage 1              | -      | -      | -      | - | 1428 |
| Stage 2              | -      | -      | -      | - | 429  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 467    | - | *507 |
| Stage 1              | -      | -      | -      | - | *472 |
| Stage 2              | -      | -      | -      | - | *821 |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 467    | - | *401 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *401 |
| Stage 1              | -      | -      | -      | - | *472 |
| Stage 2              | -      | -      | -      | - | *650 |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.1 | 14.4 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 401   | 668   | -   | -   | 467   | -   |
| HCM Lane V/C Ratio    | 0.283 | 0.226 | -   | -   | 0.207 | -   |
| HCM Control Delay (s) | 17.5  | 12    | -   | -   | 14.7  | -   |
| HCM Lane LOS          | C     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 1.1   | 0.9   | -   | -   | 0.8   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 628  | 84   | 28   | 696  | 105  | 28   |
| Future Vol, veh/h        | 628  | 84   | 28   | 696  | 105  | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 661  | 88   | 29   | 733  | 111  | 29   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 749    | 0 | 1056 |
| Stage 1              | -      | -      | -      | - | 705  |
| Stage 2              | -      | -      | -      | - | 351  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 900    | - | *634 |
| Stage 1              | -      | -      | -      | - | *771 |
| Stage 2              | -      | -      | -      | - | *776 |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 900    | - | *613 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *613 |
| Stage 1              | -      | -      | -      | - | *771 |
| Stage 2              | -      | -      | -      | - | *751 |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.4 | 11.7 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 613   | 778   | -   | -   | 900   | -   |
| HCM Lane V/C Ratio    | 0.18  | 0.038 | -   | -   | 0.033 | -   |
| HCM Control Delay (s) | 12.2  | 9.8   | -   | -   | 9.1   | -   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.7   | 0.1   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.9  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 574  | 153  | 32   | 554  | 118  | 153  |
| Future Vol, veh/h        | 574  | 153  | 32   | 554  | 118  | 153  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 957  | 255  | 53   | 923  | 197  | 255  |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1212   |
| Stage 1              | -      | -      | 1085   |
| Stage 2              | -      | -      | 475    |
| Critical Hdwy        | -      | 5.34   | 5.74   |
| Critical Hdwy Stg 1  | -      | -      | 6.64   |
| Critical Hdwy Stg 2  | -      | -      | 6.04   |
| Follow-up Hdwy       | -      | 3.12   | 3.82   |
| Pot Cap-1 Maneuver   | -      | 479    | 242    |
| Stage 1              | -      | -      | 397    |
| Stage 2              | -      | -      | 541    |
| Platoon blocked, %   | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | 479    | 215    |
| Mov Cap-2 Maneuver   | -      | -      | 215    |
| Stage 1              | -      | -      | 397    |
| Stage 2              | -      | -      | 481    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.7 | 44.8 |
| HCM LOS              |    |     | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 215   | 790   | -   | -   | 479   | -   |
| HCM Lane V/C Ratio    | 0.915 | 0.323 | -   | -   | 0.111 | -   |
| HCM Control Delay (s) | 87.8  | 11.7  | -   | -   | 13.5  | -   |
| HCM Lane LOS          | F     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 7.5   | 1.4   | -   | -   | 0.4   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 11.1 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |
| Traffic Vol, veh/h  | 2    | 11   | 0    | 32   | 0    | 140  | 0    | 10   | 19   | 328  | 32   | 0    |
| Future Vol, veh/h   | 2    | 11   | 0    | 32   | 0    | 140  | 0    | 10   | 19   | 328  | 32   | 0    |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 2    | 12   | 0    | 36   | 0    | 156  | 0    | 11   | 21   | 364  | 36   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB | NB  | SB   |
|----------------------------|-----|----|-----|------|
| Opposing Approach          | WB  | EB | SB  | NB   |
| Opposing Lanes             | 1   | 1  | 1   | 1    |
| Conflicting Approach Left  | SB  | NB | EB  | WB   |
| Conflicting Lanes Left     | 1   | 1  | 1   | 1    |
| Conflicting Approach Right | NB  | SB | WB  | EB   |
| Conflicting Lanes Right    | 1   | 1  | 1   | 1    |
| HCM Control Delay          | 8.4 | 9  | 7.7 | 12.5 |
| HCM LOS                    | A   | A  | A   | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 15%   | 19%   | 91%   |
| Vol Thru, %            | 34%   | 85%   | 0%    | 9%    |
| Vol Right, %           | 66%   | 0%    | 81%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 29    | 13    | 172   | 360   |
| LT Vol                 | 0     | 2     | 32    | 328   |
| Through Vol            | 10    | 11    | 0     | 32    |
| RT Vol                 | 19    | 0     | 140   | 0     |
| Lane Flow Rate         | 32    | 14    | 191   | 400   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.04  | 0.021 | 0.241 | 0.514 |
| Departure Headway (Hd) | 4.487 | 5.251 | 4.542 | 4.63  |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 794   | 679   | 789   | 776   |
| Service Time           | 2.537 | 3.301 | 2.573 | 2.665 |
| HCM Lane V/C Ratio     | 0.04  | 0.021 | 0.242 | 0.515 |
| HCM Control Delay      | 7.7   | 8.4   | 9     | 12.5  |
| HCM Lane LOS           | A     | A     | A     | B     |
| HCM 95th-tile Q        | 0.1   | 0.1   | 0.9   | 3     |

22-1270: Black Mountain Village  
2024 Total PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |   |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 7 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | A |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 19   | 0    | 9    | 18   | 19   | 4    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 19   | 0    | 9    | 18   | 19   | 4    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 28   | 0    | 13   | 26   | 28   | 6    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.2 | 6.7 | 6.8 | 7.4 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 10%   | 83%   |
| Vol Thru, %            | 33%   | 75%   | 0%    | 17%   |
| Vol Right, %           | 67%   | 0%    | 90%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 27    | 4     | 21    | 23    |
| LT Vol                 | 0     | 1     | 2     | 19    |
| Through Vol            | 9     | 3     | 0     | 4     |
| RT Vol                 | 18    | 0     | 19    | 0     |
| Lane Flow Rate         | 40    | 6     | 31    | 34    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.04  | 0.007 | 0.03  | 0.039 |
| Departure Headway (Hd) | 3.622 | 4.134 | 3.541 | 4.192 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 990   | 865   | 1009  | 856   |
| Service Time           | 1.639 | 2.164 | 1.569 | 2.206 |
| HCM Lane V/C Ratio     | 0.04  | 0.007 | 0.031 | 0.04  |
| HCM Control Delay      | 6.8   | 7.2   | 6.7   | 7.4   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0.1   | 0.1   |

22-1270: Black Mountain Village  
2024 Total School PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 12.1 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 41   | 34   | 1    | 15   | 0    | 96   | 0    | 30   | 46   | 92   | 4    | 0    |
| Future Vol, veh/h   | 41   | 34   | 1    | 15   | 0    | 96   | 0    | 30   | 46   | 92   | 4    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 111  | 92   | 3    | 41   | 0    | 259  | 0    | 81   | 124  | 249  | 11   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB | SB   |
|----------------------------|------|------|----|------|
| Opposing Approach          | WB   | EB   | SB | NB   |
| Opposing Lanes             | 1    | 1    | 1  | 1    |
| Conflicting Approach Left  | SB   | NB   | EB | WB   |
| Conflicting Lanes Left     | 1    | 1    | 1  | 1    |
| Conflicting Approach Right | NB   | SB   | WB | EB   |
| Conflicting Lanes Right    | 1    | 1    | 1  | 1    |
| HCM Control Delay          | 11.9 | 12.1 | 11 | 13.2 |
| HCM LOS                    | B    | B    | B  | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 54%   | 14%   | 96%   |
| Vol Thru, %            | 39%   | 45%   | 0%    | 4%    |
| Vol Right, %           | 61%   | 1%    | 86%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 76    | 76    | 111   | 96    |
| LT Vol                 | 0     | 41    | 15    | 92    |
| Through Vol            | 30    | 34    | 0     | 4     |
| RT Vol                 | 46    | 1     | 96    | 0     |
| Lane Flow Rate         | 205   | 205   | 300   | 259   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.311 | 0.334 | 0.429 | 0.423 |
| Departure Headway (Hd) | 5.442 | 5.861 | 5.145 | 5.865 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 655   | 610   | 696   | 610   |
| Service Time           | 3.513 | 3.933 | 3.21  | 3.931 |
| HCM Lane V/C Ratio     | 0.313 | 0.336 | 0.431 | 0.425 |
| HCM Control Delay      | 11    | 11.9  | 12.1  | 13.2  |
| HCM Lane LOS           | B     | B     | B     | B     |
| HCM 95th-tile Q        | 1.3   | 1.5   | 2.2   | 2.1   |

22-1270: Black Mountain Village  
2024 Total AM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔    |      | ↔    |      |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 0    | 352  | 6    | 10   | 173  | 33   | 0    | 0    | 0    | 17   | 0    | 0    |
| Future Vol, veh/h        | 0    | 352  | 6    | 10   | 173  | 33   | 0    | 0    | 0    | 17   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 391  | 7    | 11   | 192  | 37   | 0    | 0    | 0    | 19   | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 229    | 0      | 398    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1338   | -      | 1159   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1338   | -      | 1159   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.4 | 11.6 |
| HCM LOS              | B  |     |      |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL  | WBT | WBR | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|------|-----|-----|-------|-----|-----|
| Capacity (veh/h)      | 1338 | -   | -   | 1159 | -   | -   | 562   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.01 | -   | -   | 0.034 | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 8.1  | 0   | -   | 11.6  | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A    | A   | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0    | -   | -   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔    |      | ↔    |      |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 0    | 31   | 9    | 9    | 21   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 31   | 9    | 9    | 21   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 69   | 69   | 69   | 69   | 90   | 69   | 90   | 69   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 45   | 13   | 13   | 30   | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 77     | 0      | 58     |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1521   | -      | 1545   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1521   | -      | 1545   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 1.1 | 9.2 |
| HCM LOS              | A  |     |     |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-----|-----|-------|-----|-----|
| Capacity (veh/h)      | 1521 | -   | -   | 1545  | -   | -   | 886   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.008 | -   | -   | 0.038 | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 7.3   | 0   | -   | 9.2   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total School PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 0    | 165  | 7    | 16   | 110  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 165  | 7    | 16   | 110  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 38   | 38   | 38   | 38   | 90   | 38   | 90   | 38   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 434  | 18   | 42   | 289  | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 | Minor1 |   |   |       |       |       |
|----------------------|--------|--------|--------|--------|---|---|-------|-------|-------|
| Conflicting Flow All | 336    | 0      | 0      | 452    | 0 | 0 | 614   | 849   | 313   |
| Stage 1              | -      | -      | -      | -      | - | - | 397   | 397   | -     |
| Stage 2              | -      | -      | -      | -      | - | - | 217   | 452   | -     |
| Critical Hdwy        | 4.13   | -      | -      | 4.13   | - | - | 6.63  | 6.53  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | -      | - | - | 5.43  | 5.53  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | -      | - | - | 5.83  | 5.53  | -     |
| Follow-up Hdwy       | 2.219  | -      | -      | 2.219  | - | - | 3.519 | 4.019 | 3.319 |
| Pot Cap-1 Maneuver   | 1222   | -      | -      | 1107   | - | - | 439   | 297   | 726   |
| Stage 1              | -      | -      | -      | -      | - | - | 678   | 603   | -     |
| Stage 2              | -      | -      | -      | -      | - | - | 799   | 570   | -     |
| Platoon blocked, %   | -      | -      | -      | -      | - | - | -     | -     | -     |
| Mov Cap-1 Maneuver   | 1222   | -      | -      | 1107   | - | - | 418   | 0     | 726   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      | - | - | 418   | 0     | -     |
| Stage 1              | -      | -      | -      | -      | - | - | 678   | 0     | -     |
| Stage 2              | -      | -      | -      | -      | - | - | 761   | 0     | -     |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.9 | 14.2 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1222 | -   | -   | 1107  | -   | -   | 424   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.038 | -   | -   | 0.079 |
| HCM Control Delay (s) | 0    | -   | -   | 8.4   | 0   | -   | 14.2  |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0.1   | -   | -   | 0.3   |

22-1270: Black Mountain Village  
2024 Total AM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 4    | 375  | 0    | 0    | 227  | 55   | 2    | 0    | 60   | 24   | 0    | 8    |
| Future Vol, veh/h        | 4    | 375  | 0    | 0    | 227  | 55   | 2    | 0    | 60   | 24   | 0    | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 417  | 0    | 0    | 252  | 61   | 2    | 0    | 67   | 27   | 0    | 9    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |   |       |       |       |       |       |       |
|----------------------|--------|--------|--------|--------|---|-------|-------|-------|-------|-------|-------|
| Conflicting Flow All | 313    | 0      | -      | -      | 0 | 712   | 738   | 209   | 500   | 708   | 283   |
| Stage 1              | -      | -      | -      | -      | - | 425   | 425   | -     | 283   | 283   | -     |
| Stage 2              | -      | -      | -      | -      | - | 287   | 313   | -     | 217   | 425   | -     |
| Critical Hdwy        | 4.13   | -      | -      | -      | - | 7.33  | 6.53  | 6.93  | 7.33  | 6.53  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | -      | - | 6.53  | 5.53  | -     | 6.13  | 5.53  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | -      | - | 6.13  | 5.53  | -     | 6.53  | 5.53  | -     |
| Follow-up Hdwy       | 2.219  | -      | -      | -      | - | 3.519 | 4.019 | 3.319 | 3.519 | 4.019 | 3.319 |
| Pot Cap-1 Maneuver   | *1362  | -      | 0      | 0      | - | *558  | *508  | 798   | *826  | *532  | *910  |
| Stage 1              | -      | -      | 0      | 0      | - | *578  | *586  | -     | *859  | *752  | -     |
| Stage 2              | -      | -      | 0      | 0      | - | *859  | *752  | -     | *766  | *586  | -     |
| Platoon blocked, %   | 1      | -      | -      | -      | - | 1     | 1     | 1     | 1     | 1     | 1     |
| Mov Cap-1 Maneuver   | *1362  | -      | -      | -      | - | *551  | *506  | 798   | *755  | *530  | *910  |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      | - | *551  | *506  | -     | *755  | *530  | -     |
| Stage 1              | -      | -      | -      | -      | - | *576  | *584  | -     | *856  | *752  | -     |
| Stage 2              | -      | -      | -      | -      | - | *851  | *752  | -     | *699  | *584  | -     |

| Approach             | EB  | WB | NB | SB  |
|----------------------|-----|----|----|-----|
| HCM Control Delay, s | 0.1 | 0  | 10 | 9.8 |
| HCM LOS              |     |    | B  | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 787   | *1362 | -   | -   | -   | 789   |
| HCM Lane V/C Ratio    | 0.088 | 0.003 | -   | -   | -   | 0.045 |
| HCM Control Delay (s) | 10    | 7.7   | 0   | -   | -   | 9.8   |
| HCM Lane LOS          | B     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | -   | 0.1   |

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



22-1270: Black Mountain Village  
2024 Total PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕↕   |      |      | ↕    |      |      | ↕    |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 4    | 68   | 0    | 0    | 91   | 49   | 3    | 0    | 20   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 68   | 0    | 0    | 91   | 49   | 3    | 0    | 20   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 78   | 78   | 78   | 78   | 90   | 78   | 90   | 78   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 87   | 0    | 0    | 117  | 54   | 4    | 0    | 26   | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 171    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | *1518  | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *1518  | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB  | SB  |
|----------------------|-----|----|-----|-----|
| HCM Control Delay, s | 0.4 | 0  | 8.7 | 8.9 |
| HCM LOS              |     |    | A   | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 995   | *1518 | -   | -   | -   | 947   |
| HCM Lane V/C Ratio    | 0.03  | 0.003 | -   | -   | -   | 0.029 |
| HCM Control Delay (s) | 8.7   | 7.4   | 0   | -   | -   | 8.9   |
| HCM Lane LOS          | A     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total School PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕↕   |      |      | ↕    |      |      | ↕    |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 4    | 202  | 0    | 0    | 185  | 49   | 3    | 0    | 63   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 202  | 0    | 0    | 185  | 49   | 3    | 0    | 63   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 39   | 39   | 39   | 39   | 90   | 39   | 90   | 39   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 518  | 0    | 0    | 474  | 54   | 8    | 0    | 162  | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 528    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1256   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1256   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.1 | 0  | 11.9 | 13.9 |
| HCM LOS              |     |    | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 690   | 1256  | -   | -   | -   | 433   |
| HCM Lane V/C Ratio    | 0.245 | 0.004 | -   | -   | -   | 0.064 |
| HCM Control Delay (s) | 11.9  | 7.9   | 0   | -   | -   | 13.9  |
| HCM Lane LOS          | B     | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 1     | 0     | -   | -   | -   | 0.2   |

22-1270: Black Mountain Village  
2024 Total AM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 459  | 0    | 0    | 283  | 0    | 22   |
| Future Vol, veh/h        | 459  | 0    | 0    | 283  | 0    | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 510  | 0    | 0    | 314  | 0    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |      |       |
|----------------------|--------|--------|--------|------|-------|
| Conflicting Flow All | 0      | 0      | 510    | 0    | 824   |
| Stage 1              | -      | -      | -      | 510  | -     |
| Stage 2              | -      | -      | -      | 314  | -     |
| Critical Hdwy        | -      | -      | 4.13   | -    | 6.63  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83 | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43 | -     |
| Follow-up Hdwy       | -      | -      | 2.219  | -    | 3.519 |
| Pot Cap-1 Maneuver   | -      | -      | 1053   | -    | 593   |
| Stage 1              | -      | -      | -      | 569  | -     |
| Stage 2              | -      | -      | -      | 800  | -     |
| Platoon blocked, %   | -      | -      | -      | -    | 1     |
| Mov Cap-1 Maneuver   | -      | -      | 1053   | -    | 593   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 593  | -     |
| Stage 1              | -      | -      | -      | 569  | -     |
| Stage 2              | -      | -      | -      | 800  | -     |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 10 |
| HCM LOS              |    |    | B  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 745   | -   | -   | 1053 | -   |
| HCM Lane V/C Ratio    | 0.033 | -   | -   | -    | -   |
| HCM Control Delay (s) | 10    | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0    | -   |

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

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2024 Total PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 105  | 1    | 1    | 142  | 0    | 19   |
| Future Vol, veh/h        | 105  | 1    | 1    | 142  | 0    | 19   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 131  | 1    | 1    | 178  | 0    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |      |       |
|----------------------|--------|--------|--------|------|-------|
| Conflicting Flow All | 0      | 0      | 132    | 0    | 312   |
| Stage 1              | -      | -      | -      | 132  | -     |
| Stage 2              | -      | -      | -      | 180  | -     |
| Critical Hdwy        | -      | -      | 4.13   | -    | 6.63  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83 | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43 | -     |
| Follow-up Hdwy       | -      | -      | 2.219  | -    | 3.519 |
| Pot Cap-1 Maneuver   | -      | -      | 1452   | -    | 910   |
| Stage 1              | -      | -      | -      | 881  | -     |
| Stage 2              | -      | -      | -      | 918  | -     |
| Platoon blocked, %   | -      | -      | -      | -    | 1     |
| Mov Cap-1 Maneuver   | -      | -      | 1452   | -    | 909   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 909  | -     |
| Stage 1              | -      | -      | -      | 881  | -     |
| Stage 2              | -      | -      | -      | 917  | -     |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.1 | 8.7 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 985   | -   | -   | 1452  | -   |
| HCM Lane V/C Ratio    | 0.024 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.7   | -   | -   | 7.5   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↕↔   |      | ↕    |      | ↕↔   |      |
| Traffic Vol, veh/h       | 284  | 0    | 0    | 235  | 3    | 29   |
| Future Vol, veh/h        | 284  | 0    | 0    | 235  | 3    | 29   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 728  | 0    | 0    | 603  | 8    | 74   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 728    | 0      |
| Stage 1              | -      | -      | -      | 728    |
| Stage 2              | -      | -      | -      | 603    |
| Critical Hdwy        | -      | -      | 4.13   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83   |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43   |
| Follow-up Hdwy       | -      | -      | 2.219  | -      |
| Pot Cap-1 Maneuver   | -      | -      | 873    | -      |
| Stage 1              | -      | -      | -      | 440    |
| Stage 2              | -      | -      | -      | 773    |
| Platoon blocked, %   | -      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 873    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | 218    |
| Stage 1              | -      | -      | -      | 440    |
| Stage 2              | -      | -      | -      | 773    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 12.9 |
| HCM LOS              | B  |    |      |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-----|-----|
| Capacity (veh/h)      | 538   | -   | -   | 873 | -   |
| HCM Lane V/C Ratio    | 0.153 | -   | -   | -   | -   |
| HCM Control Delay (s) | 12.9  | -   | -   | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | A   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0   | -   |

22-1270: Black Mountain Village  
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7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↔   |      | ↕    |      | ↕↔   |      | ↕↔   |      | ↕↔   |      | ↕↔   |      |
| Traffic Vol, veh/h       | 28   | 10   | 48   | 76   | 4    | 5    | 24   | 295  | 70   | 4    | 552  | 21   |
| Future Vol, veh/h        | 28   | 10   | 48   | 76   | 4    | 5    | 24   | 295  | 70   | 4    | 552  | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 31   | 11   | 53   | 84   | 4    | 6    | 27   | 328  | 78   | 4    | 613  | 23   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 853    | 1093   | 318    | 641    |
| Stage 1              | 633    | 633    | -      | 382    |
| Stage 2              | 220    | 460    | -      | 259    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 280    | 213    | 578    | 385    |
| Stage 1              | 366    | 472    | -      | 592    |
| Stage 2              | 734    | 564    | -      | 687    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 263    | 203    | 578    | 322    |
| Mov Cap-2 Maneuver   | 263    | 203    | -      | 322    |
| Stage 1              | 349    | 471    | -      | 565    |
| Stage 2              | 690    | 538    | -      | 607    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 16.5 | 19.5 | 0.7 | 0.1 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 584   | -   | -   | 263   | 438   | 322   | 377   | 1149  | -   | -   |
| HCM Lane V/C Ratio    | 0.046 | -   | -   | 0.118 | 0.147 | 0.262 | 0.027 | 0.004 | -   | -   |
| HCM Control Delay (s) | 11.5  | -   | -   | 20.5  | 14.6  | 20.1  | 14.8  | 8.1   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | B     | C     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.4   | 0.5   | 1     | 0.1   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 47   | 19   | 25   | 71   | 20   | 9    | 30   | 392  | 56   | 9    | 215  | 35   |
| Future Vol, veh/h        | 47   | 19   | 25   | 71   | 20   | 9    | 30   | 392  | 56   | 9    | 215  | 35   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 63   | 25   | 33   | 95   | 27   | 12   | 40   | 523  | 75   | 12   | 287  | 47   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 690    | 1013   | 167    | 754    |
| Stage 1              | 335    | 335    | -      | 603    |
| Stage 2              | 355    | 678    | -      | 151    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 358    | 237    | 721    | 325    |
| Stage 1              | 585    | 641    | -      | 439    |
| Stage 2              | 613    | 450    | -      | 798    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 308    | 223    | 721    | 270    |
| Mov Cap-2 Maneuver   | 308    | 223    | -      | 270    |
| Stage 1              | 556    | 633    | -      | 417    |
| Stage 2              | 540    | 428    | -      | 722    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 18.2 | 23.4 | 0.6 | 0.3 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 810   | -   | -   | 308   | 367   | 270   | 304   | 975   | -   | -   |
| HCM Lane V/C Ratio    | 0.049 | -   | -   | 0.203 | 0.16  | 0.351 | 0.127 | 0.012 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 19.6  | 16.7  | 25.4  | 18.6  | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | C     | D     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.7   | 0.6   | 1.5   | 0.4   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Total School PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 11   | 6    | 28   | 53   | 6    | 9    | 25   | 238  | 51   | 2    | 243  | 22   |
| Future Vol, veh/h        | 11   | 6    | 28   | 53   | 6    | 9    | 25   | 238  | 51   | 2    | 243  | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 12   | 7    | 31   | 60   | 7    | 10   | 28   | 267  | 57   | 2    | 273  | 25   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 483    | 670    | 149    | 440    |
| Stage 1              | 290    | 290    | -      | 323    |
| Stage 2              | 193    | 380    | -      | 117    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *740   | 534    | 740    | *793   |
| Stage 1              | *627   | 671    | -      | *902   |
| Stage 2              | *902   | 804    | -      | *836   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *707   | 516    | 740    | *732   |
| Mov Cap-2 Maneuver   | *707   | 516    | -      | *732   |
| Stage 1              | *606   | 670    | -      | *873   |
| Stage 2              | *856   | 777    | -      | *791   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.4 | 10.3 | 0.8 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 841   | -   | -   | 707   | 687   | 732   | 752   | 1492  | -   | -   |
| HCM Lane V/C Ratio    | 0.033 | -   | -   | 0.017 | 0.056 | 0.081 | 0.022 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 10.2  | 10.5  | 10.4  | 9.9   | 7.4   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.2   | 0.3   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 25   | 3    | 130  | 7    | 1    | 0    | 91   | 365  | 11   | 0    | 669  | 6    |
| Future Vol, veh/h        | 25   | 3    | 130  | 7    | 1    | 0    | 91   | 365  | 11   | 0    | 669  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 28   | 3    | 144  | 8    | 1    | 0    | 101  | 406  | 12   | 0    | 743  | 7    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1112   | 1367   | 375    | 913    |
| Stage 1              | 747    | 747    | -      | 614    |
| Stage 2              | 365    | 620    | -      | 299    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 220    | 146    | 532    | 287    |
| Stage 1              | 298    | 418    | -      | 367    |
| Stage 2              | 574    | 478    | -      | 628    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 186    | 117    | 532    | 174    |
| Mov Cap-2 Maneuver   | 186    | 117    | -      | 174    |
| Stage 1              | 240    | 418    | -      | 295    |
| Stage 2              | 460    | 384    | -      | 454    |

| Approach             | EB   | WB   | NB  | SB |
|----------------------|------|------|-----|----|
| HCM Control Delay, s | 21.5 | 28.2 | 2.7 | 0  |
| HCM LOS              | C    | D    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 516   | -   | -   | 391   | 164   | 740 | -   | -   |
| HCM Lane V/C Ratio    | 0.196 | -   | -   | 0.449 | 0.054 | -   | -   | -   |
| HCM Control Delay (s) | 13.7  | -   | -   | 21.5  | 28.2  | 0   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | D     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 2.3   | 0.2   | 0   | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 12   | 1    | 124  | 8    | 1    | 3    | 99   | 462  | 9    | 3    | 297  | 9    |
| Future Vol, veh/h        | 12   | 1    | 124  | 8    | 1    | 3    | 99   | 462  | 9    | 3    | 297  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 1    | 170  | 11   | 1    | 4    | 136  | 633  | 12   | 4    | 407  | 12   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 947    | 1338   | 210    | 1082   |
| Stage 1              | 421    | 421    | -      | 911    |
| Stage 2              | 526    | 917    | -      | 171    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 275    | 152    | 677    | 229    |
| Stage 1              | 495    | 587    | -      | 229    |
| Stage 2              | 459    | 349    | -      | 748    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 231    | 123    | 677    | 145    |
| Mov Cap-2 Maneuver   | 231    | 123    | -      | 145    |
| Stage 1              | 404    | 583    | -      | 187    |
| Stage 2              | 370    | 285    | -      | 555    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 14.6 | 27.7 | 1.9 | 0.1 |
| HCM LOS              | B    | D    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 739   | -   | -   | 563   | 175   | 579   | -   | -   |
| HCM Lane V/C Ratio    | 0.184 | -   | -   | 0.333 | 0.094 | 0.007 | -   | -   |
| HCM Control Delay (s) | 11    | -   | -   | 14.6  | 27.7  | 11.3  | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | D     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 1.5   | 0.3   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Total School PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 6    | 0    | 74   | 11   | 0    | 7    | 88   | 299  | 7    | 3    | 319  | 1    |
| Future Vol, veh/h        | 6    | 0    | 74   | 11   | 0    | 7    | 88   | 299  | 7    | 3    | 319  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 0    | 84   | 13   | 0    | 8    | 100  | 340  | 8    | 3    | 363  | 1    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 706    | 918    | 182    | 695    |
| Stage 1              | 370    | 370    | -      | 544    |
| Stage 2              | 336    | 548    | -      | 151    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 478    | 337    | 706    | 486    |
| Stage 1              | 536    | 619    | -      | 553    |
| Stage 2              | 785    | 616    | -      | 769    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 427    | 293    | 706    | 385    |
| Mov Cap-2 Maneuver   | 427    | 293    | -      | 385    |
| Stage 1              | 467    | 617    | -      | 482    |
| Stage 2              | 679    | 537    | -      | 675    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 11.2 | 12.7 | 2.3 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 784   | -   | -   | 673   | 491   | 975   | -   | -   |
| HCM Lane V/C Ratio    | 0.128 | -   | -   | 0.135 | 0.042 | 0.003 | -   | -   |
| HCM Control Delay (s) | 10.3  | -   | -   | 11.2  | 12.7  | 8.7   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.5   | 0.1   | 0     | -   | -   |

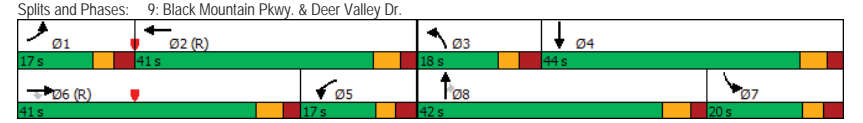
Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

22-1270: Black Mountain Village  
2024 Total AM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 92    | 712   | 453   | 259   | 191   | 357   | 329   | 270   | 89    | 651   |
| Future Volume (vph)  | 92    | 712   | 453   | 259   | 191   | 357   | 329   | 270   | 89    | 651   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 1     | 6     |       | 5     | 2     | 3     | 8     |       | 7     | 4     |
| Permitted Phases     |       |       | 6     |       |       |       |       | 8     |       |       |
| Detector Phase       | 1     | 6     | 6     | 5     | 2     | 3     | 8     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   |
| Minimum Split (s)    | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  | 11.1  | 40.4  | 40.4  | 11.1  | 41.5  |
| Total Split (%)      | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  | 18.0  | 42.0  | 42.0  | 20.0  | 44.0  |
| Total Split (s)      | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% | 15.0% | 35.0% | 35.0% | 16.7% | 36.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   | 3.1   | 2.4   | 2.4   | 3.1   | 2.5   |
| 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)  | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   | 6.1   | 6.4   | 6.4   | 6.1   | 6.5   |
| Lead/Lag             | Lead  | Lead  | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | Max   | Max   | None  | None  |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green, Master Intersection  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2024 Total PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 69    | 401   | 218   | 265   | 424   | 249   | 413   | 213   | 77    | 300   |
| Future Volume (vph)  | 69    | 401   | 218   | 265   | 424   | 249   | 413   | 213   | 77    | 300   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       | 2     |       |       |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 2     | 1     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  |
| Minimum Split (s)    | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  | 11.1  | 41.5  | 41.5  | 11.1  | 40.4  |
| Total Split (s)      | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  |
| Total Split (%)      | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   | 3.1   | 2.5   | 2.5   | 3.1   | 2.4   |
| 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)  | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   | 6.1   | 6.5   | 6.5   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | None  | None  | None  | Max   |

Intersection Summary

Cycle Length: 120

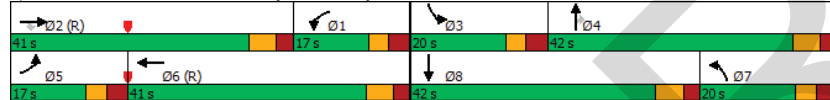
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 104   | 379   | 275   | 241   | 226   | 323   | 243   | 222   | 49    | 318   |
| Future Volume (vph)  | 104   | 379   | 275   | 241   | 226   | 323   | 243   | 222   | 49    | 318   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (%)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary

Cycle Length: 120

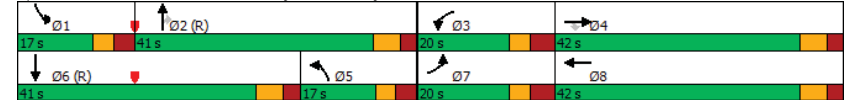
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection

Natural Cycle: 125

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.







22-1270: Black Mountain Village  
2024 Total School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 104  | 379  | 275  | 241  | 226  | 48    | 323  | 243  | 222  | 49   | 318  | 37   |
| Future Volume (veh/h)        | 104  | 379  | 275  | 241  | 226  | 48    | 323  | 243  | 222  | 49   | 318  | 37   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 151  | 549  | 0    | 349  | 328  | 53    | 468  | 352  | 0    | 71   | 461  | 41   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69  | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 208  | 722  |      | 389  | 861  | 135   | 839  | 2532 |      | 130  | 1378 | 121  |
| Arrive On Green              | 0.06 | 0.14 | 0.00 | 0.11 | 0.19 | 0.19  | 0.24 | 0.50 | 0.00 | 0.04 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4450 | 699   | 3456 | 5106 | 1585 | 3456 | 4779 | 420  |
| Grp Volume(v), veh/h         | 151  | 549  | 0    | 349  | 249  | 132   | 468  | 352  | 0    | 71   | 327  | 175  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1745  | 1728 | 1702 | 1585 | 1728 | 1702 | 1795 |
| Q Serve(g_s), s              | 5.2  | 12.4 | 0.0  | 12.0 | 7.6  | 7.9   | 14.2 | 4.5  | 0.0  | 2.4  | 9.1  | 9.2  |
| Cycle Q Clear(g_c), s        | 5.2  | 12.4 | 0.0  | 12.0 | 7.6  | 7.9   | 14.2 | 4.5  | 0.0  | 2.4  | 9.1  | 9.2  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.40  | 1.00 |      | 1.00 | 1.00 |      | 0.23 |
| Lane Grp Cap(c), veh/h       | 208  | 722  |      | 389  | 659  | 338   | 839  | 2532 |      | 130  | 982  | 518  |
| V/C Ratio(X)                 | 0.72 | 0.76 |      | 0.90 | 0.38 | 0.39  | 0.56 | 0.14 |      | 0.54 | 0.33 | 0.34 |
| Avail Cap(c_a), veh/h        | 389  | 1511 |      | 389  | 1007 | 516   | 839  | 2532 |      | 314  | 982  | 518  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 55.4 | 49.6 | 0.0  | 52.6 | 42.1 | 42.2  | 39.8 | 16.4 | 0.0  | 56.7 | 33.6 | 33.7 |
| Incr Delay (d2), s/veh       | 1.8  | 0.6  | 0.0  | 22.2 | 0.1  | 0.3   | 0.5  | 0.1  | 0.0  | 1.3  | 0.9  | 1.8  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 4.1  | 9.1  | 0.0  | 10.5 | 5.8  | 6.2   | 10.2 | 3.2  | 0.0  | 1.9  | 7.0  | 7.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 57.2 | 50.2 | 0.0  | 74.8 | 42.2 | 42.5  | 40.3 | 16.5 | 0.0  | 58.0 | 34.5 | 35.4 |
| LnGrp LOS                    | E    | D    |      | E    | D    | D     | D    | B    |      | E    | C    | D    |
| Approach Vol, veh/h          |      | 700  |      |      | 730  |       |      | 820  |      |      | 573  |      |
| Approach Delay, s/veh        |      | 51.7 |      |      | 57.9 |       |      | 30.1 |      |      | 37.7 |      |
| Approach LOS                 |      | D    |      |      | E    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.6 | 65.9 | 20.0 | 23.5 | 35.5 | 41.0  | 13.7 | 29.7 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | * 35  | 13.5 | 35.5 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 4.4  | 6.5  | 14.0 | 14.4 | 16.2 | 11.2  | 7.2  | 9.9  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.6  | 0.0  | 2.5  | 0.0  | 2.1   | 0.1  | 1.6  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 44.2 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

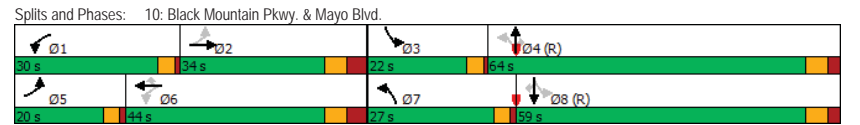
Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Total AM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 317   | 49    | 286   | 81    | 135   | 96    | 454   | 139   | 44    | 1119  | 106   |
| Future Volume (vph)  | 317   | 49    | 286   | 81    | 135   | 96    | 454   | 139   | 44    | 1119  | 106   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |       |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phases      | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 20.0  | 34.0  | 30.0  | 44.0  | 44.0  | 27.0  | 64.0  | 64.0  | 22.0  | 59.0  | 59.0  |
| Total Split (%)      | 13.3% | 22.7% | 20.0% | 29.3% | 29.3% | 18.0% | 42.7% | 42.7% | 14.7% | 39.3% | 39.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary  
Cycle Length: 150  
Actuated Cycle Length: 150  
Offset: 69 (46%), Referenced to phase 4:NBT and 8:SBTL, Start of Green  
Natural Cycle: 105  
Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2024 Total PM

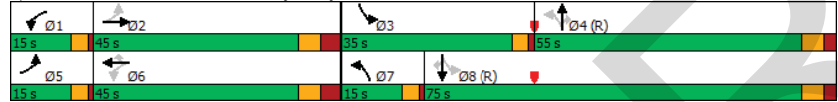
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 57    | 31    | 171   | 25    | 95    | 89    | 656   | 141   | 65    | 610   | 27    |
| Future Volume (vph)  | 57    | 31    | 171   | 25    | 95    | 89    | 656   | 141   | 65    | 610   | 27    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |       |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 15.0  | 45.0  | 15.0  | 45.0  | 45.0  | 15.0  | 55.0  | 55.0  | 35.0  | 75.0  | 75.0  |
| Total Split (%)      | 10.0% | 30.0% | 10.0% | 30.0% | 30.0% | 10.0% | 36.7% | 36.7% | 23.3% | 50.0% | 50.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 116 (77%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2024 Total School PM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 154   | 50    | 111   | 31    | 98    | 115   | 469   | 148   | 97    | 568   | 88    |
| Future Volume (vph)  | 154   | 50    | 111   | 31    | 98    | 115   | 469   | 148   | 97    | 568   | 88    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |       |
| Permitted Phases     | 2     |       | 6     |       | 6     | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  |
| Minimum Split (s)    | 9.5   | 25.7  | 9.5   | 43.7  | 43.7  | 9.5   | 37.4  | 37.4  | 9.5   | 37.4  | 37.4  |
| Total Split (s)      | 35.0  | 60.0  | 35.0  | 60.0  | 60.0  | 15.0  | 40.0  | 40.0  | 15.0  | 40.0  | 40.0  |
| Total Split (%)      | 23.3% | 40.0% | 23.3% | 40.0% | 40.0% | 10.0% | 26.7% | 26.7% | 10.0% | 26.7% | 26.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 3.7   | 1.0   | 3.7   | 3.7   | 1.0   | 2.4   | 2.4   | 1.0   | 2.4   | 2.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 7.7   | 4.0   | 7.7   | 7.7   | 4.0   | 6.4   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | Max   | None  | Max   | Max   | None  | C-Max | C-Max | None  | C-Max | C-Max |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 0 (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.





22-1270: Black Mountain Village  
2024 Total School PM

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 154  | 50    | 109  | 111  | 31   | 98    | 115  | 469  | 148  | 97   | 568  | 88   |
| Future Volume (veh/h)        | 154  | 50    | 109  | 111  | 31   | 98    | 115  | 469  | 148  | 97   | 568  | 88   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 233  | 76    | 124  | 168  | 47   | 74    | 174  | 711  | 0    | 147  | 861  | 66   |
| Peak Hour Factor             | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 643  | 237   | 387  | 520  | 652  | 553   | 251  | 1734 |      | 340  | 1185 | 528  |
| Arrive On Green              | 0.10 | 0.37  | 0.37 | 0.07 | 0.35 | 0.35  | 0.07 | 0.34 | 0.00 | 0.07 | 0.33 | 0.33 |
| Sat Flow, veh/h              | 1781 | 639   | 1043 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 233  | 0     | 200  | 168  | 47   | 74    | 174  | 711  | 0    | 147  | 861  | 66   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0     | 1683 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 12.3 | 0.0   | 12.7 | 9.0  | 2.5  | 4.8   | 9.6  | 16.0 | 0.0  | 8.1  | 32.0 | 4.3  |
| Cycle Q Clear(g_c), s        | 12.3 | 0.0   | 12.7 | 9.0  | 2.5  | 4.8   | 9.6  | 16.0 | 0.0  | 8.1  | 32.0 | 4.3  |
| Prop In Lane                 | 1.00 |       | 0.62 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 643  | 0     | 625  | 520  | 652  | 553   | 251  | 1734 |      | 340  | 1185 | 528  |
| V/C Ratio(X)                 | 0.36 | 0.00  | 0.32 | 0.32 | 0.07 | 0.13  | 0.69 | 0.41 |      | 0.43 | 0.73 | 0.12 |
| Avail Cap(c_a), veh/h        | 838  |       | 625  | 755  | 652  | 553   | 251  | 1734 |      | 350  | 1185 | 528  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 25.7 | 0.0   | 33.7 | 27.9 | 32.6 | 33.4  | 34.0 | 38.0 | 0.0  | 30.3 | 44.0 | 34.8 |
| Incr Delay (d2), s/veh       | 0.1  | 0.0   | 1.4  | 0.1  | 0.2  | 0.5   | 6.7  | 0.7  | 0.0  | 0.3  | 3.9  | 0.5  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 9.1  | 0.0   | 9.4  | 7.1  | 2.2  | 3.5   | 8.2  | 11.2 | 0.0  | 6.4  | 21.1 | 3.2  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 25.8 | 0.0   | 35.0 | 28.0 | 32.9 | 33.9  | 40.7 | 38.7 | 0.0  | 30.6 | 47.9 | 35.3 |
| LnGrp LOS                    | C    | A     | D    | C    | C    | C     | D    | D    |      | C    | D    | D    |
| Approach Vol, veh/h          |      | 433   |      |      | 289  |       |      | 885  |      |      | 1074 |      |
| Approach Delay, s/veh        |      | 30.1  |      |      | 30.3 |       |      | 39.1 |      |      | 44.8 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 15.2 | 63.4  | 14.1 | 57.3 | 18.6 | 60.0  | 15.0 | 56.4 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 31.0 | * 52  | 11.0 | 33.6 | 31.0 | * 52  | 11.0 | 33.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 11.0 | 14.7  | 10.1 | 18.0 | 14.3 | 6.8   | 11.6 | 34.0 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.2  | 0.8   | 0.0  | 3.1  | 0.3  | 0.3   | 0.0  | 0.0  |      |      |      |      |

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

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Total AM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |        |        |        |        |        |        |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Int Delay, s/veh         | 0      |        |        |        |        |        |
| Movement                 | EBL    | EBR    | NBL    | NBT    | SBT    | SBR    |
| Lane Configurations      |        | ↔      |        | ↔      | ↔      | ↔      |
| Traffic Vol, veh/h       | 0      | 1      | 0      | 690    | 1059   | 460    |
| Future Vol, veh/h        | 0      | 1      | 0      | 690    | 1059   | 460    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop   | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None | - None | - None | - None | - None |
| Storage Length           | -      | 0      | -      | -      | -      | 150    |
| Veh in Median Storage, # | 0      | -      | -      | 0      | 0      | -      |
| Grade, %                 | 0      | -      | -      | 0      | 0      | -      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1      | 0      | 767    | 1177   | 511    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 589  | - 0    | - 0    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | - 6.94 | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | - 3.32 | -      | -      |
| Pot Cap-1 Maneuver   | 0 *639 | 0      | -      |
| Stage 1              | 0      | - 0    | -      |
| Stage 2              | 0      | - 0    | -      |
| Platoon blocked, %   | 1      | -      | -      |
| Mov Cap-1 Maneuver   | - *639 | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.6 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 639     | -   | -   |
| HCM Lane V/C Ratio    | - 0.002   | -   | -   |
| HCM Control Delay (s) | - 10.6    | -   | -   |
| HCM Lane LOS          | - B       | -   | -   |
| HCM 95th %tile Q(veh) | - 0       | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 7    | 0    | 887  | 771  | 44   |
| Future Vol, veh/h        | 0    | 7    | 0    | 887  | 771  | 44   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 7    | 0    | 934  | 812  | 46   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 406  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *764 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *764 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.8 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 764     | - - | - - |
| HCM Lane V/C Ratio    | - 0.01    | - - | - - |
| HCM Control Delay (s) | - 9.8     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Total School PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 9    | 0    | 732  | 597  | 190  |
| Future Vol, veh/h        | 0    | 9    | 0    | 732  | 597  | 190  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 12   | 0    | 976  | 796  | 253  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 398  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *848 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *848 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.3 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 848     | - - | - - |
| HCM Lane V/C Ratio    | - 0.014   | - - | - - |
| HCM Control Delay (s) | - 9.3     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Total AM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 7.5   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 33    | 770   |       | 1450  |       |
| Demand Flow Rate, veh/h     | 33    | 786   |       | 1479  |       |
| Vehicles Circulating, veh/h | 1458  | 12    |       | 27    |       |
| Vehicles Exiting, veh/h     | 48    | 1479  |       | 771   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 9.9   | 5.2   |       | 8.7   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.469 | 0.531 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 33    | 369   | 417   | 695   | 784   |
| Cap Entry Lane, veh/h       | 411   | 1335  | 1406  | 1317  | 1388  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.979 | 0.981 | 0.981 |
| Flow Entry, veh/h           | 33    | 362   | 408   | 682   | 769   |
| Cap Entry, veh/h            | 411   | 1310  | 1376  | 1292  | 1361  |
| V/C Ratio                   | 0.080 | 0.276 | 0.297 | 0.528 | 0.565 |
| Control Delay, s/veh        | 9.9   | 5.2   | 5.2   | 8.5   | 8.8   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 3     | 4     |

22-1270: Black Mountain Village  
2024 Total PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.6   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 4     | 946   |       | 826   |       |
| Demand Flow Rate, veh/h     | 4     | 965   |       | 842   |       |
| Vehicles Circulating, veh/h | 838   | 1     |       | 3     |       |
| Vehicles Exiting, veh/h     | 7     | 841   |       | 963   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 5.2   | 5.8   |       | 5.3   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 454   | 511   | 396   | 446   |
| Cap Entry Lane, veh/h       | 697   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.979 | 0.981 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 4     | 445   | 501   | 388   | 438   |
| Cap Entry, veh/h            | 697   | 1321  | 1392  | 1319  | 1390  |
| V/C Ratio                   | 0.006 | 0.337 | 0.360 | 0.294 | 0.315 |
| Control Delay, s/veh        | 5.2   | 5.8   | 5.8   | 5.3   | 5.4   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 1     | 1     |

22-1270: Black Mountain Village  
2024 Total School PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 6.6   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 29    | 1100  |       | 1107  |       |
| Demand Flow Rate, veh/h     | 29    | 1122  |       | 1129  |       |
| Vehicles Circulating, veh/h | 1122  | 7     |       | 15    |       |
| Vehicles Exiting, veh/h     | 22    | 1144  |       | 1114  |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 7.2   | 6.5   |       | 6.6   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 29    | 527   | 595   | 531   | 598   |
| Cap Entry Lane, veh/h       | 547   | 1341  | 1412  | 1331  | 1402  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 29    | 517   | 583   | 520   | 587   |
| Cap Entry, veh/h            | 547   | 1316  | 1384  | 1304  | 1376  |
| V/C Ratio                   | 0.053 | 0.393 | 0.421 | 0.399 | 0.426 |
| Control Delay, s/veh        | 7.2   | 6.5   | 6.6   | 6.6   | 6.7   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 2     | 2     |

22-1270: Black Mountain Village  
2024 Total AM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |  |      |      |        |      |      |        |       |       |        |      |      |  |
|--------------------------|--|------|------|--------|------|------|--------|-------|-------|--------|------|------|--|
| Int Delay, s/veh         | 5.7  |      |      |        |      |      |        |       |       |        |      |      |  |
| Movement                 | EBL  | EBT  | EBR  | WBL    | WBT  | WBR  | NBL    | NBT   | NBR   | SBL    | SBT  | SBR  |  |
| Lane Configurations      | ↔  | ↔    | ↔    | ↔      | ↔    | ↔    | ↔      | ↔     | ↔     | ↔      | ↔    | ↔    |  |
| Traffic Vol, veh/h       | 173  | 97   | 7    | 14     | 171  | 79   | 12     | 4     | 7     | 24     | 3    | 162  |  |
| Future Vol, veh/h        | 173  | 97   | 7    | 14     | 171  | 79   | 12     | 4     | 7     | 24     | 3    | 162  |  |
| Conflicting Peds, #/hr   | 0  | 0    | 0    | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 0    | 0    |  |
| Sign Control             | Free   | Free | Free | Free   | Free | Free | Stop   | Stop  | Stop  | Stop   | Stop | Stop |  |
| RT Channelized           | -  | -    | None | -      | -    | None | -      | -     | None  | -      | -    | None |  |
| Storage Length           | 150  | -    | -    | 145    | -    | -    | -      | -     | -     | -      | -    | -    |  |
| Veh in Median Storage, # | -  | 0    | -    | -      | 0    | -    | -      | -     | 0     | -      | -    | 0    |  |
| Grade, %                 | -  | 0    | -    | -      | 0    | -    | -      | -     | 0     | -      | -    | 0    |  |
| Peak Hour Factor         | 90   | 90   | 90   | 90     | 90   | 90   | 90     | 90    | 90    | 90     | 90   | 90   |  |
| Heavy Vehicles, %        | 2  | 2    | 2    | 2      | 2    | 2    | 2      | 2     | 2     | 2      | 2    | 2    |  |
| Mvmt Flow                | 192  | 108  | 8    | 16     | 190  | 88   | 13     | 4     | 8     | 27     | 3    | 180  |  |
| Major/Minor              | Major1   |      |      | Major2 |      |      | Minor1 |       |       | Minor2 |      |      |  |
| Conflicting Flow All     | 278  | 0    | 0    | 116    | 0    | 0    | 625    | 806   | 58    | 706    | 766  | 139  |  |
| Stage 1                  | -  | -    | -    | -      | -    | -    | 496    | 496   | -     | 266    | 266  | -    |  |
| Stage 2                  | -  | -    | -    | -      | -    | -    | 129    | 310   | -     | 440    | 500  | -    |  |
| Critical Hdwy            | 4.14   | -    | -    | 4.14   | -    | -    | 7.54   | 6.54  | 6.94  | 7.54   | 6.54 | 6.94 |  |
| Critical Hdwy Stg 1      | -  | -    | -    | -      | -    | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Critical Hdwy Stg 2      | -  | -    | -    | -      | -    | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Follow-up Hdwy           | 2.22   | -    | -    | 2.22   | -    | -    | 3.52   | 4.02  | 3.32  | 3.52   | 4.02 | 3.32 |  |
| Pot Cap-1 Maneuver       | 1282   | -    | -    | 1525   | -    | -    | 398    | 330   | *1056 | 347    | 348  | 884  |  |
| Stage 1                  | -  | -    | -    | -      | -    | -    | 558    | 566   | -     | 716    | 687  | -    |  |
| Stage 2                  | -  | -    | -    | -      | -    | -    | 861    | 658   | -     | 603    | 564  | -    |  |
| Platoon blocked, %       | -  | -    | -    | 1      | -    | -    | 1      | 1     | 1     | 1      | 1    | 1    |  |
| Mov Cap-1 Maneuver       | 1282   | -    | -    | 1525   | -    | -    | 276    | 278   | *1056 | 299    | 293  | 884  |  |
| Mov Cap-2 Maneuver       | -  | -    | -    | -      | -    | -    | 276    | 278   | -     | 299    | 293  | -    |  |
| Stage 1                  | -  | -    | -    | -      | -    | -    | 474    | 481   | -     | 609    | 680  | -    |  |
| Stage 2                  | -  | -    | -    | -      | -    | -    | 675    | 651   | -     | 504    | 479  | -    |  |
| Approach                 | EB   |      |      | WB     |      |      | NB     |       |       | SB     |      |      |  |
| HCM Control Delay, s     | 5.2  |      |      | 0.4    |      |      | 15.9   |       |       | 12.5   |      |      |  |
| HCM LOS                  | C  |      |      | C      |      |      | C      |       |       | B      |      |      |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL  | EBT  | EBR    | WBL  | WBT  | WBR    | SBLn1 |       |        |      |      |  |
| Capacity (veh/h)         | 357  | 1282 | -    | -      | 1525 | -    | -      | 690   |       |        |      |      |  |
| HCM Lane V/C Ratio       | 0.072  | 0.15 | -    | -      | 0.01 | -    | -      | 0.304 |       |        |      |      |  |
| HCM Control Delay (s)    | 15.9   | 8.3  | -    | -      | 7.4  | -    | -      | 12.5  |       |        |      |      |  |
| HCM Lane LOS             | C  | A    | -    | -      | A    | -    | -      | B     |       |        |      |      |  |
| HCM 95th %tile Q(veh)    | 0.2  | 0.5  | -    | -      | 0    | -    | -      | 1.3   |       |        |      |      |  |
| Notes                    | -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |      |      |        |      |      |        |       |       |        |      |      |  |

22-1270: Black Mountain Village  
2024 Total PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 81   | 146  | 10   | 24   | 139  | 27   | 9    | 4    | 3    | 28   | 4    | 136  |
| Future Vol, veh/h        | 81   | 146  | 10   | 24   | 139  | 27   | 9    | 4    | 3    | 28   | 4    | 136  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 111  | 200  | 14   | 33   | 190  | 37   | 12   | 5    | 4    | 38   | 5    | 186  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 227    | 0      | 0      | 214    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1339   | -      | -      | 1443   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1339   | -      | -      | 1443   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 2.7 | 1  | 15.1 | 12.2 |
| HCM LOS              |     |    | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 379   | 1339  | -   | -   | 1443  | -   | -   | 731   |
| HCM Lane V/C Ratio    | 0.058 | 0.083 | -   | -   | 0.023 | -   | -   | 0.315 |
| HCM Control Delay (s) | 15.1  | 7.9   | -   | -   | 7.6   | -   | -   | 12.2  |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0.1   | -   | -   | 1.3   |

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

22-1270: Black Mountain Village  
2024 Total School PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 115  | 163  | 17   | 12   | 145  | 41   | 10   | 3    | 6    | 7    | 3    | 52   |
| Future Vol, veh/h        | 115  | 163  | 17   | 12   | 145  | 41   | 10   | 3    | 6    | 7    | 3    | 52   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 140  | 199  | 21   | 15   | 177  | 50   | 12   | 4    | 7    | 9    | 4    | 63   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 227    | 0      | 0      | 220    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1339   | -      | -      | 1435   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1339   | -      | -      | 1435   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.1 | 0.5 | 13.5 | 10.4 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 449   | 1339  | -   | -   | 1435 | -   | -   | 741   |
| HCM Lane V/C Ratio    | 0.052 | 0.105 | -   | -   | 0.01 | -   | -   | 0.102 |
| HCM Control Delay (s) | 13.5  | 8     | -   | -   | 7.5  | -   | -   | 10.4  |
| HCM Lane LOS          | B     | A     | -   | -   | A    | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0    | -   | -   | 0.3   |

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



22-1270: Black Mountain Village  
2024 Total AM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 6.2   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 47    | 861  | 62    | 59   | 539   | 25   | 46    | 6    | 88    | 38   | 7     | 37   |
| Future Vol, veh/h        | 47    | 861  | 62    | 59   | 539   | 25   | 46    | 6    | 88    | 38   | 7     | 37   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 52    | 957  | 69    | 66   | 599   | 28   | 51    | 7    | 98    | 42   | 8     | 41   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 627    | 0      | 1026   | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 590    | -      | 380    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 590    | -      | 380    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.6 | 1.6 | 44.5 | 41.3 |
| HCM LOS              |     |     | E    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 90    | 301   | 590   | -   | -   | 380   | -   | -   | 106   | 225   |
| HCM Lane V/C Ratio    | 0.568 | 0.347 | 0.089 | -   | -   | 0.173 | -   | -   | 0.398 | 0.217 |
| HCM Control Delay (s) | 88    | 23.2  | 11.7  | -   | -   | 16.4  | -   | -   | 59.8  | 25.4  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | C     | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 2.6   | 1.5   | 0.3   | -   | -   | 0.6   | -   | -   | 1.6   | 0.8   |

22-1270: Black Mountain Village  
2024 Total PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 6.7   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 66    | 609  | 31    | 55   | 704   | 58   | 58    | 4    | 84    | 26   | 4     | 46   |
| Future Vol, veh/h        | 66    | 609  | 31    | 55   | 704   | 58   | 58    | 4    | 84    | 26   | 4     | 46   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 78    | 716  | 36    | 65   | 828   | 68   | 68    | 5    | 99    | 31   | 5     | 54   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 896    | 0      | 752    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 439    | -      | 515    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 439    | -      | 515    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 1.4 | 0.9 | 48.3 | 38.5 |
| HCM LOS              |     |     | E    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 102   | 364   | 439   | -   | -   | 515   | -   | -   | 83    | 281   |
| HCM Lane V/C Ratio    | 0.669 | 0.284 | 0.177 | -   | -   | 0.126 | -   | -   | 0.369 | 0.209 |
| HCM Control Delay (s) | 93    | 18.8  | 15    | -   | -   | 13    | -   | -   | 71.8  | 21.2  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | B     | -   | -   | F     | C     |
| HCM 95th %tile Q(veh) | 3.4   | 1.2   | 0.6   | -   | -   | 0.4   | -   | -   | 1.4   | 0.8   |

22-1270: Black Mountain Village  
2024 Total School PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |      |      |      |      |      |      |
|--------------------------|-------|------|-------|------|-------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5   |      |       |      |       |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↘  |      | ↔ ↘  |      | ↔ ↘  |      |
| Traffic Vol, veh/h       | 48    | 546  | 42    | 40   | 494   | 46   | 8    | 4    | 37   | 28   | 10   | 30   |
| Future Vol, veh/h        | 48    | 546  | 42    | 40   | 494   | 46   | 8    | 4    | 37   | 28   | 10   | 30   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 74    | 74   | 74    | 74   | 74    | 74   | 74   | 74   | 74   | 74   | 74   | 74   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 65    | 738  | 57    | 54   | 668   | 62   | 11   | 5    | 50   | 38   | 14   | 41   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 730    | 0      | 0      | 795    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 527    | -      | -      | 491    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 527    | -      | -      | 491    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 1  | 0.9 | 22.3 | 35.5 |
| HCM LOS              | C  |     | E    |      |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 115   | 313   | 527   | -   | -   | 491  | -   | -   | 131   | 197   |
| HCM Lane V/C Ratio    | 0.094 | 0.177 | 0.123 | -   | -   | 0.11 | -   | -   | 0.289 | 0.274 |
| HCM Control Delay (s) | 39.5  | 19    | 12.8  | -   | -   | 13.2 | -   | -   | 43.3  | 30    |
| HCM Lane LOS          | E     | C     | B     | -   | -   | B    | -   | -   | E     | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0.6   | 0.4   | -   | -   | 0.4  | -   | -   | 1.1   | 1.1   |

22-1270: Black Mountain Village  
2024 Total AM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔ ↘  | ↔ ↘  | ↔ ↘  | ↔ ↘  | ↔ ↘  | ↔ ↘  |
| Traffic Vol, veh/h       | 155  | 19   | 43   | 51   | 24   | 243  |
| Future Vol, veh/h        | 155  | 19   | 43   | 51   | 24   | 243  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 172  | 21   | 48   | 57   | 27   | 270  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 180    | 27     | 297    |
| Stage 1              | 27     | -      | -      |
| Stage 2              | 153    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 810    | 1048   | 1264   |
| Stage 1              | 996    | -      | -      |
| Stage 2              | 875    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 779    | 1048   | 1264   |
| Mov Cap-2 Maneuver   | 779    | -      | -      |
| Stage 1              | 958    | -      | -      |
| Stage 2              | 875    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.6 | 3.6 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1264  | -   | 779   | 1048  | -   | -   |
| HCM Lane V/C Ratio    | 0.038 | -   | 0.221 | 0.02  | -   | -   |
| HCM Control Delay (s) | 8     | -   | 10.9  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.8   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 95   | 39   | 28   | 43   | 56   | 148  |
| Future Vol, veh/h        | 95   | 39   | 28   | 43   | 56   | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 106  | 43   | 31   | 48   | 62   | 164  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 172    | 62     | 226    | 0 | - | 0 |
| Stage 1              | 62     | -      | -      | - | - | - |
| Stage 2              | 110    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 818    | 1003   | 1342   | - | - | - |
| Stage 1              | 961    | -      | -      | - | - | - |
| Stage 2              | 915    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 799    | 1003   | 1342   | - | - | - |
| Mov Cap-2 Maneuver   | 799    | -      | -      | - | - | - |
| Stage 1              | 939    | -      | -      | - | - | - |
| Stage 2              | 915    | -      | -      | - | - | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.8 | 3.1 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1342  | -   | 799   | 1003  | -   | -   |
| HCM Lane V/C Ratio    | 0.023 | -   | 0.132 | 0.043 | -   | -   |
| HCM Control Delay (s) | 7.7   | -   | 10.2  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.5   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total School PM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 114  | 24   | 26   | 48   | 47   | 116  |
| Future Vol, veh/h        | 114  | 24   | 26   | 48   | 47   | 116  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 163  | 34   | 37   | 69   | 67   | 166  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 210    | 67     | 233    | 0 | - | 0 |
| Stage 1              | 67     | -      | -      | - | - | - |
| Stage 2              | 143    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 778    | 997    | 1335   | - | - | - |
| Stage 1              | 956    | -      | -      | - | - | - |
| Stage 2              | 884    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 756    | 997    | 1335   | - | - | - |
| Mov Cap-2 Maneuver   | 756    | -      | -      | - | - | - |
| Stage 1              | 929    | -      | -      | - | - | - |
| Stage 2              | 884    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 2.7 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1335  | -   | 756   | 997   | -   | -   |
| HCM Lane V/C Ratio    | 0.028 | -   | 0.215 | 0.034 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 11.1  | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.8   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total AM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.4  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    | W    | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 22   | 69   | 150  | 2    | 81   | 359  |
| Future Vol, veh/h        | 22   | 69   | 150  | 2    | 81   | 359  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 24   | 77   | 167  | 2    | 90   | 399  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 747    | 168    | 0 0 169 0   |
| Stage 1              | 168    | -      | - - - -     |
| Stage 2              | 579    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 381    | 876    | - - 1409 -  |
| Stage 1              | 862    | -      | - - - -     |
| Stage 2              | 560    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 350    | 876    | - - 1409 -  |
| Mov Cap-2 Maneuver   | 350    | -      | - - - -     |
| Stage 1              | 862    | -      | - - - -     |
| Stage 2              | 514    | -      | - - - -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 11.6 | 0  | 1.4 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 643   | 1409  |
| HCM Lane V/C Ratio    | -   | -        | 0.157 | 0.064 |
| HCM Control Delay (s) | -   | -        | 11.6  | 7.7   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2024 Total PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.8  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    | W    | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 26   | 82   | 27   | 2    | 90   | 22   |
| Future Vol, veh/h        | 26   | 82   | 27   | 2    | 90   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 30   | 2    | 100  | 24   |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 255    | 31     | 0 0 32 0    |
| Stage 1              | 31     | -      | - - - -     |
| Stage 2              | 224    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 734    | 1043   | - - 1580 -  |
| Stage 1              | 992    | -      | - - - -     |
| Stage 2              | 813    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 687    | 1043   | - - 1580 -  |
| Mov Cap-2 Maneuver   | 687    | -      | - - - -     |
| Stage 1              | 992    | -      | - - - -     |
| Stage 2              | 761    | -      | - - - -     |

| Approach             | WB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.5 | 0  | 6  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 927   | 1580  |
| HCM Lane V/C Ratio    | -   | -        | 0.129 | 0.063 |
| HCM Control Delay (s) | -   | -        | 9.5   | 7.4   |
| HCM Lane LOS          | -   | -        | A     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.4   | 0.2   |

22-1270: Black Mountain Village  
2024 Total School PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 26   | 82   | 165  | 2    | 90   | 95   |
| Future Vol, veh/h        | 26   | 82   | 165  | 2    | 90   | 95   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 183  | 2    | 100  | 106  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 490    | 184    | 0 0 185 0   |
| Stage 1              | 184    | -      | - - - -     |
| Stage 2              | 306    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 537    | 858    | - - 1390 -  |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 747    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 496    | 858    | - - 1390 -  |
| Mov Cap-2 Maneuver   | 496    | -      | - - - -     |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 690    | -      | - - - -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 10.9 | 0  | 3.8 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 730   | 1390  |
| HCM Lane V/C Ratio    | -   | -        | 0.164 | 0.072 |
| HCM Control Delay (s) | -   | -        | 10.9  | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2024 Total AM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔↔↔  | ↔    | ↔    | ↔↔↔  | ↔    | ↔    |
| Traffic Vol, veh/h       | 1118 | 114  | 0    | 627  | 0    | 127  |
| Future Vol, veh/h        | 1118 | 114  | 0    | 627  | 0    | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1242 | 127  | 0    | 697  | 0    | 141  |

| Major/Minor          | Major1 | Major2 | Minor1     |
|----------------------|--------|--------|------------|
| Conflicting Flow All | 0      | 0      | - - - 621  |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |
| Critical Hdwy        | -      | -      | - - - 7.14 |
| Critical Hdwy Stg 1  | -      | -      | - - - -    |
| Critical Hdwy Stg 2  | -      | -      | - - - -    |
| Follow-up Hdwy       | -      | -      | - - - 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 0 - 0 369  |
| Stage 1              | -      | -      | 0 - 0 -    |
| Stage 2              | -      | -      | 0 - 0 -    |
| Platoon blocked, %   | -      | -      | - - - -    |
| Mov Cap-1 Maneuver   | -      | -      | - - - 369  |
| Mov Cap-2 Maneuver   | -      | -      | - - - -    |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 20.7 |
| HCM LOS              |    |    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 369   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.382 | -   | -   | -   |
| HCM Control Delay (s) | 20.7  | -   | -   | -   |
| HCM Lane LOS          | C     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 1.8   | -   | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 525  | 117  | 0    | 740  | 0    | 148  |
| Future Vol, veh/h        | 525  | 117  | 0    | 740  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 583  | 130  | 0    | 822  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 292    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *800 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *800   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 800   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.206 | -   | -   | -   |
| HCM Control Delay (s) | 10.7  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 595  | 117  | 0    | 601  | 0    | 148  |
| Future Vol, veh/h        | 595  | 117  | 0    | 601  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 661  | 130  | 0    | 668  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 331    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *790 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *790   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 790   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.208 | -   | -   | -   |
| HCM Control Delay (s) | 10.8  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 367  | 209  | 29   | 13   | 7    |
| Future Vol, veh/h        | 2    | 367  | 209  | 29   | 13   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 408  | 232  | 32   | 14   | 8    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 264    | 0      | 0      | 456   | 248   |
| Stage 1              | -      | -      | -      | 248   | -     |
| Stage 2              | -      | -      | -      | 208   | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1299   | -      | -      | 547   | 790   |
| Stage 1              | -      | -      | -      | 793   | -     |
| Stage 2              | -      | -      | -      | 807   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1299   | -      | -      | 546   | 790   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 546   | -     |
| Stage 1              | -      | -      | -      | 791   | -     |
| Stage 2              | -      | -      | -      | 807   | -     |

| Approach             | EB | WB | SB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.1 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1299  | -   | -   | -   | 612   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.036 |
| HCM Control Delay (s) | 7.8   | 0   | -   | -   | 11.1  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2024 Total PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 3    | 57   | 66   | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 57   | 66   | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 63   | 73   | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 110    | 0      | 0      | 130   | 92    |
| Stage 1              | -      | -      | -      | 92    | -     |
| Stage 2              | -      | -      | -      | 38    | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | *1550  | -      | -      | *977  | *1035 |
| Stage 1              | -      | -      | -      | *977  | -     |
| Stage 2              | -      | -      | -      | *980  | -     |
| Platoon blocked, %   | 1      | -      | -      | 1     | 1     |
| Mov Cap-1 Maneuver   | *1550  | -      | -      | *975  | *1035 |
| Mov Cap-2 Maneuver   | -      | -      | -      | *975  | -     |
| Stage 1              | -      | -      | -      | *975  | -     |
| Stage 2              | -      | -      | -      | *980  | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 8.7 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL    | EBT | WBT | WBR | SBLn1 |
|-----------------------|--------|-----|-----|-----|-------|
| Capacity (veh/h)      | * 1550 | -   | -   | -   | 991   |
| HCM Lane V/C Ratio    | 0.002  | -   | -   | -   | 0.025 |
| HCM Control Delay (s) | 7.3    | 0   | -   | -   | 8.7   |
| HCM Lane LOS          | A      | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0      | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total School PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 191  | 162  | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 191  | 162  | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 212  | 180  | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 217    | 0      | 311    |
| Stage 1              | -      | -      | 199    |
| Stage 2              | -      | -      | 112    |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2.219  | -      | 3.319  |
| Pot Cap-1 Maneuver   | *1425  | -      | *898   |
| Stage 1              | -      | -      | *898   |
| Stage 2              | -      | -      | *901   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *1425  | -      | *897   |
| Mov Cap-2 Maneuver   | -      | -      | *897   |
| Stage 1              | -      | -      | *897   |
| Stage 2              | -      | -      | *901   |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.1 | 0  | 9.1 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1425 | -   | -   | -   | 911   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.027 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.1   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total AM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      | ↕↕↕↕ | ↕↕↕  |      |
| Traffic Vol, veh/h       | 0    | 37   | 0    | 956  | 1301 | 61   |
| Future Vol, veh/h        | 0    | 37   | 0    | 956  | 1301 | 61   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 41   | 0    | 1062 | 1446 | 68   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 757    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *624   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   |        | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *624   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 11.2 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | 624   | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.066 | -   | -   |
| HCM Control Delay (s) | -   | 11.2  | -   | -   |
| HCM Lane LOS          | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.2   | -   | -   |

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



22-1270: Black Mountain Village  
2024 Total PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 875  | 723  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 875  | 723  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 972  | 803  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 435    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *756   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *756   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.1 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 756   | -   |
| HCM Lane V/C Ratio    | -         | 0.065 | -   |
| HCM Control Delay (s) | -         | 10.1  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 788  | 774  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 788  | 774  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 876  | 860  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 463    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *734   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *734   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 734   | -   |
| HCM Lane V/C Ratio    | -         | 0.067 | -   |
| HCM Control Delay (s) | -         | 10.3  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 25.9 |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔↔   |
| Traffic Vol, veh/h       | 133  | 32   | 83   | 823  | 1228 | 110  |
| Future Vol, veh/h        | 133  | 32   | 83   | 823  | 1228 | 110  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 148  | 36   | 92   | 914  | 1364 | 122  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1975   | 743    | 1486   |
| Stage 1              | 1425   | -      | -      |
| Stage 2              | 550    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | * 97   | *624   | 729    |
| Stage 1              | *640   | -      | -      |
| Stage 2              | *755   | -      | -      |
| Platoon blocked, %   | 1      | 1      | -      |
| Mov Cap-1 Maneuver   | * 85   | *624   | 729    |
| Mov Cap-2 Maneuver   | * 85   | -      | -      |
| Stage 1              | *560   | -      | -      |
| Stage 2              | *755   | -      | -      |

| Approach             | EB    | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 372.9 | 1  | 0  |
| HCM LOS              | F     |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1  | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|--------|-------|-----|-----|
| Capacity (veh/h)      | 729   | -   | 85     | 624   | -   | -   |
| HCM Lane V/C Ratio    | 0.127 | -   | 1.739  | 0.057 | -   | -   |
| HCM Control Delay (s) | 10.7  | -   | \$ 460 | 11.1  | -   | -   |
| HCM Lane LOS          | B     | -   | F      | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 12.3   | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 8.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔↔   |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 723  | 655  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 723  | 655  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 803  | 728  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1303   | 426    | 852    |
| Stage 1              | 790    | -      | -      |
| Stage 2              | 513    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *218   | *778   | 791    |
| Stage 1              | *675   | -      | -      |
| Stage 2              | *773   | -      | -      |
| Platoon blocked, %   | 1      | 1      | -      |
| Mov Cap-1 Maneuver   | *192   | *778   | 791    |
| Mov Cap-2 Maneuver   | *192   | -      | -      |
| Stage 1              | *593   | -      | -      |
| Stage 2              | *773   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 74.3 | 1.1 | 0  |
| HCM LOS              | F    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 791   | -   | 192   | 778   | -   | -   |
| HCM Lane V/C Ratio    | 0.121 | -   | 0.88  | 0.043 | -   | -   |
| HCM Control Delay (s) | 10.2  | -   | 87    | 9.8   | -   | -   |
| HCM Lane LOS          | B     | -   | F     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 6.6   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 8.8  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 636  | 706  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 636  | 706  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 707  | 784  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1321   | 454    | 908    |
| Stage 1              | 846    | -      | -      |
| Stage 2              | 475    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *213   | *756   | 817    |
| Stage 1              | *709   | -      | -      |
| Stage 2              | *791   | -      | -      |
| Platoon blocked, %   | 1      | 1      | -      |
| Mov Cap-1 Maneuver   | *188   | *756   | 817    |
| Mov Cap-2 Maneuver   | *188   | -      | -      |
| Stage 1              | *626   | -      | -      |
| Stage 2              | *791   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 78.7 | 1.2 | 0  |
| HCM LOS              | F    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 817   | -   | 188   | 756   | -   | -   |
| HCM Lane V/C Ratio    | 0.117 | -   | 0.898 | 0.044 | -   | -   |
| HCM Control Delay (s) | 10    | -   | 92.2  | 10    | -   | -   |
| HCM Lane LOS          | A     | -   | F     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 6.9   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 40   | 0    | 907  | 1229 | 31   |
| Future Vol, veh/h        | 0    | 40   | 0    | 907  | 1229 | 31   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 44   | 0    | 1008 | 1366 | 34   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 700    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *554   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *554   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBT  | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|------|-------|-------|-----|-----|
| Capacity (veh/h)      | -   | 554  | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.08 | -     | -     | -   | -   |
| HCM Control Delay (s) | -   | 12.1 | -     | -     | -   | -   |
| HCM Lane LOS          | -   | B    | -     | -     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.3  | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↕    | ↖    | ↕    | ↗    |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 808  | 652  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 808  | 652  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 898  | 724  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 381    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *815   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *815   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.7 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 815   | -   |
| HCM Lane V/C Ratio    | -         | 0.068 | -   |
| HCM Control Delay (s) | -         | 9.7   | -   |
| HCM Lane LOS          | -         | A     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↕    | ↖    | ↕    | ↗    |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 721  | 703  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 721  | 703  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 801  | 781  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 409    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *789   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *789   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT  | SBR |
|-----------------------|-----------|------|-----|
| Capacity (veh/h)      | -         | 789  | -   |
| HCM Lane V/C Ratio    | -         | 0.07 | -   |
| HCM Control Delay (s) | -         | 9.9  | -   |
| HCM Lane LOS          | -         | A    | -   |
| HCM 95th %tile Q(veh) | -         | 0.2  | -   |

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

**APPENDIX K**

**2029 BUILD PEAK HOUR ANALYSIS**

DRAFT

22-1270: Black Mountain Village  
2029 Total AM

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 25    | 1455  | 13    | 630   | 13    | 3     | 122   | 2     | 22    |
| Future Volume (vph)  | 25    | 1455  | 13    | 630   | 13    | 3     | 122   | 2     | 22    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 9.0   | 61.0  | 9.0   | 61.0  | 9.0   | 38.0  | 12.0  | 41.0  | 41.0  |
| Total Split (%)      | 7.5%  | 50.8% | 7.5%  | 50.8% | 7.5%  | 31.7% | 10.0% | 34.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

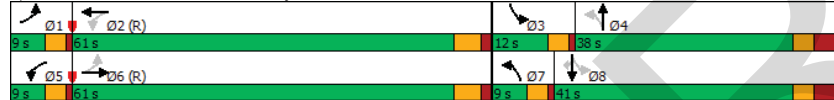
Actuated Cycle Length: 120

Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total PM

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 33    | 677   | 17    | 758   | 7     | 3     | 89    | 3     | 44    |
| Future Volume (vph)  | 33    | 677   | 17    | 758   | 7     | 3     | 89    | 3     | 44    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 13.0  | 54.6  | 12.0  | 53.6  | 11.0  | 37.4  | 16.0  | 42.4  | 42.4  |
| Total Split (%)      | 10.8% | 45.5% | 10.0% | 44.7% | 9.2%  | 31.2% | 13.3% | 35.3% | 35.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

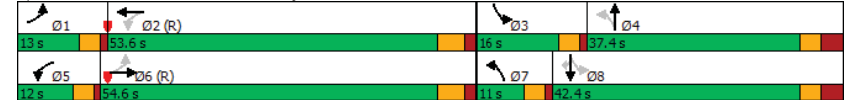
Actuated Cycle Length: 120

Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total School PM

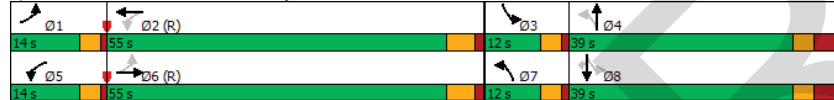
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 17    | 704   | 6     | 649   | 8     | 5     | 78    | 1     | 20    |
| Future Volume (vph)  | 17    | 704   | 6     | 649   | 8     | 5     | 78    | 1     | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     |       |       |       |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Spplits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total AM

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔↔    |      | ↔    | ↔↔   |       | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 25   | 1455  | 7    | 13   | 630  | 42    | 13   | 3    | 22   | 122  | 2    | 22   |
| Future Volume (veh/h)        | 25   | 1455  | 7    | 13   | 630  | 42    | 13   | 3    | 22   | 122  | 2    | 22   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 28   | 1617  | 7    | 14   | 700  | 37    | 14   | 3    | 18   | 136  | 2    | 13   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 387  | 2555  | 11   | 168  | 2370 | 125   | 460  | 61   | 366  | 532  | 588  | 498  |
| Arrive On Green              | 0.03 | 0.49  | 0.49 | 0.02 | 0.48 | 0.48  | 0.02 | 0.26 | 0.26 | 0.07 | 0.31 | 0.31 |
| Sat Flow, veh/h              | 1781 | 5248  | 23   | 1781 | 4966 | 261   | 1781 | 231  | 1389 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 28   | 1049  | 575  | 14   | 479  | 258   | 14   | 0    | 21   | 136  | 2    | 13   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702  | 1866 | 1781 | 1702 | 1823  | 1781 | 0    | 1620 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 1.0  | 27.4  | 27.4 | 0.5  | 10.3 | 10.3  | 0.7  | 0.0  | 1.2  | 6.5  | 0.1  | 0.7  |
| Cycle Q Clear(g_c), s        | 1.0  | 27.4  | 27.4 | 0.5  | 10.3 | 10.3  | 0.7  | 0.0  | 1.2  | 6.5  | 0.1  | 0.7  |
| Prop In Lane                 | 1.00 | 0.01  | 1.00 | 1.00 | 0.14 | 1.00  | 0.86 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 387  | 1658  | 909  | 168  | 1624 | 870   | 460  | 0    | 427  | 532  | 588  | 498  |
| V/C Ratio(X)                 | 0.07 | 0.63  | 0.63 | 0.08 | 0.29 | 0.30  | 0.03 | 0.00 | 0.05 | 0.26 | 0.00 | 0.03 |
| Avail Cap(c_a), veh/h        | 416  | 1658  | 909  | 214  | 1624 | 870   | 507  | 0    | 427  | 532  | 588  | 498  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.6 | 22.8  | 22.8 | 18.6 | 19.1 | 19.1  | 31.4 | 0.0  | 33.0 | 27.8 | 28.2 | 28.4 |
| Incr Delay (d2), s/veh       | 0.0  | 1.9   | 3.3  | 0.1  | 0.5  | 0.9   | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.7  | 16.7  | 18.5 | 0.4  | 7.5  | 8.1   | 0.5  | 0.0  | 0.9  | 5.0  | 0.1  | 0.5  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.6 | 24.7  | 26.2 | 18.6 | 19.5 | 20.0  | 31.5 | 0.0  | 33.2 | 27.9 | 28.2 | 28.5 |
| LnGrp LOS                    | B    | C     | C    | B    | B    | B     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 1652 |       |      | 751  |      |       | 35   |      |      | 151  |      |      |
| Approach Delay, s/veh        | 25.0 |       |      | 19.7 |      |       | 32.5 |      |      | 27.9 |      |      |
| Approach LOS                 | C    |       |      | B    |      |       | C    |      |      | C    |      |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 7.0  | 63.0  | 12.0 | 38.0 | 5.9  | 64.1  | 5.9  | 44.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.0  | * 55  | 8.0  | 31.6 | 5.0  | * 55  | 5.0  | 34.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 3.0  | 12.3  | 8.5  | 3.2  | 2.5  | 29.4  | 2.7  | 2.7  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.5   | 0.0  | 0.0  | 0.0  | 9.1   | 0.0  | 0.0  |      |      |      |      |

Intersection Summary

HCM 6th Ctrl Delay 23.8  
HCM 6th LOS C

Notes

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





22-1270: Black Mountain Village  
2029 Total AM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 1217 | 382  | 94   | 581  | 104  | 148  |
| Future Vol, veh/h        | 1217 | 382  | 94   | 581  | 104  | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1352 | 424  | 104  | 646  | 116  | 164  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 1776   | 0 | 2030 888  |
| Stage 1              | -      | -      | -      | - | 1564 -    |
| Stage 2              | -      | -      | -      | - | 466 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 463    | - | 246 *624  |
| Stage 1              | -      | -      | -      | - | 502 -     |
| Stage 2              | -      | -      | -      | - | 547 -     |
| Platoon blocked, %   | -      | -      | 1      | - | 1 1       |
| Mov Cap-1 Maneuver   | -      | -      | 463    | - | 190 *624  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 348 -     |
| Stage 1              | -      | -      | -      | - | 502 -     |
| Stage 2              | -      | -      | -      | - | 424 -     |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.1 | 15.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 348   | 624   | -   | -   | 463   | -   |
| HCM Lane V/C Ratio    | 0.332 | 0.264 | -   | -   | 0.226 | -   |
| HCM Control Delay (s) | 20.4  | 12.8  | -   | -   | 15    | -   |
| HCM Lane LOS          | C     | B     | -   | -   | C     | -   |
| HCM 95th %tile Q(veh) | 1.4   | 1.1   | -   | -   | 0.9   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 688  | 85   | 29   | 766  | 106  | 29   |
| Future Vol, veh/h        | 688  | 85   | 29   | 766  | 106  | 29   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 724  | 89   | 31   | 806  | 112  | 31   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 813    | 0 | 1153 407  |
| Stage 1              | -      | -      | -      | - | 769 -     |
| Stage 2              | -      | -      | -      | - | 384 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 923    | - | 482 *756  |
| Stage 1              | -      | -      | -      | - | 776 -     |
| Stage 2              | -      | -      | -      | - | 602 -     |
| Platoon blocked, %   | -      | -      | 1      | - | 1 1       |
| Mov Cap-1 Maneuver   | -      | -      | 923    | - | 465 *756  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 542 -     |
| Stage 1              | -      | -      | -      | - | 776 -     |
| Stage 2              | -      | -      | -      | - | 582 -     |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 12.7 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 542   | 756   | -   | -   | 923   | -   |
| HCM Lane V/C Ratio    | 0.206 | 0.04  | -   | -   | 0.033 | -   |
| HCM Control Delay (s) | 13.4  | 10    | -   | -   | 9     | -   |
| HCM Lane LOS          | B     | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.8   | 0.1   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.9  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 628  | 161  | 33   | 609  | 119  | 167  |
| Future Vol, veh/h        | 628  | 161  | 33   | 609  | 119  | 167  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1047 | 268  | 55   | 1015 | 198  | 278  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 1315   | 0 | 1697 |
| Stage 1              | -      | -      | -      | - | 1181 |
| Stage 2              | -      | -      | -      | - | 516  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 439    | - | 210  |
| Stage 1              | -      | -      | -      | - | 362  |
| Stage 2              | -      | -      | -      | - | 515  |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 439    | - | 183  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 308  |
| Stage 1              | -      | -      | -      | - | 362  |
| Stage 2              | -      | -      | -      | - | 451  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.7 | 21.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 308   | 778   | -   | -   | 439   | -   |
| HCM Lane V/C Ratio    | 0.644 | 0.358 | -   | -   | 0.125 | -   |
| HCM Control Delay (s) | 35.6  | 12.2  | -   | -   | 14.4  | -   |
| HCM Lane LOS          | E     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 4.2   | 1.6   | -   | -   | 0.4   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 12.2 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↑↓   |      |      | ↑↓   |      |      | ↑↓   |      |      | ↑↓   |      |
| Traffic Vol, veh/h  | 2    | 13   | 0    | 36   | 0    | 152  | 0    | 11   | 21   | 362  | 36   | 0    |
| Future Vol, veh/h   | 2    | 13   | 0    | 36   | 0    | 152  | 0    | 11   | 21   | 362  | 36   | 0    |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 2    | 14   | 0    | 40   | 0    | 169  | 0    | 12   | 23   | 402  | 40   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB |
|----------------------------|-----|-----|-----|----|
| Opposing Approach          | WB  | EB  | SB  | NB |
| Opposing Lanes             | 1   | 1   | 1   | 1  |
| Conflicting Approach Left  | SB  | NB  | EB  | WB |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1  |
| Conflicting Approach Right | NB  | SB  | WB  | EB |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1  |
| HCM Control Delay          | 8.6 | 9.5 | 7.9 | 14 |
| HCM LOS                    | A   | A   | A   | B  |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 13%   | 19%   | 91%   |
| Vol Thru, %            | 34%   | 87%   | 0%    | 9%    |
| Vol Right, %           | 66%   | 0%    | 81%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 32    | 15    | 188   | 398   |
| LT Vol                 | 0     | 2     | 36    | 362   |
| Through Vol            | 11    | 13    | 0     | 36    |
| RT Vol                 | 21    | 0     | 152   | 0     |
| Lane Flow Rate         | 36    | 17    | 209   | 442   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.045 | 0.025 | 0.271 | 0.576 |
| Departure Headway (Hd) | 4.603 | 5.4   | 4.666 | 4.69  |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 772   | 659   | 767   | 765   |
| Service Time           | 2.669 | 3.467 | 2.71  | 2.736 |
| HCM Lane V/C Ratio     | 0.047 | 0.026 | 0.272 | 0.578 |
| HCM Control Delay      | 7.9   | 8.6   | 9.5   | 14    |
| HCM Lane LOS           | A     | A     | A     | B     |
| HCM 95th-tile Q        | 0.1   | 0.1   | 1.1   | 3.7   |

22-1270: Black Mountain Village  
2029 Total PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |   |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 7 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | A |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 20   | 0    | 10   | 20   | 21   | 5    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 20   | 0    | 10   | 20   | 21   | 5    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 29   | 0    | 15   | 29   | 31   | 7    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.2 | 6.7 | 6.8 | 7.4 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 9%    | 81%   |
| Vol Thru, %            | 33%   | 75%   | 0%    | 19%   |
| Vol Right, %           | 67%   | 0%    | 91%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 30    | 4     | 22    | 26    |
| LT Vol                 | 0     | 1     | 2     | 21    |
| Through Vol            | 10    | 3     | 0     | 5     |
| RT Vol                 | 20    | 0     | 20    | 0     |
| Lane Flow Rate         | 44    | 6     | 32    | 38    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.044 | 0.007 | 0.032 | 0.045 |
| Departure Headway (Hd) | 3.629 | 4.151 | 3.553 | 4.195 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 987   | 860   | 1005  | 856   |
| Service Time           | 1.648 | 2.185 | 1.585 | 2.209 |
| HCM Lane V/C Ratio     | 0.045 | 0.007 | 0.032 | 0.044 |
| HCM Control Delay      | 6.8   | 7.2   | 6.7   | 7.4   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0.1   | 0.1   |

22-1270: Black Mountain Village  
2029 Total School PM

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 13.8 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 45   | 38   | 1    | 16   | 0    | 105  | 0    | 33   | 51   | 101  | 5    | 0    |
| Future Vol, veh/h   | 45   | 38   | 1    | 16   | 0    | 105  | 0    | 33   | 51   | 101  | 5    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 122  | 103  | 3    | 43   | 0    | 284  | 0    | 89   | 138  | 273  | 14   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB | NB   | SB   |
|----------------------------|------|----|------|------|
| Opposing Approach          | WB   | EB | SB   | NB   |
| Opposing Lanes             | 1    | 1  | 1    | 1    |
| Conflicting Approach Left  | SB   | NB | EB   | WB   |
| Conflicting Lanes Left     | 1    | 1  | 1    | 1    |
| Conflicting Approach Right | NB   | SB | WB   | EB   |
| Conflicting Lanes Right    | 1    | 1  | 1    | 1    |
| HCM Control Delay          | 13.3 | 14 | 12.3 | 15.3 |
| HCM LOS                    | B    | B  | B    | C    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 54%   | 13%   | 95%   |
| Vol Thru, %            | 39%   | 45%   | 0%    | 5%    |
| Vol Right, %           | 61%   | 1%    | 87%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 84    | 84    | 121   | 106   |
| LT Vol                 | 0     | 45    | 16    | 101   |
| Through Vol            | 33    | 38    | 0     | 5     |
| RT Vol                 | 51    | 1     | 105   | 0     |
| Lane Flow Rate         | 227   | 227   | 327   | 286   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.368 | 0.394 | 0.502 | 0.497 |
| Departure Headway (Hd) | 5.837 | 6.253 | 5.528 | 6.247 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 615   | 574   | 654   | 579   |
| Service Time           | 3.885 | 4.301 | 3.546 | 4.269 |
| HCM Lane V/C Ratio     | 0.369 | 0.395 | 0.5   | 0.494 |
| HCM Control Delay      | 12.3  | 13.3  | 14    | 15.3  |
| HCM Lane LOS           | B     | B     | B     | C     |
| HCM 95th-tile Q        | 1.7   | 1.9   | 2.8   | 2.8   |

22-1270: Black Mountain Village  
2029 Total AM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      |      |      | ↕    |      |      |      |
| Traffic Vol, veh/h       | 0    | 388  | 7    | 11   | 189  | 33   | 0    | 0    | 0    | 17   | 0    | 0    |
| Future Vol, veh/h        | 0    | 388  | 7    | 11   | 189  | 33   | 0    | 0    | 0    | 17   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 431  | 8    | 12   | 210  | 37   | 0    | 0    | 0    | 19   | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 247    | 0      | 439    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1317   | -      | 1119   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1317   | -      | 1119   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 0.4 | 12 |
| HCM LOS              |    |     | B  |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1317 | -   | -   | 1119  | -   | -   | 532   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.011 | -   | -   | 0.036 |
| HCM Control Delay (s) | 0    | -   | -   | 8.3   | 0   | -   | 12    |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      |      |      | ↕    |      |      |      |
| Traffic Vol, veh/h       | 0    | 33   | 10   | 10   | 22   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 33   | 10   | 10   | 22   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 69   | 69   | 69   | 69   | 90   | 69   | 90   | 69   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 48   | 14   | 14   | 32   | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 79     | 0      | 62     |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1518   | -      | 1540   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1518   | -      | 1540   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 1.1 | 9.3 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1518 | -   | -   | 1540  | -   | -   | 879   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.009 | -   | -   | 0.038 |
| HCM Control Delay (s) | 0    | -   | -   | 7.4   | 0   | -   | 9.3   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total School PM

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      | -    |      | ↕    |      | -    |      |
| Traffic Vol, veh/h       | 0    | 181  | 8    | 17   | 120  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 181  | 8    | 17   | 120  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 38   | 38   | 38   | 38   | 90   | 38   | 90   | 38   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 476  | 21   | 45   | 316  | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 | Minor1 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 363    | 0      | 0      | 497    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1194   | -      | -      | 1065   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1194   | -      | -      | 1065   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.9 | 15.1 |
| HCM LOS              | C  |     |      |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1194 | -   | -   | 1065  | -   | -   | 391   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.042 | -   | -   | 0.085 |
| HCM Control Delay (s) | 0    | -   | -   | 8.5   | 0   | -   | 15.1  |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0.1   | -   | -   | 0.3   |

22-1270: Black Mountain Village  
2029 Total AM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      | -    |      | ↕    |      | -    |      |
| Traffic Vol, veh/h       | 4    | 411  | 0    | 0    | 244  | 55   | 2    | 0    | 67   | 24   | 0    | 8    |
| Future Vol, veh/h        | 4    | 411  | 0    | 0    | 244  | 55   | 2    | 0    | 67   | 24   | 0    | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 457  | 0    | 0    | 271  | 61   | 2    | 0    | 74   | 27   | 0    | 9    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 332    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | *1337  | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *1337  | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB  |
|----------------------|-----|----|------|-----|
| HCM Control Delay, s | 0.1 | 0  | 10.2 | 9.9 |
| HCM LOS              | B   |    | A    |     |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 763   | *1337 | -   | -   | -   | 775   |
| HCM Lane V/C Ratio    | 0.1   | 0.003 | -   | -   | -   | 0.046 |
| HCM Control Delay (s) | 10.2  | 7.7   | 0   | -   | -   | 9.9   |
| HCM Lane LOS          | B     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2029 Total PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 1.7     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 4    | 70   | 0    | 0    | 92   | 49   | 3    | 0    | 22   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 70   | 0    | 0    | 92   | 49   | 3    | 0    | 22   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 78   | 78   | 78   | 78   | 90   | 78   | 90   | 78   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 90   | 0    | 0    | 118  | 54   | 4    | 0    | 28   | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 172    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1524   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1524   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB  | SB |
|----------------------|-----|----|-----|----|
| HCM Control Delay, s | 0.3 | 0  | 8.8 | 9  |
| HCM LOS              |     |    | A   | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 990   | 1524  | -   | -   | -   | 922   |
| HCM Lane V/C Ratio    | 0.032 | 0.003 | -   | -   | -   | 0.03  |
| HCM Control Delay (s) | 8.8   | 7.4   | 0   | -   | -   | 9     |
| HCM Lane LOS          | A     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2029 Total School PM

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 2.1     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 4    | 218  | 0    | 0    | 196  | 49   | 3    | 0    | 70   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 218  | 0    | 0    | 196  | 49   | 3    | 0    | 70   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 39   | 39   | 39   | 39   | 90   | 39   | 90   | 39   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 559  | 0    | 0    | 503  | 54   | 8    | 0    | 179  | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 557    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1243   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1243   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.1 | 0  | 12.5 | 14.7 |
| HCM LOS              |     |    | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 669   | 1243  | -   | -   | -   | 399   |
| HCM Lane V/C Ratio    | 0.28  | 0.004 | -   | -   | -   | 0.07  |
| HCM Control Delay (s) | 12.5  | 7.9   | 0   | -   | -   | 14.7  |
| HCM Lane LOS          | B     | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 1.1   | 0     | -   | -   | -   | 0.2   |

22-1270: Black Mountain Village  
2029 Total AM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 501  | 0    | 0    | 301  | 0    | 24   |
| Future Vol, veh/h        | 501  | 0    | 0    | 301  | 0    | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 557  | 0    | 0    | 334  | 0    | 27   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 557    | 0 | 891 279     |
| Stage 1              | -      | -      | -      | - | 557 -       |
| Stage 2              | -      | -      | -      | - | 334 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1012   | - | *539 719    |
| Stage 1              | -      | -      | -      | - | *538 -      |
| Stage 2              | -      | -      | -      | - | *794 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1           |
| Mov Cap-1 Maneuver   | -      | -      | 1012   | - | *539 719    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *539 -      |
| Stage 1              | -      | -      | -      | - | *538 -      |
| Stage 2              | -      | -      | -      | - | *794 -      |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 10.2 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 719   | -   | -   | 1012 | -   |
| HCM Lane V/C Ratio    | 0.037 | -   | -   | -    | -   |
| HCM Control Delay (s) | 10.2  | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0    | -   |

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

22-1270: Black Mountain Village  
2029 Total PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 109  | 1    | 1    | 143  | 0    | 21   |
| Future Vol, veh/h        | 109  | 1    | 1    | 143  | 0    | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 136  | 1    | 1    | 179  | 0    | 26   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 137    | 0 | 318 69      |
| Stage 1              | -      | -      | -      | - | 137 -       |
| Stage 2              | -      | -      | -      | - | 181 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1446   | - | *906 980    |
| Stage 1              | -      | -      | -      | - | *876 -      |
| Stage 2              | -      | -      | -      | - | *917 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1           |
| Mov Cap-1 Maneuver   | -      | -      | 1446   | - | *905 980    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *905 -      |
| Stage 1              | -      | -      | -      | - | *876 -      |
| Stage 2              | -      | -      | -      | - | *916 -      |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.1 | 8.8 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 980   | -   | -   | 1446  | -   |
| HCM Lane V/C Ratio    | 0.027 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.8   | -   | -   | 7.5   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |  |
|--------------------------|------|------|------|------|------|------|--|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |  |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |  |
| Lane Configurations      | ↕↔   |      | ↕    |      | ↕↔   |      |  |
| Traffic Vol, veh/h       | 306  | 0    | 0    | 247  | 3    | 32   |  |
| Future Vol, veh/h        | 306  | 0    | 0    | 247  | 3    | 32   |  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |  |
| RT Channelized           | -    | None | -    | None | -    | None |  |
| Storage Length           | -    | -    | -    | -    | 0    | -    |  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |  |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |  |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |  |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Mvmt Flow                | 785  | 0    | 0    | 633  | 8    | 82   |  |

| Major/Minor          | Major1 | Major2 | Minor1 |               |
|----------------------|--------|--------|--------|---------------|
| Conflicting Flow All | 0      | 0      | 785    | 0 1418 393    |
| Stage 1              | -      | -      | -      | 785 -         |
| Stage 2              | -      | -      | -      | 633 -         |
| Critical Hdwy        | -      | -      | 4.13   | - 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83 -        |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43 -        |
| Follow-up Hdwy       | -      | -      | 2.219  | - 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 832    | - 186 607     |
| Stage 1              | -      | -      | -      | 411 -         |
| Stage 2              | -      | -      | -      | 739 -         |
| Platoon blocked, %   | -      | -      | -      | 1 -           |
| Mov Cap-1 Maneuver   | -      | -      | 832    | - 186 607     |
| Mov Cap-2 Maneuver   | -      | -      | -      | 186 -         |
| Stage 1              | -      | -      | -      | 411 -         |
| Stage 2              | -      | -      | -      | 739 -         |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-----|-----|
| Capacity (veh/h)      | 508   | -   | -   | 832 | -   |
| HCM Lane V/C Ratio    | 0.177 | -   | -   | -   | -   |
| HCM Control Delay (s) | 13.6  | -   | -   | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | A   | -   |
| HCM 95th %tile Q(veh) | 0.6   | -   | -   | 0   | -   |

22-1270: Black Mountain Village  
2029 Total AM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↔   |      | ↕    |      | ↕↔   |      | ↕↔   |      | ↕↔   |      | ↕↔   |      |
| Traffic Vol, veh/h       | 31   | 11   | 52   | 83   | 5    | 6    | 26   | 324  | 77   | 5    | 606  | 23   |
| Future Vol, veh/h        | 31   | 11   | 52   | 83   | 5    | 6    | 26   | 324  | 77   | 5    | 606  | 23   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 34   | 12   | 58   | 92   | 6    | 7    | 29   | 360  | 86   | 6    | 673  | 26   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2                           |
|----------------------|--------|--------|--------|----------------------------------|
| Conflicting Flow All | 939    | 1202   | 350    | 705 1129 180 699 0 0 446 0 0     |
| Stage 1              | 698    | 698    | -      | 418 418 - - - - - - -            |
| Stage 2              | 241    | 504    | -      | 287 711 - - - - - - -            |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99 6.54 6.94 5.34 - - 4.14 - - |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54 5.54 - - - - - - -          |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74 5.54 - - - - - - -          |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67 4.02 3.32 3.12 - - 2.22 - - |
| Pot Cap-1 Maneuver   | *407   | 275    | 552    | *597 *308 *971 545 - - *1453 - - |
| Stage 1              | *330   | 440    | -      | *879 *803 - - - - - - -          |
| Stage 2              | *879   | 769    | -      | *661 *434 - - - - - - -          |
| Platoon blocked, %   | 1      | 1      | 1      | 1 1 1 - - 1 - -                  |
| Mov Cap-1 Maneuver   | *381   | 260    | 552    | *493 *290 *971 545 - - *1453 - - |
| Mov Cap-2 Maneuver   | *381   | 260    | -      | *493 *290 - - - - - - -          |
| Stage 1              | *313   | 438    | -      | *832 *760 - - - - - - -          |
| Stage 2              | *820   | 728    | -      | *573 *432 - - - - - - -          |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 14.6 | 13.9 | 0.7 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 545   | -   | -   | 381   | 462   | 493   | 470   | *1453 | -   | -   |
| HCM Lane V/C Ratio    | 0.053 | -   | -   | 0.09  | 0.152 | 0.187 | 0.026 | 0.004 | -   | -   |
| HCM Control Delay (s) | 12    | -   | -   | 15.4  | 14.2  | 14    | 12.9  | 7.5   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.3   | 0.5   | 0.7   | 0.1   | 0     | -   | -   |

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



22-1270: Black Mountain Village  
2029 Total PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 52   | 21   | 27   | 78   | 22   | 10   | 33   | 430  | 61   | 10   | 234  | 39   |
| Future Vol, veh/h        | 52   | 21   | 27   | 78   | 22   | 10   | 33   | 430  | 61   | 10   | 234  | 39   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 69   | 28   | 36   | 104  | 29   | 13   | 44   | 573  | 81   | 13   | 312  | 52   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 753    | 1106   | 182    | 826    |
| Stage 1              | 364    | 364    | -      | 661    |
| Stage 2              | 389    | 742    | -      | 165    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *737   | 400    | *706   | *651   |
| Stage 1              | *559   | 622    | -      | *832   |
| Stage 2              | *832   | 708    | -      | *783   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *652   | 374    | *706   | *554   |
| Mov Cap-2 Maneuver   | *652   | 374    | -      | *554   |
| Stage 1              | *528   | 616    | -      | *785   |
| Stage 2              | *742   | 668    | -      | *703   |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 12.1 | 13 | 0.6 | 0.3 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 784   | -   | -   | 652   | 509   | 554   | 493   | *1375 | -   | -   |
| HCM Lane V/C Ratio    | 0.056 | -   | -   | 0.106 | 0.126 | 0.188 | 0.087 | 0.01  | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 11.2  | 13.1  | 13    | 13    | 7.6   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.4   | 0.4   | 0.7   | 0.3   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 13   | 7    | 30   | 58   | 7    | 10   | 27   | 260  | 56   | 2    | 265  | 24   |
| Future Vol, veh/h        | 13   | 7    | 30   | 58   | 7    | 10   | 27   | 260  | 56   | 2    | 265  | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 8    | 34   | 65   | 8    | 11   | 30   | 292  | 63   | 2    | 298  | 27   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 526    | 731    | 163    | 479    |
| Stage 1              | 316    | 316    | -      | 352    |
| Stage 2              | 210    | 415    | -      | 127    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *693   | 490    | *725   | *746   |
| Stage 1              | *602   | 654    | -      | *902   |
| Stage 2              | *902   | 774    | -      | *824   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *657   | 471    | *725   | *682   |
| Mov Cap-2 Maneuver   | *657   | 471    | -      | *682   |
| Stage 1              | *580   | 653    | -      | *869   |
| Stage 2              | *851   | 746    | -      | *775   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.7 | 10.7 | 0.8 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 818   | -   | -   | 657   | 658   | 682   | 712   | *1492 | -   | -   |
| HCM Lane V/C Ratio    | 0.037 | -   | -   | 0.022 | 0.063 | 0.096 | 0.027 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.6   | -   | -   | 10.6  | 10.8  | 10.8  | 10.2  | 7.4   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.2   | 0.3   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 28   | 3    | 144  | 8    | 1    | 0    | 100  | 399  | 13   | 0    | 735  | 7    |
| Future Vol, veh/h        | 28   | 3    | 144  | 8    | 1    | 0    | 100  | 399  | 13   | 0    | 735  | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 31   | 3    | 160  | 9    | 1    | 0    | 111  | 443  | 14   | 0    | 817  | 8    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1221   | 1500   | 413    | 1000   |
| Stage 1              | 821    | 821    | -      | 672    |
| Stage 2              | 400    | 679    | -      | 328    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 255    | 159    | 503    | 352    |
| Stage 1              | 265    | 387    | -      | 515    |
| Stage 2              | 814    | 581    | -      | 604    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 208    | 122    | 503    | 193    |
| Mov Cap-2 Maneuver   | 208    | 122    | -      | 193    |
| Stage 1              | 203    | 387    | -      | 394    |
| Stage 2              | 622    | 445    | -      | 408    |

| Approach             | EB   | WB   | NB  | SB |
|----------------------|------|------|-----|----|
| HCM Control Delay, s | 22.8 | 25.9 | 2.9 | 0  |
| HCM LOS              | C    | D    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 475   | -   | -   | 393   | 182   | 947 | -   | -   |
| HCM Lane V/C Ratio    | 0.234 | -   | -   | 0.495 | 0.055 | -   | -   | -   |
| HCM Control Delay (s) | 14.9  | -   | -   | 22.8  | 25.9  | 0   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | D     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.9   | -   | -   | 2.7   | 0.2   | 0   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14   | 1    | 137  | 9    | 1    | 3    | 109  | 506  | 10   | 3    | 324  | 10   |
| Future Vol, veh/h        | 14   | 1    | 137  | 9    | 1    | 3    | 109  | 506  | 10   | 3    | 324  | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 19   | 1    | 188  | 12   | 1    | 4    | 149  | 693  | 14   | 4    | 444  | 14   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1035   | 1464   | 229    | 1184   |
| Stage 1              | 459    | 459    | -      | 998    |
| Stage 2              | 576    | 1005   | -      | 186    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 416    | 205    | 659    | 333    |
| Stage 1              | 467    | 565    | -      | 390    |
| Stage 2              | 818    | 475    | -      | 733    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 344    | 161    | 659    | 198    |
| Mov Cap-2 Maneuver   | 344    | 161    | -      | 198    |
| Stage 1              | 369    | 562    | -      | 308    |
| Stage 2              | 640    | 375    | -      | 521    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 14.2 | 21.6 | 2  | 0.1 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 709   | -   | -   | 597   | 235   | 856   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | 0.349 | 0.076 | 0.005 | -   | -   |
| HCM Control Delay (s) | 11.4  | -   | -   | 14.2  | 21.6  | 9.2   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | 1.6   | 0.2   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      | ↔    |      |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 7    | 0    | 82   | 13   | 0    | 8    | 98   | 327  | 8    | 3    | 348  | 1    |
| Future Vol, veh/h        | 7    | 0    | 82   | 13   | 0    | 8    | 98   | 327  | 8    | 3    | 348  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8    | 0    | 93   | 15   | 0    | 9    | 111  | 372  | 9    | 3    | 395  | 1    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 773    | 1005   | 198    | 763    |
| Stage 1              | 402    | 402    | -      | 599    |
| Stage 2              | 371    | 603    | -      | 164    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 486    | 332    | 689    | 493    |
| Stage 1              | 510    | 599    | -      | 581    |
| Stage 2              | 849    | 632    | -      | 755    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 426    | 282    | 689    | 377    |
| Mov Cap-2 Maneuver   | 426    | 282    | -      | 377    |
| Stage 1              | 436    | 597    | -      | 496    |
| Stage 2              | 717    | 539    | -      | 651    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 11.5 | 12.9 | 2.4 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 758   | -   | -   | 657   | 478   | 1032  | -   | -   |
| HCM Lane V/C Ratio    | 0.147 | -   | -   | 0.154 | 0.05  | 0.003 | -   | -   |
| HCM Control Delay (s) | 10.6  | -   | -   | 11.5  | 12.9  | 8.5   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0.5   | 0.2   | 0     | -   | -   |

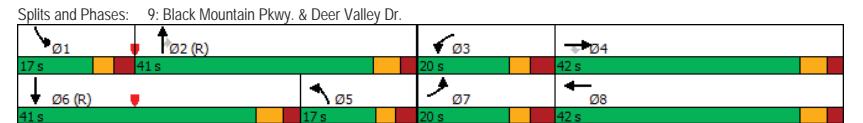
Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

22-1270: Black Mountain Village  
2029 Total AM

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 98    | 782   | 497   | 274   | 214   | 388   | 364   | 294   | 99    | 714   |
| Future Volume (vph)  | 98    | 782   | 497   | 274   | 214   | 388   | 364   | 294   | 99    | 714   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (%)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (s)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 68 (57%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2029 Total PM

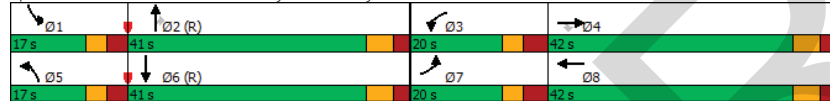
9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 72    | 438   | 239   | 280   | 471   | 267   | 457   | 231   | 85    | 328   |
| Future Volume (vph)  | 72    | 438   | 239   | 280   | 471   | 267   | 457   | 231   | 85    | 328   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (%)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max | None  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 34 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total School PM

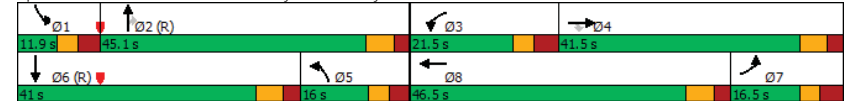
9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL  | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗  | ↖ ↗   |
| Traffic Volume (vph) | 111   | 414   | 302   | 253   | 253   | 349   | 269   | 241   | 54   | 347   |
| Future Volume (vph)  | 111   | 414   | 302   | 253   | 253   | 349   | 269   | 241   | 54   | 347   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1    | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |      |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1    | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |      |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 5.0  | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 21.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1 | 40.4  |
| Total Split (s)      | 16.5  | 41.5  | 41.5  | 21.5  | 46.5  | 16.0  | 45.1  | 45.1  | 11.9 | 41.0  |
| Total Split (%)      | 13.8% | 34.6% | 34.6% | 17.9% | 38.8% | 13.3% | 37.6% | 37.6% | 9.9% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1  | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1  | 6.4   |
| Lead/Lag             | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None | C-Max |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.





22-1270: Black Mountain Village  
2029 Total School PM

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 111  | 414  | 302  | 253  | 253  | 53    | 349  | 269  | 241  | 54   | 347  | 41   |
| Future Volume (veh/h)        | 111  | 414  | 302  | 253  | 253  | 53    | 349  | 269  | 241  | 54   | 347  | 41   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 161  | 600  | 0    | 367  | 367  | 58    | 506  | 390  | 0    | 78   | 503  | 45   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69  | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 538  | 755  |      | 420  | 507  | 78    | 785  | 2449 |      | 133  | 1377 | 122  |
| Arrive On Green              | 0.31 | 0.30 | 0.00 | 0.12 | 0.11 | 0.11  | 0.08 | 0.16 | 0.00 | 0.04 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4463 | 687   | 3456 | 5106 | 1585 | 3456 | 4776 | 422  |
| Grp Volume(v), veh/h         | 161  | 600  | 0    | 367  | 278  | 147   | 506  | 390  | 0    | 78   | 357  | 191  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1747  | 1728 | 1702 | 1585 | 1728 | 1702 | 1794 |
| Q Serve(g_s), s              | 4.2  | 13.0 | 0.0  | 12.5 | 9.4  | 9.8   | 17.1 | 7.9  | 0.0  | 2.7  | 10.0 | 10.2 |
| Cycle Q Clear(g_c), s        | 4.2  | 13.0 | 0.0  | 12.5 | 9.4  | 9.8   | 17.1 | 7.9  | 0.0  | 2.7  | 10.0 | 10.2 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.39  | 1.00 |      | 1.00 | 1.00 |      | 0.24 |
| Lane Grp Cap(c), veh/h       | 538  | 755  |      | 420  | 387  | 199   | 785  | 2449 |      | 133  | 982  | 517  |
| V/C Ratio(X)                 | 0.30 | 0.79 |      | 0.87 | 0.72 | 0.74  | 0.64 | 0.16 |      | 0.59 | 0.36 | 0.37 |
| Avail Cap(c_a), veh/h        | 538  | 1489 |      | 432  | 1135 | 582   | 785  | 2449 |      | 167  | 982  | 517  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00  | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 36.3 | 40.6 | 0.0  | 51.8 | 51.3 | 51.5  | 50.8 | 29.6 | 0.0  | 56.7 | 33.9 | 34.0 |
| Incr Delay (d2), s/veh       | 0.1  | 0.7  | 0.0  | 16.7 | 0.9  | 2.1   | 1.4  | 0.1  | 0.0  | 1.5  | 1.0  | 2.0  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 3.1  | 8.3  | 0.0  | 10.5 | 7.3  | 7.8   | 12.8 | 6.3  | 0.0  | 2.1  | 7.7  | 8.3  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 36.5 | 41.3 | 0.0  | 68.5 | 52.3 | 53.5  | 52.2 | 29.8 | 0.0  | 58.3 | 35.0 | 36.0 |
| LnGrp LOS                    | D    | D    |      | E    | D    | D     | D    | C    |      | E    | C    | D    |
| Approach Vol, veh/h          |      | 761  |      |      | 792  |       |      | 896  |      |      | 626  |      |
| Approach Delay, s/veh        |      | 40.3 |      |      | 60.0 |       |      | 42.4 |      |      | 38.2 |      |
| Approach LOS                 |      | D    |      |      | E    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.7 | 63.9 | 21.1 | 24.3 | 33.7 | 41.0  | 25.2 | 20.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.8  | 38.7 | 15.0 | 35.0 | 9.9  | * 35  | 10.0 | 40.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 4.7  | 9.9  | 14.5 | 15.0 | 19.1 | 12.2  | 6.2  | 11.8 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.8  | 0.0  | 2.8  | 0.0  | 2.3   | 0.1  | 1.8  |      |      |      |      |

**Intersection Summary**

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 45.6 |
| HCM 6th LOS        | D    |

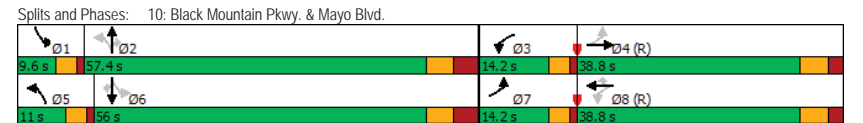
**Notes**  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Total AM

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 348   | 52    | 316   | 87    | 149   | 98    | 498   | 154   | 48    | 1228  | 116   |
| Future Volume (vph)  | 348   | 52    | 316   | 87    | 149   | 98    | 498   | 154   | 48    | 1228  | 116   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phases      | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 14.2  | 38.8  | 14.2  | 38.8  | 38.8  | 11.0  | 57.4  | 57.4  | 9.6   | 56.0  | 56.0  |
| Total Split (%)      | 11.8% | 32.3% | 11.8% | 32.3% | 32.3% | 9.2%  | 47.8% | 47.8% | 8.0%  | 46.7% | 46.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2029 Total PM

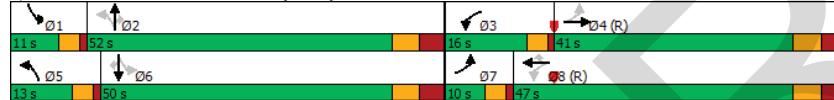
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 60    | 32    | 188   | 25    | 105   | 90    | 723   | 156   | 71    | 666   | 28    |
| Future Volume (vph)  | 60    | 32    | 188   | 25    | 105   | 90    | 723   | 156   | 71    | 666   | 28    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 10.0  | 41.0  | 16.0  | 47.0  | 47.0  | 13.0  | 52.0  | 52.0  | 11.0  | 50.0  | 50.0  |
| Total Split (%)      | 8.3%  | 34.2% | 13.3% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 9.2%  | 41.7% | 41.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2029 Total School PM

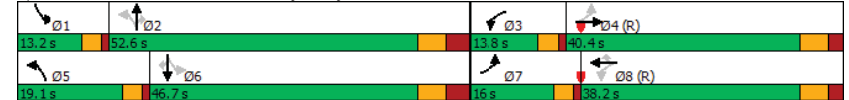
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 167   | 53    | 123   | 32    | 108   | 119   | 517   | 163   | 107   | 620   | 95    |
| Future Volume (vph)  | 167   | 53    | 123   | 32    | 108   | 119   | 517   | 163   | 107   | 620   | 95    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 16.0  | 40.4  | 13.8  | 38.2  | 38.2  | 19.1  | 52.6  | 52.6  | 13.2  | 46.7  | 46.7  |
| Total Split (%)      | 13.3% | 33.7% | 11.5% | 31.8% | 31.8% | 15.9% | 43.8% | 43.8% | 11.0% | 38.9% | 38.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.







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10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 53    | 118  | 123  | 32   | 108   | 119  | 517  | 163  | 107  | 620  | 95   |
| Future Volume (veh/h)        | 167  | 53    | 118  | 123  | 32   | 108   | 119  | 517  | 163  | 107  | 620  | 95   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 253  | 80    | 135  | 186  | 48   | 82    | 180  | 783  | 0    | 162  | 939  | 71   |
| Peak Hour Factor             | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 554  | 180   | 304  | 420  | 505  | 428   | 264  | 1911 |      | 368  | 1302 | 581  |
| Arrive On Green              | 0.10 | 0.29  | 0.29 | 0.08 | 0.27 | 0.27  | 0.08 | 0.37 | 0.00 | 0.02 | 0.12 | 0.12 |
| Sat Flow, veh/h              | 1781 | 625   | 1055 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 253  | 0     | 215  | 186  | 48   | 82    | 180  | 783  | 0    | 162  | 939  | 71   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0     | 1680 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 12.0 | 0.0   | 12.5 | 9.1  | 2.3  | 4.8   | 7.5  | 13.6 | 0.0  | 6.6  | 30.5 | 4.8  |
| Cycle Q Clear(g_c), s        | 12.0 | 0.0   | 12.5 | 9.1  | 2.3  | 4.8   | 7.5  | 13.6 | 0.0  | 6.6  | 30.5 | 4.8  |
| Prop In Lane                 | 1.00 |       | 0.63 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 554  | 0     | 484  | 420  | 505  | 428   | 264  | 1911 |      | 368  | 1302 | 581  |
| V/C Ratio(X)                 | 0.46 | 0.00  | 0.44 | 0.44 | 0.10 | 0.19  | 0.68 | 0.41 |      | 0.44 | 0.72 | 0.12 |
| Avail Cap(c_a), veh/h        | 554  | 0     | 484  | 420  | 505  | 428   | 347  | 1911 |      | 377  | 1302 | 581  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 27.7 | 0.0   | 34.9 | 28.7 | 32.8 | 33.7  | 26.2 | 27.8 | 0.0  | 22.8 | 46.8 | 35.5 |
| Incr Delay (d2), s/veh       | 0.2  | 0.0   | 2.9  | 0.3  | 0.4  | 1.0   | 1.7  | 0.7  | 0.0  | 0.3  | 3.5  | 0.4  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 9.1  | 0.0   | 9.4  | 7.0  | 2.0  | 3.6   | 5.8  | 9.6  | 0.0  | 5.4  | 21.6 | 3.6  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 28.0 | 0.0   | 37.8 | 29.0 | 33.2 | 34.7  | 27.9 | 28.4 | 0.0  | 23.1 | 50.3 | 36.0 |
| LnGrp LOS                    | C    | A     | D    | C    | C    | C     | C    | C    |      | C    | D    | D    |
| Approach Vol, veh/h          |      | 468   |      |      | 316  |       |      | 963  |      |      | 1172 |      |
| Approach Delay, s/veh        |      | 32.5  |      |      | 31.1 |       |      | 28.3 |      |      | 45.7 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.6 | 52.6  | 13.8 | 41.0 | 13.6 | 51.7  | 16.0 | 38.8 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.2  | * 45  | 9.8  | 34.0 | 15.1 | * 39  | 12.0 | 31.8 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 8.6  | 15.6  | 11.1 | 14.5 | 9.5  | 32.5  | 14.0 | 6.8  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 4.0   | 0.0  | 0.8  | 0.1  | 2.7   | 0.0  | 0.3  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 36.3 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |        |        |        |        |        |        |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Int Delay, s/veh         | 0      |        |        |        |        |        |
| Movement                 | EBL    | EBR    | NBL    | NBT    | SBT    | SBR    |
| Lane Configurations      |        | ↔      |        | ↔      | ↔      | ↔      |
| Traffic Vol, veh/h       | 0      | 1      | 0      | 751    | 1161   | 508    |
| Future Vol, veh/h        | 0      | 1      | 0      | 751    | 1161   | 508    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop   | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None | - None | - None | - None | - None |
| Storage Length           | - 0    | -      | -      | -      | -      | 150    |
| Veh in Median Storage, # | 0      | -      | -      | 0      | 0      | -      |
| Grade, %                 | 0      | -      | -      | 0      | 0      | -      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1      | 0      | 834    | 1290   | 564    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 645  | - 0    | - 0    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | - 6.94 | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | - 3.32 | -      | -      |
| Pot Cap-1 Maneuver   | 0 *607 | 0      | -      |
| Stage 1              | 0      | - 0    | -      |
| Stage 2              | 0      | - 0    | -      |
| Platoon blocked, %   | 1      | -      | -      |
| Mov Cap-1 Maneuver   | - *607 | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.9 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 607     | -   | -   |
| HCM Lane V/C Ratio    | - 0.002   | -   | -   |
| HCM Control Delay (s) | - 10.9    | -   | -   |
| HCM Lane LOS          | - B       | -   | -   |
| HCM 95th %tile Q(veh) | - 0       | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 8    | 0    | 969  | 842  | 48   |
| Future Vol, veh/h        | 0    | 8    | 0    | 969  | 842  | 48   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 8    | 0    | 1020 | 886  | 51   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 443  | - 0    | - 0    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | - 6.94 | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | - 3.32 | -      | -      |
| Pot Cap-1 Maneuver   | 0 *737 | 0      | -      |
| Stage 1              | 0      | - 0    | -      |
| Stage 2              | 0      | - 0    | -      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | - *737 | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 737     | -   | -   |
| HCM Lane V/C Ratio    | - 0.011   | -   | -   |
| HCM Control Delay (s) | - 9.9     | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | - 0       | -   | -   |

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

22-1270: Black Mountain Village  
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11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 10   | 0    | 798  | 650  | 210  |
| Future Vol, veh/h        | 0    | 10   | 0    | 798  | 650  | 210  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 13   | 0    | 1064 | 867  | 280  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 434  | - 0    | - 0    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | - 6.94 | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | - 3.32 | -      | -      |
| Pot Cap-1 Maneuver   | 0 *815 | 0      | -      |
| Stage 1              | 0      | - 0    | -      |
| Stage 2              | 0      | - 0    | -      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | - *815 | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.5 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 815     | -   | -   |
| HCM Lane V/C Ratio    | - 0.016   | -   | -   |
| HCM Control Delay (s) | - 9.5     | -   | -   |
| HCM Lane LOS          | - A       | -   | -   |
| HCM 95th %tile Q(veh) | - 0.1     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 8.3   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     | 2     |       | 2     |
| Conflicting Circle Lanes    | 2     | 2     | 2     |       | 2     |
| Adj Approach Flow, veh/h    | 37    | 838   | 1591  |       |       |
| Demand Flow Rate, veh/h     | 37    | 855   | 1622  |       |       |
| Vehicles Circulating, veh/h | 1599  | 14    | 29    |       |       |
| Vehicles Exiting, veh/h     | 52    | 1622  | 840   |       |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     |       |       |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 |       |       |
| Approach Delay, s/veh       | 11.5  | 5.5   | 9.7   |       |       |
| Approach LOS                | B     | A     | A     |       |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT TR | LT TR | LT TR |       |
| Assumed Moves               | LR    | LT TR | LT TR | LT TR |       |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 37    | 402   | 453   | 762   | 860   |
| Cap Entry Lane, veh/h       | 365   | 1333  | 1403  | 1314  | 1386  |
| Entry HV Adj Factor         | 1.000 | 0.980 | 0.980 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 37    | 394   | 444   | 748   | 843   |
| Cap Entry, veh/h            | 365   | 1305  | 1376  | 1289  | 1358  |
| V/C Ratio                   | 0.101 | 0.302 | 0.323 | 0.580 | 0.621 |
| Control Delay, s/veh        | 11.5  | 5.5   | 5.5   | 9.5   | 10.0  |
| LOS                         | B     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 4     | 5     |

22-1270: Black Mountain Village  
2029 Total PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.9   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     | 2     |       | 2     |
| Conflicting Circle Lanes    | 2     | 2     | 2     |       | 2     |
| Adj Approach Flow, veh/h    | 4     | 1033  | 903   |       |       |
| Demand Flow Rate, veh/h     | 4     | 1054  | 921   |       |       |
| Vehicles Circulating, veh/h | 916   | 1     | 3     |       |       |
| Vehicles Exiting, veh/h     | 8     | 919   | 1052  |       |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     |       |       |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 |       |       |
| Approach Delay, s/veh       | 5.6   | 6.2   | 5.6   |       |       |
| Approach LOS                | A     | A     | A     |       |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT TR | LT TR | LT TR |       |
| Assumed Moves               | LR    | LT TR | LT TR | LT TR |       |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 495   | 559   | 433   | 488   |
| Cap Entry Lane, veh/h       | 652   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 4     | 486   | 548   | 424   | 479   |
| Cap Entry, veh/h            | 652   | 1323  | 1390  | 1319  | 1389  |
| V/C Ratio                   | 0.006 | 0.367 | 0.394 | 0.322 | 0.345 |
| Control Delay, s/veh        | 5.6   | 6.1   | 6.2   | 5.6   | 5.7   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 1     | 2     |

22-1270: Black Mountain Village  
2029 Total School PM

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 7.1   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 33    | 1200  |       | 1210  |       |
| Demand Flow Rate, veh/h     | 33    | 1224  |       | 1234  |       |
| Vehicles Circulating, veh/h | 1225  | 9     |       | 16    |       |
| Vehicles Exiting, veh/h     | 25    | 1249  |       | 1217  |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 8.0   | 7.0   |       | 7.1   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 33    | 575   | 649   | 580   | 654   |
| Cap Entry Lane, veh/h       | 501   | 1339  | 1409  | 1330  | 1401  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.981 | 0.981 |
| Flow Entry, veh/h           | 33    | 564   | 636   | 569   | 641   |
| Cap Entry, veh/h            | 501   | 1313  | 1381  | 1304  | 1374  |
| V/C Ratio                   | 0.066 | 0.430 | 0.461 | 0.436 | 0.467 |
| Control Delay, s/veh        | 8.0   | 6.9   | 7.1   | 7.1   | 7.2   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 2     | 3     |

22-1270: Black Mountain Village  
2029 Total AM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |  |       |      |        |       |      |        |       |       |        |      |      |  |
|--------------------------|--|-------|------|--------|-------|------|--------|-------|-------|--------|------|------|--|
| Int Delay, s/veh         | 6  |       |      |        |       |      |        |       |       |        |      |      |  |
| Movement                 | EBL  | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR   | SBL    | SBT  | SBR  |  |
| Lane Configurations      | ↔  | ↔     | ↔    | ↔      | ↔     | ↔    | ↔      | ↔     | ↔     | ↔      | ↔    | ↔    |  |
| Traffic Vol, veh/h       | 190  | 106   | 8    | 15     | 187   | 87   | 14     | 5     | 8     | 26     | 3    | 179  |  |
| Future Vol, veh/h        | 190  | 106   | 8    | 15     | 187   | 87   | 14     | 5     | 8     | 26     | 3    | 179  |  |
| Conflicting Peds, #/hr   | 0  | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0     | 0      | 0    | 0    |  |
| Sign Control             | Free   | Free  | Free | Free   | Free  | Free | Stop   | Stop  | Stop  | Stop   | Stop | Stop |  |
| RT Channelized           | -  | -     | None | -      | -     | None | -      | -     | None  | -      | -    | None |  |
| Storage Length           | 150  | -     | -    | 145    | -     | -    | -      | -     | -     | -      | -    | -    |  |
| Veh in Median Storage, # | -  | 0     | -    | -      | 0     | -    | -      | -     | 0     | -      | -    | 0    |  |
| Grade, %                 | -  | 0     | -    | -      | 0     | -    | -      | -     | 0     | -      | -    | 0    |  |
| Peak Hour Factor         | 90   | 90    | 90   | 90     | 90    | 90   | 90     | 90    | 90    | 90     | 90   | 90   |  |
| Heavy Vehicles, %        | 2  | 2     | 2    | 2      | 2     | 2    | 2      | 2     | 2     | 2      | 2    | 2    |  |
| Mvmt Flow                | 211  | 118   | 9    | 17     | 208   | 97   | 16     | 6     | 9     | 29     | 3    | 199  |  |
| Major/Minor              | Major1   |       |      | Major2 |       |      | Minor1 |       |       | Minor2 |      |      |  |
| Conflicting Flow All     | 305  | 0     | 0    | 127    | 0     | 0    | 685    | 884   | 64    | 775    | 840  | 153  |  |
| Stage 1                  | -  | -     | -    | -      | -     | -    | 545    | 545   | -     | 291    | 291  | -    |  |
| Stage 2                  | -  | -     | -    | -      | -     | -    | 140    | 339   | -     | 484    | 549  | -    |  |
| Critical Hdwy            | 4.14   | -     | -    | 4.14   | -     | -    | 7.54   | 6.54  | 6.94  | 7.54   | 6.54 | 6.94 |  |
| Critical Hdwy Stg 1      | -  | -     | -    | -      | -     | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Critical Hdwy Stg 2      | -  | -     | -    | -      | -     | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Follow-up Hdwy           | 2.22   | -     | -    | 2.22   | -     | -    | 3.52   | 4.02  | 3.32  | 3.52   | 4.02 | 3.32 |  |
| Pot Cap-1 Maneuver       | 1253   | -     | -    | 1525   | -     | -    | 366    | 300   | *1049 | 314    | 319  | 866  |  |
| Stage 1                  | -  | -     | -    | -      | -     | -    | 529    | 543   | -     | 693    | 670  | -    |  |
| Stage 2                  | -  | -     | -    | -      | -     | -    | 849    | 638   | -     | 577    | 541  | -    |  |
| Platoon blocked, %       | -  | -     | -    | 1      | -     | -    | 1      | 1     | 1     | 1      | 1    | 1    |  |
| Mov Cap-1 Maneuver       | 1253   | -     | -    | 1525   | -     | -    | 241    | 247   | *1049 | 264    | 262  | 866  |  |
| Mov Cap-2 Maneuver       | -  | -     | -    | -      | -     | -    | 241    | 247   | -     | 264    | 262  | -    |  |
| Stage 1                  | -  | -     | -    | -      | -     | -    | 440    | 451   | -     | 577    | 663  | -    |  |
| Stage 2                  | -  | -     | -    | -      | -     | -    | 643    | 631   | -     | 470    | 450  | -    |  |
| Approach                 | EB   | WB    |      |        | NB    |      |        | SB    |       |        |      |      |  |
| HCM Control Delay, s     | 5.3  | 0.4   |      |        | 17.7  |      |        | 13.4  |       |        |      |      |  |
| HCM LOS                  |  |       |      |        | C     |      |        | B     |       |        |      |      |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |       |        |      |      |  |
| Capacity (veh/h)         | 314  | 1253  | -    | -      | 1525  | -    | -      | 657   |       |        |      |      |  |
| HCM Lane V/C Ratio       | 0.096  | 0.168 | -    | -      | 0.011 | -    | -      | 0.352 |       |        |      |      |  |
| HCM Control Delay (s)    | 17.7   | 8.5   | -    | -      | 7.4   | -    | -      | 13.4  |       |        |      |      |  |
| HCM Lane LOS             | C  | A     | -    | -      | A     | -    | -      | B     |       |        |      |      |  |
| HCM 95th %tile Q(veh)    | 0.3  | 0.6   | -    | -      | 0     | -    | -      | 1.6   |       |        |      |      |  |
| Notes                    | -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |       |      |        |       |      |        |       |       |        |      |      |  |

22-1270: Black Mountain Village  
2029 Total PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 89   | 159  | 11   | 26   | 151  | 30   | 10   | 5    | 3    | 31   | 5    | 150  |
| Future Vol, veh/h        | 89   | 159  | 11   | 26   | 151  | 30   | 10   | 5    | 3    | 31   | 5    | 150  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 122  | 218  | 15   | 36   | 207  | 41   | 14   | 7    | 4    | 42   | 7    | 205  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 248    | 0      | 0      | 233    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1315   | -      | -      | 1442   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1315   | -      | -      | 1442   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 2.8 | 0.9 | 16.5 | 13 |
| HCM LOS              |     |     | C    | B  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 339   | 1315  | -   | -   | 1442  | -   | -   | 702   |
| HCM Lane V/C Ratio    | 0.073 | 0.093 | -   | -   | 0.025 | -   | -   | 0.363 |
| HCM Control Delay (s) | 16.5  | 8     | -   | -   | 7.6   | -   | -   | 13    |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0.1   | -   | -   | 1.7   |

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

22-1270: Black Mountain Village  
2029 Total School PM

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 127  | 178  | 18   | 14   | 158  | 45   | 11   | 3    | 7    | 8    | 3    | 57   |
| Future Vol, veh/h        | 127  | 178  | 18   | 14   | 158  | 45   | 11   | 3    | 7    | 8    | 3    | 57   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 155  | 217  | 22   | 17   | 193  | 55   | 13   | 4    | 9    | 10   | 4    | 70   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 248    | 0      | 0      | 239    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1315   | -      | -      | 1434   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1315   | -      | -      | 1434   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.2 | 0.5 | 14.1 | 10.7 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 422   | 1315  | -   | -   | 1434  | -   | -   | 713   |
| HCM Lane V/C Ratio    | 0.061 | 0.118 | -   | -   | 0.012 | -   | -   | 0.116 |
| HCM Control Delay (s) | 14.1  | 8.1   | -   | -   | 7.5   | -   | -   | 10.7  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.4   | -   | -   | 0     | -   | -   | 0.4   |

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

22-1270: Black Mountain Village  
2029 Total AM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |      |      |      |      |      |      |
|--------------------------|-------|------|-------|------|-------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 10.3  |      |       |      |       |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↘  |      | ↔ ↘  |      | ↔ ↘  |      |
| Traffic Vol, veh/h       | 51    | 942  | 69    | 65   | 586   | 28   | 51   | 7    | 98   | 43   | 8    | 41   |
| Future Vol, veh/h        | 51    | 942  | 69    | 65   | 586   | 28   | 51   | 7    | 98   | 43   | 8    | 41   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90    | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 57    | 1047 | 77    | 72   | 651   | 31   | 57   | 8    | 109  | 48   | 9    | 46   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 682    | 0      | 0      | 1124   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 556    | -      | -      | 341    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 556    | -      | -      | 341    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.6 | 1.8 | 78.6 | 69.3 |
| HCM LOS              |     |     | F    | F    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 66    | 251   | 556   | -   | -   | 341   | -   | -   | 77    | 176   |
| HCM Lane V/C Ratio    | 0.859 | 0.465 | 0.102 | -   | -   | 0.212 | -   | -   | 0.62  | 0.309 |
| HCM Control Delay (s) | 176.3 | 31.2  | 12.2  | -   | -   | 18.4  | -   | -   | 109   | 34.4  |
| HCM Lane LOS          | F     | D     | B     | -   | -   | C     | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 4.1   | 2.3   | 0.3   | -   | -   | 0.8   | -   | -   | 2.8   | 1.2   |

22-1270: Black Mountain Village  
2029 Total PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |      |      |      |      |      |      |
|--------------------------|-------|------|-------|------|-------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 11.9  |      |       |      |       |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↘  |      | ↔ ↘  |      | ↔ ↘  |      |
| Traffic Vol, veh/h       | 73    | 664  | 34    | 61   | 768   | 64   | 64   | 5    | 93   | 29   | 5    | 50   |
| Future Vol, veh/h        | 73    | 664  | 34    | 61   | 768   | 64   | 64   | 5    | 93   | 29   | 5    | 50   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 85    | 85   | 85    | 85   | 85    | 85   | 85   | 85   | 85   | 85   | 85   | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 86    | 781  | 40    | 72   | 904   | 75   | 75   | 6    | 109  | 34   | 6    | 59   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 979    | 0      | 0      | 821    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 401    | -      | -      | 477    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 401    | -      | -      | 477    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 1.6 | 0.9 | 94.4 | 63.2 |
| HCM LOS              |     |     | F    | F    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 75    | 296   | 401   | -   | -   | 477  | -   | -   | 59    | 216   |
| HCM Lane V/C Ratio    | 1.004 | 0.39  | 0.214 | -   | -   | 0.15 | -   | -   | 0.578 | 0.3   |
| HCM Control Delay (s) | 201.1 | 24.7  | 16.4  | -   | -   | 13.9 | -   | -   | 128.9 | 28.6  |
| HCM Lane LOS          | F     | C     | C     | -   | -   | B    | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 5.3   | 1.8   | 0.8   | -   | -   | 0.5  | -   | -   | 2.3   | 1.2   |

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

22-1270: Black Mountain Village  
2029 Total School PM

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 4.5   |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 52    | 595  | 46    | 44   | 536   | 51   | 9     | 5    | 41    | 31   | 11    | 33   |
| Future Vol, veh/h        | 52    | 595  | 46    | 44   | 536   | 51   | 9     | 5    | 41    | 31   | 11    | 33   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 74    | 74   | 74    | 74   | 74    | 74   | 74    | 74   | 74    | 74   | 74    | 74   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 70    | 804  | 62    | 59   | 724   | 69   | 12    | 7    | 55    | 42   | 15    | 45   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 793    | 0      | 866    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | 5.34   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | 3.12   | -      |
| Pot Cap-1 Maneuver   | 492    | -      | 454    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 492    | -      | 454    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB   |
|----------------------|----|----|------|------|
| HCM Control Delay, s | 1  | 1  | 28.4 | 49.3 |
| HCM LOS              |    |    | D    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 87    | 255   | 492   | -   | -   | 454   | -   | -   | 103   | 160   |
| HCM Lane V/C Ratio    | 0.14  | 0.244 | 0.143 | -   | -   | 0.131 | -   | -   | 0.407 | 0.372 |
| HCM Control Delay (s) | 53    | 23.6  | 13.5  | -   | -   | 14.1  | -   | -   | 62.1  | 40.2  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | B     | -   | -   | F     | E     |
| HCM 95th %tile Q(veh) | 0.5   | 0.9   | 0.5   | -   | -   | 0.4   | -   | -   | 1.7   | 1.6   |

22-1270: Black Mountain Village  
2029 Total AM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 4.2   |      |       |      |       |      |
| Movement                 | EBL   | EBR  | NBL   | NBT  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 170   | 21   | 47    | 56   | 26    | 267  |
| Future Vol, veh/h        | 170   | 21   | 47    | 56   | 26    | 267  |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Stop  | Stop | Free  | Free | Free  | Free |
| RT Channelized           | -     | None | -     | None | -     | None |
| Storage Length           | 335   | 0    | 175   | -    | -     | 300  |
| Veh in Median Storage, # | 0     | -    | -     | 0    | 0     | -    |
| Grade, %                 | 0     | -    | -     | 0    | 0     | -    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90    | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 189   | 23   | 52    | 62   | 29    | 297  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 195    | 29     | 326    |
| Stage 1              | 29     | -      | -      |
| Stage 2              | 166    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 794    | 1046   | 1234   |
| Stage 1              | 994    | -      | -      |
| Stage 2              | 863    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 761    | 1046   | 1234   |
| Mov Cap-2 Maneuver   | 761    | -      | -      |
| Stage 1              | 952    | -      | -      |
| Stage 2              | 863    | -      | -      |

| Approach             | EB | NB  | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 11 | 3.7 | 0  |
| HCM LOS              | B  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1234  | -   | 761   | 1046  | -   | -   |
| HCM Lane V/C Ratio    | 0.042 | -   | 0.248 | 0.022 | -   | -   |
| HCM Control Delay (s) | 8     | -   | 11.3  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 1     | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2029 Total PM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.8  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 104  | 43   | 30   | 47   | 62   | 163  |
| Future Vol, veh/h        | 104  | 43   | 30   | 47   | 62   | 163  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 116  | 48   | 33   | 52   | 69   | 181  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 187    | 69     | 250    | 0 | - | 0 |
| Stage 1              | 69     | -      | -      | - | - | - |
| Stage 2              | 118    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 802    | 994    | 1316   | - | - | - |
| Stage 1              | 954    | -      | -      | - | - | - |
| Stage 2              | 907    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 782    | 994    | 1316   | - | - | - |
| Mov Cap-2 Maneuver   | 782    | -      | -      | - | - | - |
| Stage 1              | 930    | -      | -      | - | - | - |
| Stage 2              | 907    | -      | -      | - | - | - |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 3  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1316  | -   | 782   | 994   | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | 0.148 | 0.048 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 10.4  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.5   | 0.2   | -   | -   |

22-1270: Black Mountain Village  
2029 Total School PM

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 125  | 25   | 28   | 53   | 52   | 127  |
| Future Vol, veh/h        | 125  | 25   | 28   | 53   | 52   | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 179  | 36   | 40   | 76   | 74   | 181  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 230    | 74     | 255    | 0 | - | 0 |
| Stage 1              | 74     | -      | -      | - | - | - |
| Stage 2              | 156    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 758    | 988    | 1310   | - | - | - |
| Stage 1              | 949    | -      | -      | - | - | - |
| Stage 2              | 872    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 735    | 988    | 1310   | - | - | - |
| Mov Cap-2 Maneuver   | 735    | -      | -      | - | - | - |
| Stage 1              | 920    | -      | -      | - | - | - |
| Stage 2              | 872    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 2.7 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1310  | -   | 735   | 988   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | 0.243 | 0.036 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 11.5  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.9   | 0.1   | -   | -   |



22-1270: Black Mountain Village  
2029 Total AM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 22   | 69   | 164  | 2    | 81   | 396  |
| Future Vol, veh/h        | 22   | 69   | 164  | 2    | 81   | 396  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 24   | 77   | 182  | 2    | 90   | 440  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 803    | 183    | 0 0 184 0   |
| Stage 1              | 183    | -      | - - - -     |
| Stage 2              | 620    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 353    | 859    | - - 1391 -  |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 536    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 323    | 859    | - - 1391 -  |
| Mov Cap-2 Maneuver   | 323    | -      | - - - -     |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 490    | -      | - - - -     |

| Approach             | WB | NB | SB  |
|----------------------|----|----|-----|
| HCM Control Delay, s | 12 | 0  | 1.3 |
| HCM LOS              | B  |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 613   | 1391  |
| HCM Lane V/C Ratio    | -   | -        | 0.165 | 0.065 |
| HCM Control Delay (s) | -   | -        | 12    | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2029 Total PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.7  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 26   | 82   | 29   | 2    | 90   | 24   |
| Future Vol, veh/h        | 26   | 82   | 29   | 2    | 90   | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 32   | 2    | 100  | 27   |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 260    | 33     | 0 0 34 0    |
| Stage 1              | 33     | -      | - - - -     |
| Stage 2              | 227    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 729    | 1041   | - - 1578 -  |
| Stage 1              | 989    | -      | - - - -     |
| Stage 2              | 811    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 682    | 1041   | - - 1578 -  |
| Mov Cap-2 Maneuver   | 682    | -      | - - - -     |
| Stage 1              | 989    | -      | - - - -     |
| Stage 2              | 759    | -      | - - - -     |

| Approach             | WB  | NB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.5 | 0  | 5.9 |
| HCM LOS              | A   |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT   |
|-----------------------|-----|----------|------|-------|
| Capacity (veh/h)      | -   | -        | 924  | 1578  |
| HCM Lane V/C Ratio    | -   | -        | 0.13 | 0.063 |
| HCM Control Delay (s) | -   | -        | 9.5  | 7.4   |
| HCM Lane LOS          | -   | -        | A    | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.4  | 0.2   |

22-1270: Black Mountain Village  
2029 Total School PM

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.9  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 26   | 82   | 180  | 2    | 90   | 104  |
| Future Vol, veh/h        | 26   | 82   | 180  | 2    | 90   | 104  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 200  | 2    | 100  | 116  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 517    | 201    | 0 0 202 0   |
| Stage 1              | 201    | -      | - - - -     |
| Stage 2              | 316    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 518    | 840    | - - 1370 -  |
| Stage 1              | 833    | -      | - - - -     |
| Stage 2              | 739    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 478    | 840    | - - 1370 -  |
| Mov Cap-2 Maneuver   | 478    | -      | - - - -     |
| Stage 1              | 833    | -      | - - - -     |
| Stage 2              | 681    | -      | - - - -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 11.1 | 0  | 3.6 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 710   | 1370  |
| HCM Lane V/C Ratio    | -   | -        | 0.169 | 0.073 |
| HCM Control Delay (s) | -   | -        | 11.1  | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2029 Total AM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔↔↔  | ↔    | ↔    | ↔↔↔  | ↔    | ↔    |
| Traffic Vol, veh/h       | 1238 | 114  | 0    | 687  | 0    | 127  |
| Future Vol, veh/h        | 1238 | 114  | 0    | 687  | 0    | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1376 | 127  | 0    | 763  | 0    | 141  |

| Major/Minor          | Major1 | Major2 | Minor1     |
|----------------------|--------|--------|------------|
| Conflicting Flow All | 0      | 0      | - - - 688  |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |
| Critical Hdwy        | -      | -      | - - - 7.14 |
| Critical Hdwy Stg 1  | -      | -      | - - - -    |
| Critical Hdwy Stg 2  | -      | -      | - - - -    |
| Follow-up Hdwy       | -      | -      | - - - 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 0 - 0 333  |
| Stage 1              | -      | -      | 0 - 0 -    |
| Stage 2              | -      | -      | 0 - 0 -    |
| Platoon blocked, %   | -      | -      | - - - -    |
| Mov Cap-1 Maneuver   | -      | -      | - - - 333  |
| Mov Cap-2 Maneuver   | -      | -      | - - - -    |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 23.5 |
| HCM LOS              |    |    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 333   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.424 | -   | -   | -   |
| HCM Control Delay (s) | 23.5  | -   | -   | -   |
| HCM Lane LOS          | C     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 2     | -   | -   | -   |

22-1270: Black Mountain Village  
2029 Total PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 586  | 117  | 0    | 810  | 0    | 148  |
| Future Vol, veh/h        | 586  | 117  | 0    | 810  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 651  | 130  | 0    | 900  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 326    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *778 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *778   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 778   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 664  | 117  | 0    | 658  | 0    | 148  |
| Future Vol, veh/h        | 664  | 117  | 0    | 658  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 738  | 130  | 0    | 731  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 369    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *778 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *778   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 778   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 403  | 226  | 29   | 13   | 7    |
| Future Vol, veh/h        | 2    | 403  | 226  | 29   | 13   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 448  | 251  | 32   | 14   | 8    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 283    | 0      | 0      | 495   | 267   |
| Stage 1              | -      | -      | -      | 267   | -     |
| Stage 2              | -      | -      | -      | 228   | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1278   | -      | -      | 519   | 771   |
| Stage 1              | -      | -      | -      | 777   | -     |
| Stage 2              | -      | -      | -      | 789   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1278   | -      | -      | 518   | 771   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 518   | -     |
| Stage 1              | -      | -      | -      | 775   | -     |
| Stage 2              | -      | -      | -      | 789   | -     |

| Approach             | EB | WB | SB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.4 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1278  | -   | -   | -   | 585   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.038 |
| HCM Control Delay (s) | 7.8   | 0   | -   | -   | 11.4  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 59   | 68   | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 59   | 68   | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 66   | 76   | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 113    | 0      | 0      | 134   | 95    |
| Stage 1              | -      | -      | -      | 95    | -     |
| Stage 2              | -      | -      | -      | 39    | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1545   | -      | -      | 936   | 1048  |
| Stage 1              | -      | -      | -      | 989   | -     |
| Stage 2              | -      | -      | -      | 979   | -     |
| Platoon blocked, %   | 1      | -      | -      | 1     | 1     |
| Mov Cap-1 Maneuver   | 1545   | -      | -      | 934   | 1048  |
| Mov Cap-2 Maneuver   | -      | -      | -      | 934   | -     |
| Stage 1              | -      | -      | -      | 987   | -     |
| Stage 2              | -      | -      | -      | 979   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 8.8 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1545  | -   | -   | -   | 963   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.025 |
| HCM Control Delay (s) | 7.3   | 0   | -   | -   | 8.8   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total School PM

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 207  | 173  | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 207  | 173  | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 230  | 192  | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 229    | 0      | 332    |
| Stage 1              | -      | -      | 211    |
| Stage 2              | -      | -      | 121    |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2,219  | -      | 3,519  |
| Pot Cap-1 Maneuver   | *1415  | -      | *892   |
| Stage 1              | -      | -      | *892   |
| Stage 2              | -      | -      | *892   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *1415  | -      | *890   |
| Mov Cap-2 Maneuver   | -      | -      | *890   |
| Stage 1              | -      | -      | *890   |
| Stage 2              | -      | -      | *892   |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.1 | 0  | 9.1 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1415 | -   | -   | -   | 904   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.027 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.1   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2029 Total AM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↕    | ↕↕↕  | ↕↕↕  | ↕↕↕  |      |
| Traffic Vol, veh/h       | 0    | 37   | 0    | 1046 | 1423 | 61   |
| Future Vol, veh/h        | 0    | 37   | 0    | 1046 | 1423 | 61   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 41   | 0    | 1162 | 1581 | 68   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 825    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *580   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   |        | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *580   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 11.7 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | 580   | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.071 | -   | -   |
| HCM Control Delay (s) | -   | 11.7  | -   | -   |
| HCM Lane LOS          | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 955  | 787  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 955  | 787  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 1061 | 874  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 470    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *734   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *734   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 734   | -   |
| HCM Lane V/C Ratio    | -         | 0.067 | -   |
| HCM Control Delay (s) | -         | 10.3  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 859  | 842  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 859  | 842  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 954  | 936  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 501    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *734   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *734   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 734   | -   |
| HCM Lane V/C Ratio    | -         | 0.067 | -   |
| HCM Control Delay (s) | -         | 10.3  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 133  | 32   | 83   | 913  | 1350 | 110  |
| Future Vol, veh/h        | 133  | 32   | 83   | 913  | 1350 | 110  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 148  | 36   | 92   | 1014 | 1500 | 122  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 2151   | 811    | 1622   |
| Stage 1              | 1561   | -      | -      |
| Stage 2              | 590    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *407   | *602   | 671    |
| Stage 1              | *601   | -      | -      |
| Stage 2              | *731   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *351   | *602   | 671    |
| Mov Cap-2 Maneuver   | *351   | -      | -      |
| Stage 1              | *519   | -      | -      |
| Stage 2              | *731   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.3 | 0.9 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 671   | -   | 351   | 602   | -   | -   |
| HCM Lane V/C Ratio    | 0.137 | -   | 0.421 | 0.059 | -   | -   |
| HCM Control Delay (s) | 11.2  | -   | 22.5  | 11.4  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | 2     | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 803  | 719  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 803  | 719  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 892  | 799  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1410   | 462    | 923    |
| Stage 1              | 861    | -      | -      |
| Stage 2              | 549    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *588   | *756   | 802    |
| Stage 1              | *693   | -      | -      |
| Stage 2              | *753   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *518   | *756   | 802    |
| Mov Cap-2 Maneuver   | *518   | -      | -      |
| Stage 1              | *610   | -      | -      |
| Stage 2              | *753   | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 14.4 | 1  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 802   | -   | 518   | 756   | -   | -   |
| HCM Lane V/C Ratio    | 0.119 | -   | 0.326 | 0.044 | -   | -   |
| HCM Control Delay (s) | 10.1  | -   | 15.3  | 10    | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 1.4   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 707  | 774  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 707  | 774  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 786  | 860  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1428   | 492    | 984    |
| Stage 1              | 922    | -      | -      |
| Stage 2              | 506    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *394   | *734   | 824    |
| Stage 1              | *725   | -      | -      |
| Stage 2              | *776   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *348   | *734   | 824    |
| Mov Cap-2 Maneuver   | *348   | -      | -      |
| Stage 1              | *640   | -      | -      |
| Stage 2              | *776   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 22.3 | 1.1 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 824   | -   | 348   | 734   | -   | -   |
| HCM Lane V/C Ratio    | 0.116 | -   | 0.485 | 0.045 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | 24.7  | 10.1  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 2.5   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 40   | 0    | 997  | 1351 | 31   |
| Future Vol, veh/h        | 0    | 40   | 0    | 997  | 1351 | 31   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 44   | 0    | 1108 | 1501 | 34   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 768    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *502   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *502   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 12.9 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBL | NBT   | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | -   | 502   | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.089 | -     | -   | -   |
| HCM Control Delay (s) | -   | 12.9  | -     | -   | -   |
| HCM Lane LOS          | -   | B     | -     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.3   | -     | -   | -   |

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



22-1270: Black Mountain Village  
2029 Total PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗↗   | ↗↗   | ↗    |      |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 888  | 716  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 888  | 716  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 987  | 796  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 417    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *789   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *789   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT  | SBR |
|-----------------------|-----------|------|-----|
| Capacity (veh/h)      | -         | 789  | -   |
| HCM Lane V/C Ratio    | -         | 0.07 | -   |
| HCM Control Delay (s) | -         | 9.9  | -   |
| HCM Lane LOS          | -         | A    | -   |
| HCM 95th %tile Q(veh) | -         | 0.2  | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↗↗   | ↗↗   | ↗    |      |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 792  | 771  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 792  | 771  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 880  | 857  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 447    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *763   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *763   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.1 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 763   | -   |
| HCM Lane V/C Ratio    | -         | 0.073 | -   |
| HCM Control Delay (s) | -         | 10.1  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

**APPENDIX L**

**MITIGATION PEAK HOUR ANALYSIS**

DRAFT

22-1270: Black Mountain Village  
2024 Total AM Mitigated

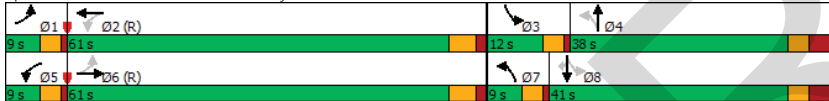
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 23    | 1330  | 11    | 581   | 11    | 3     | 111   | 2     | 20    |
| Future Volume (vph)  | 23    | 1330  | 11    | 581   | 11    | 3     | 111   | 2     | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 9.0   | 61.0  | 9.0   | 61.0  | 9.0   | 38.0  | 12.0  | 41.0  | 41.0  |
| Total Split (%)      | 7.5%  | 50.8% | 7.5%  | 50.8% | 7.5%  | 31.7% | 10.0% | 34.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total PM Mitigated

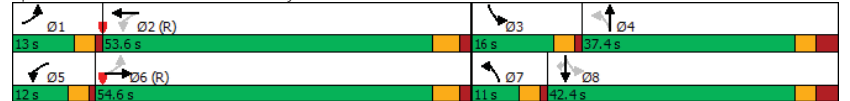
1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 30    | 625   | 16    | 697   | 6     | 3     | 81    | 3     | 40    |
| Future Volume (vph)  | 30    | 625   | 16    | 697   | 6     | 3     | 81    | 3     | 40    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 13.0  | 54.6  | 12.0  | 53.6  | 11.0  | 37.4  | 16.0  | 42.4  | 42.4  |
| Total Split (%)      | 10.8% | 45.5% | 10.0% | 44.7% | 9.2%  | 31.2% | 13.3% | 35.3% | 35.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total School PM Mitigated

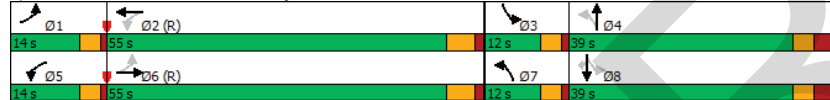
1: 32nd St. & Deer Valley Dr.  
Timings

|                      | ↖     | →     | ↗     | ←     | ↖     | ↑     | ↗     | ↓     | ↖     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 16    | 649   | 5     | 599   | 7     | 4     | 71    | 1     | 18    |
| Future Volume (vph)  | 16    | 649   | 5     | 599   | 7     | 4     | 71    | 1     | 18    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     |       |       |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Spplits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total AM Mitigated

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

|                              | ↖    | →     | ↗    | ←    | ↖    | ↑     | ↗    | ↓    | ↖    |      |      |      |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  |
| Traffic Volume (veh/h)       | 23   | 1330  | 6    | 11   | 581  | 38    | 11   | 3    | 20   | 111  | 2    | 20   |
| Future Volume (veh/h)        | 23   | 1330  | 6    | 11   | 581  | 38    | 11   | 3    | 20   | 111  | 2    | 20   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 26   | 1478  | 6    | 12   | 646  | 32    | 12   | 3    | 16   | 123  | 2    | 11   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 410  | 2578  | 10   | 188  | 2396 | 118   | 457  | 68   | 360  | 529  | 587  | 497  |
| Arrive On Green              | 0.02 | 0.49  | 0.49 | 0.01 | 0.48 | 0.48  | 0.01 | 0.26 | 0.26 | 0.06 | 0.31 | 0.31 |
| Sat Flow, veh/h              | 1781 | 5249  | 21   | 1781 | 4984 | 246   | 1781 | 256  | 1368 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 26   | 958   | 526  | 12   | 440  | 238   | 12   | 0    | 19   | 123  | 2    | 11   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702  | 1867 | 1781 | 1702 | 1826  | 1781 | 0    | 1624 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 0.9  | 23.9  | 23.9 | 0.4  | 9.3  | 9.3   | 0.6  | 0.0  | 1.0  | 5.8  | 0.1  | 0.6  |
| Cycle Q Clear(g_c), s        | 0.9  | 23.9  | 23.9 | 0.4  | 9.3  | 9.3   | 0.6  | 0.0  | 1.0  | 5.8  | 0.1  | 0.6  |
| Prop In Lane                 | 1.00 | 0.01  | 1.00 | 1.00 | 0.13 | 1.00  | 0.84 | 1.00 | 0.84 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 410  | 1672  | 917  | 188  | 1637 | 878   | 457  | 0    | 428  | 529  | 587  | 497  |
| V/C Ratio(X)                 | 0.06 | 0.57  | 0.57 | 0.06 | 0.27 | 0.27  | 0.03 | 0.00 | 0.04 | 0.23 | 0.00 | 0.02 |
| Avail Cap(c_a), veh/h        | 441  | 1672  | 917  | 238  | 1637 | 878   | 507  | 0    | 428  | 534  | 587  | 497  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.3 | 21.6  | 21.6 | 17.7 | 18.6 | 18.6  | 31.6 | 0.0  | 32.9 | 27.8 | 28.3 | 28.4 |
| Incr Delay (d2), s/veh       | 0.0  | 1.4   | 2.6  | 0.1  | 0.4  | 0.8   | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.7  | 14.8  | 16.4 | 0.3  | 6.7  | 7.4   | 0.5  | 0.0  | 0.8  | 4.5  | 0.1  | 0.4  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.3 | 23.1  | 24.2 | 17.7 | 19.0 | 19.4  | 31.6 | 0.0  | 33.1 | 27.8 | 28.3 | 28.5 |
| LnGrp LOS                    | B    | C     | C    | B    | B    | B     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 1510  |      |      | 690  |       |      | 31   |      |      |      | 136  |
| Approach Delay, s/veh        |      | 23.3  |      |      | 19.1 |       |      | 32.5 |      |      |      | 27.9 |
| Approach LOS                 |      | C     |      |      | B    |       |      | C    |      |      |      | C    |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 6.9  | 63.4  | 11.7 | 38.0 | 5.6  | 64.6  | 5.6  | 44.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.0  | * 55  | 8.0  | 31.6 | 5.0  | * 55  | 5.0  | 34.6 |      |      |      |      |
| Max Q Clear Time (g_c+I), s  | 2.9  | 11.3  | 7.8  | 3.0  | 2.4  | 25.9  | 2.6  | 2.6  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.2   | 0.0  | 0.0  | 0.0  | 8.3   | 0.0  | 0.0  |      |      |      |      |

Intersection Summary

HCM 6th Ctrl Delay: 22.5  
HCM 6th LOS: C

Notes

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |   |
|--|------|-------|------|------|------|-------|------|------|------|------|------|------|---|
| Lane Configurations  |      | ↑↑↑   |      |      | ↑↑↑  |       |      |      |      |      |      | ↑    | ↑ |
| Traffic Volume (veh/h)   | 30   | 625   | 7    | 16   | 697  | 89    | 6    | 3    | 7    | 81   | 3    | 40   |   |
| Future Volume (veh/h)  | 30   | 625   | 7    | 16   | 697  | 89    | 6    | 3    | 7    | 81   | 3    | 40   |   |
| Initial Q (Ob), veh  | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |   |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |   |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |   |
| Work Zone On Approach  | No   |       |      | No   |      |       | No   |      |      | No   |      |      |   |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |   |
| Adj Flow Rate, veh/h   | 32   | 665   | 5    | 17   | 741  | 72    | 6    | 3    | 5    | 86   | 3    | 22   |   |
| Peak Hour Factor   | 0.94 | 0.94  | 0.94 | 0.94 | 0.94 | 0.94  | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |   |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |   |
| Cap, veh/h   | 442  | 2650  | 20   | 426  | 2356 | 228   | 433  | 163  | 272  | 506  | 561  | 476  |   |
| Arrive On Green  | 0.03 | 0.51  | 0.51 | 0.04 | 1.00 | 1.00  | 0.01 | 0.26 | 0.26 | 0.05 | 0.30 | 0.30 |   |
| Sat Flow, veh/h  | 1781 | 5228  | 39   | 1781 | 4735 | 457   | 1781 | 630  | 1051 | 1781 | 1870 | 1585 |   |
| Grp Volume(v), veh/h   | 32   | 433   | 237  | 17   | 531  | 282   | 6    | 0    | 8    | 86   | 3    | 22   |   |
| Grp Sat Flow(s), veh/h/ln  | 1781 | 1702  | 1863 | 1781 | 1702 | 1788  | 1781 | 0    | 1681 | 1781 | 1870 | 1585 |   |
| Q Serve(g_s), s  | 1.0  | 8.6   | 8.6  | 0.6  | 0.1  | 0.1   | 0.3  | 0.0  | 0.4  | 4.1  | 0.1  | 1.2  |   |
| Cycle Q Clear(g_c), s  | 1.0  | 8.6   | 8.6  | 0.6  | 0.1  | 0.1   | 0.3  | 0.0  | 0.4  | 4.1  | 0.1  | 1.2  |   |
| Prop In Lane   | 1.00 |       | 0.02 | 1.00 |      | 0.26  | 1.00 |      | 0.63 | 1.00 |      | 1.00 |   |
| Lane Grp Cap(c), veh/h   | 442  | 1726  | 945  | 426  | 1694 | 890   | 433  | 0    | 436  | 506  | 561  | 476  |   |
| V/C Ratio(X)   | 0.07 | 0.25  | 0.25 | 0.04 | 0.31 | 0.32  | 0.01 | 0.00 | 0.02 | 0.17 | 0.01 | 0.05 |   |
| Avail Cap(c_a), veh/h  | 527  | 1726  | 945  | 513  | 1694 | 890   | 523  | 0    | 436  | 598  | 561  | 476  |   |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 2.00 | 2.00 | 2.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |   |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |   |
| Uniform Delay (d), s/veh   | 13.8 | 16.7  | 16.7 | 14.2 | 0.1  | 0.1   | 32.4 | 0.0  | 33.1 | 28.8 | 29.4 | 29.8 |   |
| Incr Delay (d2), s/veh   | 0.0  | 0.3   | 0.6  | 0.0  | 0.5  | 0.9   | 0.0  | 0.0  | 0.1  | 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(95%), veh/ln  | 0.8  | 6.2   | 6.9  | 0.4  | 0.3  | 0.5   | 0.2  | 0.0  | 0.3  | 3.2  | 0.1  | 0.9  |   |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |       |      |      |      |      |      |      |   |
| LnGrp Delay(d), s/veh  | 13.8 | 17.1  | 17.4 | 14.2 | 0.6  | 1.1   | 32.4 | 0.0  | 33.2 | 28.9 | 29.5 | 30.0 |   |
| LnGrp LOS  | B    | B     | B    | B    | A    | A     | C    | A    | C    | C    | C    | C    |   |
| Approach Vol, veh/h  |      | 702   |      |      | 830  |       |      | 14   |      |      | 111  |      |   |
| Approach Delay, s/veh  |      | 17.0  |      |      | 1.1  |       |      | 32.8 |      |      | 29.1 |      |   |
| Approach LOS   |      | B     |      |      | A    |       |      | C    |      |      | C    |      |   |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |   |
| Phs Duration (G+Y+Rc), s   | 7.3  | 65.4  | 9.8  | 37.5 | 6.2  | 66.5  | 4.9  | 42.4 |      |      |      |      |   |
| Change Period (Y+Rc), s  | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |   |
| Max Green Setting (Gmax), s  | 9.0  | * 48  | 12.0 | 31.0 | 8.0  | * 49  | 7.0  | 36.0 |      |      |      |      |   |
| Max Q Clear Time (g_c+I1), s   | 3.0  | 2.1   | 6.1  | 2.4  | 2.6  | 10.6  | 2.3  | 3.2  |      |      |      |      |   |
| Green Ext Time (p_c), s  | 0.0  | 4.0   | 0.0  | 0.0  | 0.0  | 3.1   | 0.0  | 0.0  |      |      |      |      |   |
| <b>Intersection Summary</b>  |      |       |      |      |      |       |      |      |      |      |      |      |   |
| HCM 6th Ctrl Delay   | 10.0 |       |      |      |      |       |      |      |      |      |      |      |   |
| HCM 6th LOS  | A    |       |      |      |      |       |      |      |      |      |      |      |   |
| <b>Notes</b>   |      |       |      |      |      |       |      |      |      |      |      |      |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |       |      |      |      |      |      |      |   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |   |
|--|------|-------|------|------|------|-------|------|------|------|------|------|------|---|
| Lane Configurations  |      | ↑↑↑   |      |      | ↑↑↑  |       |      |      |      |      |      | ↑    | ↑ |
| Traffic Volume (veh/h)   | 16   | 649   | 8    | 5    | 599  | 69    | 7    | 4    | 8    | 71   | 1    | 18   |   |
| Future Volume (veh/h)  | 16   | 649   | 8    | 5    | 599  | 69    | 7    | 4    | 8    | 71   | 1    | 18   |   |
| Initial Q (Ob), veh  | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |   |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |   |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |   |
| Work Zone On Approach  | No   |       |      | No   |      |       | No   |      |      | No   |      |      |   |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |   |
| Adj Flow Rate, veh/h   | 24   | 969   | 9    | 7    | 894  | 79    | 10   | 6    | 9    | 106  | 1    | 14   |   |
| Peak Hour Factor   | 0.67 | 0.67  | 0.67 | 0.67 | 0.67 | 0.67  | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |   |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |   |
| Cap, veh/h   | 310  | 2586  | 24   | 294  | 2300 | 203   | 461  | 183  | 275  | 531  | 592  | 501  |   |
| Arrive On Green  | 0.02 | 0.50  | 0.50 | 0.01 | 0.48 | 0.48  | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 |   |
| Sat Flow, veh/h  | 1781 | 5217  | 48   | 1781 | 4778 | 421   | 1781 | 675  | 1013 | 1781 | 1870 | 1585 |   |
| Grp Volume(v), veh/h   | 24   | 632   | 346  | 7    | 636  | 337   | 10   | 0    | 15   | 106  | 1    | 14   |   |
| Grp Sat Flow(s), veh/h/ln  | 1781 | 1702  | 1862 | 1781 | 1702 | 1795  | 1781 | 0    | 1688 | 1781 | 1870 | 1585 |   |
| Q Serve(g_s), s  | 0.8  | 13.8  | 13.8 | 0.2  | 14.3 | 14.4  | 0.5  | 0.0  | 0.8  | 5.0  | 0.0  | 0.7  |   |
| Cycle Q Clear(g_c), s  | 0.8  | 13.8  | 13.8 | 0.2  | 14.3 | 14.4  | 0.5  | 0.0  | 0.8  | 5.0  | 0.0  | 0.7  |   |
| Prop In Lane   | 1.00 |       | 0.03 | 1.00 |      | 0.23  | 1.00 |      | 0.60 | 1.00 |      | 1.00 |   |
| Lane Grp Cap(c), veh/h   | 310  | 1687  | 923  | 294  | 1639 | 864   | 461  | 0    | 459  | 531  | 592  | 501  |   |
| V/C Ratio(X)   | 0.08 | 0.37  | 0.37 | 0.02 | 0.39 | 0.39  | 0.02 | 0.00 | 0.03 | 0.20 | 0.00 | 0.03 |   |
| Avail Cap(c_a), veh/h  | 417  | 1687  | 923  | 427  | 1639 | 864   | 559  | 0    | 459  | 550  | 592  | 501  |   |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |   |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |   |
| Uniform Delay (d), s/veh   | 15.8 | 18.7  | 18.7 | 16.3 | 19.8 | 19.9  | 31.0 | 0.0  | 32.1 | 27.4 | 28.1 | 28.3 |   |
| Incr Delay (d2), s/veh   | 0.0  | 0.6   | 1.2  | 0.0  | 0.7  | 1.3   | 0.0  | 0.0  | 0.1  | 0.1  | 0.0  | 0.1  |   |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |   |
| %ile BackOfQ(95%), veh/ln  | 0.6  | 9.4   | 10.3 | 0.2  | 9.7  | 10.4  | 0.4  | 0.0  | 0.6  | 3.9  | 0.0  | 0.5  |   |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |       |      |      |      |      |      |      |   |
| LnGrp Delay(d), s/veh  | 15.9 | 19.4  | 19.9 | 16.3 | 20.5 | 21.2  | 31.0 | 0.0  | 32.2 | 27.5 | 28.1 | 28.4 |   |
| LnGrp LOS  | B    | B     | B    | B    | C    | C     | A    | C    | C    | C    | C    | C    |   |
| Approach Vol, veh/h  |      | 1002  |      |      | 980  |       | 25   |      |      |      | 121  |      |   |
| Approach Delay, s/veh  |      | 19.5  |      |      | 20.7 |       | 31.7 |      |      |      | 27.6 |      |   |
| Approach LOS   |      | B     |      |      | C    |       | C    |      |      |      | C    |      |   |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |   |
| Phs Duration (G+Y+Rc), s   | 6.8  | 63.5  | 10.8 | 39.0 | 5.0  | 65.2  | 5.4  | 44.4 |      |      |      |      |   |
| Change Period (Y+Rc), s  | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |   |
| Max Green Setting (Gmax), s  | 10.0 | * 49  | 8.0  | 32.6 | 10.0 | * 49  | 8.0  | 32.6 |      |      |      |      |   |
| Max Q Clear Time (g_c+I1), s   | 2.8  | 16.4  | 7.0  | 2.8  | 2.2  | 15.8  | 2.5  | 2.7  |      |      |      |      |   |
| Green Ext Time (p_c), s  | 0.0  | 4.9   | 0.0  | 0.0  | 0.0  | 4.8   | 0.0  | 0.0  |      |      |      |      |   |
| <b>Intersection Summary</b>  |      |       |      |      |      |       |      |      |      |      |      |      |   |
| HCM 6th Ctrl Delay   | 20.7 |       |      |      |      |       |      |      |      |      |      |      |   |
| HCM 6th LOS  | C    |       |      |      |      |       |      |      |      |      |      |      |   |
| <b>Notes</b>   |      |       |      |      |      |       |      |      |      |      |      |      |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |       |      |      |      |      |      |      |   |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 1109 | 352  | 87   | 529  | 102  | 136  |
| Future Vol, veh/h        | 1109 | 352  | 87   | 529  | 102  | 136  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1232 | 391  | 97   | 588  | 113  | 151  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 1623   | 0 | 1857 |
| Stage 1              | -      | -      | -      | - | 1428 |
| Stage 2              | -      | -      | -      | - | 429  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 467    | - | 262  |
| Stage 1              | -      | -      | -      | - | 472  |
| Stage 2              | -      | -      | -      | - | 571  |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 467    | - | 208  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 358  |
| Stage 1              | -      | -      | -      | - | 472  |
| Stage 2              | -      | -      | -      | - | 452  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.1 | 15.3 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 358   | 668   | -   | -   | 467   | -   |
| HCM Lane V/C Ratio    | 0.317 | 0.226 | -   | -   | 0.207 | -   |
| HCM Control Delay (s) | 19.6  | 12    | -   | -   | 14.7  | -   |
| HCM Lane LOS          | C     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 1.3   | 0.9   | -   | -   | 0.8   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 628  | 84   | 28   | 696  | 105  | 28   |
| Future Vol, veh/h        | 628  | 84   | 28   | 696  | 105  | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 661  | 88   | 29   | 733  | 111  | 29   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 749    | 0 | 1056 |
| Stage 1              | -      | -      | -      | - | 705  |
| Stage 2              | -      | -      | -      | - | 351  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 900    | - | 634  |
| Stage 1              | -      | -      | -      | - | 771  |
| Stage 2              | -      | -      | -      | - | 776  |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 900    | - | 613  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 675  |
| Stage 1              | -      | -      | -      | - | 771  |
| Stage 2              | -      | -      | -      | - | 751  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.4 | 11.1 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 675   | 778   | -   | -   | 900   | -   |
| HCM Lane V/C Ratio    | 0.164 | 0.038 | -   | -   | 0.033 | -   |
| HCM Control Delay (s) | 11.4  | 9.8   | -   | -   | 9.1   | -   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.6   | 0.1   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |      |
|--------------------------|--------|--------|--------|------|-------|------|
| Int Delay, s/veh         | 3.8    |        |        |      |       |      |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL   | NBR  |
| Lane Configurations      | ↑↑↑    |        | ↑↑↑    | ↑↑↑  | ↑     | ↑    |
| Traffic Vol, veh/h       | 574    | 153    | 32     | 554  | 118   | 153  |
| Future Vol, veh/h        | 574    | 153    | 32     | 554  | 118   | 153  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None | -     | None |
| Storage Length           | -      | -      | 150    | -    | 0     | 0    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 2     | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0     | -    |
| Peak Hour Factor         | 60     | 60     | 60     | 60   | 60    | 60   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    |
| Mvmt Flow                | 957    | 255    | 53     | 923  | 197   | 255  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      |
| Conflicting Flow All     | 0      | 0      | 1212   | 0    | 1560  | 606  |
| Stage 1                  | -      | -      | -      | -    | 1085  | -    |
| Stage 2                  | -      | -      | -      | -    | 475   | -    |
| Critical Hdwy            | -      | -      | 5.34   | -    | 5.74  | 7.14 |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 6.64  | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 6.04  | -    |
| Follow-up Hdwy           | -      | -      | 3.12   | -    | 3.82  | 3.92 |
| Pot Cap-1 Maneuver       | -      | -      | 459    | -    | 232   | 758  |
| Stage 1                  | -      | -      | -      | -    | 374   | -    |
| Stage 2                  | -      | -      | -      | -    | 541   | -    |
| Platoon blocked, %       | -      | -      | 1      | -    | 1     | 1    |
| Mov Cap-1 Maneuver       | -      | -      | 459    | -    | 205   | 758  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 324   | -    |
| Stage 1                  | -      | -      | -      | -    | 374   | -    |
| Stage 2                  | -      | -      | -      | -    | 479   | -    |
| Approach                 | EB     | WB     | NB     |      |       |      |
| HCM Control Delay, s     | 0      | 0.8    | 20.7   |      |       |      |
| HCM LOS                  |        |        |        | C    |       |      |
| Minor Lane/Major Mvmt    | NBLn1  | NBLn2  | EBT    | EBR  | WBL   | WBT  |
| Capacity (veh/h)         | 324    | 758    | -      | -    | 459   | -    |
| HCM Lane V/C Ratio       | 0.607  | 0.336  | -      | -    | 0.116 | -    |
| HCM Control Delay (s)    | 31.9   | 12.1   | -      | -    | 13.9  | -    |
| HCM Lane LOS             | D      | B      | -      | -    | B     | -    |
| HCM 95th %tile Q(veh)    | 3.8    | 1.5    | -      | -    | 0.4   | -    |

22-1270: Black Mountain Village  
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3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection               |       |       |       |       |      |      |      |      |      |      |      |      |
|----------------------------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|
| Intersection Delay, s/veh  | 11.1  |       |       |       |      |      |      |      |      |      |      |      |
| Intersection LOS           | B     |       |       |       |      |      |      |      |      |      |      |      |
| Movement                   | EBL   | EBT   | EBR   | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations        |       | ↑↑    |       |       | ↑↑   |      |      | ↑↑   |      |      | ↑↑   |      |
| Traffic Vol, veh/h         | 2     | 11    | 0     | 32    | 0    | 140  | 0    | 10   | 19   | 328  | 32   | 0    |
| Future Vol, veh/h          | 2     | 11    | 0     | 32    | 0    | 140  | 0    | 10   | 19   | 328  | 32   | 0    |
| 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 |
| Heavy Vehicles, %          | 2     | 2     | 2     | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                  | 2     | 12    | 0     | 36    | 0    | 156  | 0    | 11   | 21   | 364  | 36   | 0    |
| Number of Lanes            | 0     | 1     | 0     | 0     | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |
| Approach                   | EB    | WB    | NB    | SB    |      |      |      |      |      |      |      |      |
| Opposing Approach          | WB    | EB    | SB    | NB    |      |      |      |      |      |      |      |      |
| Opposing Lanes             | 1     | 1     | 1     | 1     |      |      |      |      |      |      |      |      |
| Conflicting Approach Left  | SB    | NB    | EB    | WB    |      |      |      |      |      |      |      |      |
| Conflicting Lanes Left     | 1     | 1     | 1     | 1     |      |      |      |      |      |      |      |      |
| Conflicting Approach Right | NB    | SB    | WB    | EB    |      |      |      |      |      |      |      |      |
| Conflicting Lanes Right    | 1     | 1     | 1     | 1     |      |      |      |      |      |      |      |      |
| HCM Control Delay          | 8.4   | 9     | 7.7   | 12.5  |      |      |      |      |      |      |      |      |
| HCM LOS                    | A     | A     | A     | B     |      |      |      |      |      |      |      |      |
| Lane                       | NBLn1 | EBLn1 | WBLn1 | SBLn1 |      |      |      |      |      |      |      |      |
| Vol Left, %                | 0%    | 15%   | 19%   | 91%   |      |      |      |      |      |      |      |      |
| Vol Thru, %                | 34%   | 85%   | 0%    | 9%    |      |      |      |      |      |      |      |      |
| Vol Right, %               | 66%   | 0%    | 81%   | 0%    |      |      |      |      |      |      |      |      |
| Sign Control               | Stop  | Stop  | Stop  | Stop  |      |      |      |      |      |      |      |      |
| Traffic Vol by Lane        | 29    | 13    | 172   | 360   |      |      |      |      |      |      |      |      |
| LT Vol                     | 0     | 2     | 32    | 328   |      |      |      |      |      |      |      |      |
| Through Vol                | 10    | 11    | 0     | 32    |      |      |      |      |      |      |      |      |
| RT Vol                     | 19    | 0     | 140   | 0     |      |      |      |      |      |      |      |      |
| Lane Flow Rate             | 32    | 14    | 191   | 400   |      |      |      |      |      |      |      |      |
| Geometry Grp               | 1     | 1     | 1     | 1     |      |      |      |      |      |      |      |      |
| Degree of Util (X)         | 0.04  | 0.021 | 0.241 | 0.514 |      |      |      |      |      |      |      |      |
| Departure Headway (Hd)     | 4.487 | 5.251 | 4.542 | 4.63  |      |      |      |      |      |      |      |      |
| Convergence, Y/N           | Yes   | Yes   | Yes   | Yes   |      |      |      |      |      |      |      |      |
| Cap                        | 794   | 679   | 789   | 776   |      |      |      |      |      |      |      |      |
| Service Time               | 2.537 | 3.301 | 2.573 | 2.665 |      |      |      |      |      |      |      |      |
| HCM Lane V/C Ratio         | 0.04  | 0.021 | 0.242 | 0.515 |      |      |      |      |      |      |      |      |
| HCM Control Delay          | 7.7   | 8.4   | 9     | 12.5  |      |      |      |      |      |      |      |      |
| HCM Lane LOS               | A     | A     | A     | B     |      |      |      |      |      |      |      |      |
| HCM 95th-tile Q            | 0.1   | 0.1   | 0.9   | 3     |      |      |      |      |      |      |      |      |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |   |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 7 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | A |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 19   | 0    | 9    | 18   | 19   | 4    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 19   | 0    | 9    | 18   | 19   | 4    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 28   | 0    | 13   | 26   | 28   | 6    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.2 | 6.7 | 6.8 | 7.4 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 10%   | 83%   |
| Vol Thru, %            | 33%   | 75%   | 0%    | 17%   |
| Vol Right, %           | 67%   | 0%    | 90%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 27    | 4     | 21    | 23    |
| LT Vol                 | 0     | 1     | 2     | 19    |
| Through Vol            | 9     | 3     | 0     | 4     |
| RT Vol                 | 18    | 0     | 19    | 0     |
| Lane Flow Rate         | 40    | 6     | 31    | 34    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.04  | 0.007 | 0.03  | 0.039 |
| Departure Headway (Hd) | 3.622 | 4.134 | 3.541 | 4.192 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 990   | 865   | 1009  | 856   |
| Service Time           | 1.639 | 2.164 | 1.569 | 2.206 |
| HCM Lane V/C Ratio     | 0.04  | 0.007 | 0.031 | 0.04  |
| HCM Control Delay      | 6.8   | 7.2   | 6.7   | 7.4   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0.1   | 0.1   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 12.1 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 41   | 34   | 1    | 15   | 0    | 96   | 0    | 30   | 46   | 92   | 4    | 0    |
| Future Vol, veh/h   | 41   | 34   | 1    | 15   | 0    | 96   | 0    | 30   | 46   | 92   | 4    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 111  | 92   | 3    | 41   | 0    | 259  | 0    | 81   | 124  | 249  | 11   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB   | NB | SB   |
|----------------------------|------|------|----|------|
| Opposing Approach          | WB   | EB   | SB | NB   |
| Opposing Lanes             | 1    | 1    | 1  | 1    |
| Conflicting Approach Left  | SB   | NB   | EB | WB   |
| Conflicting Lanes Left     | 1    | 1    | 1  | 1    |
| Conflicting Approach Right | NB   | SB   | WB | EB   |
| Conflicting Lanes Right    | 1    | 1    | 1  | 1    |
| HCM Control Delay          | 11.9 | 12.1 | 11 | 13.2 |
| HCM LOS                    | B    | B    | B  | B    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 54%   | 14%   | 96%   |
| Vol Thru, %            | 39%   | 45%   | 0%    | 4%    |
| Vol Right, %           | 61%   | 1%    | 86%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 76    | 76    | 111   | 96    |
| LT Vol                 | 0     | 41    | 15    | 92    |
| Through Vol            | 30    | 34    | 0     | 4     |
| RT Vol                 | 46    | 1     | 96    | 0     |
| Lane Flow Rate         | 205   | 205   | 300   | 259   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.311 | 0.334 | 0.429 | 0.423 |
| Departure Headway (Hd) | 5.442 | 5.861 | 5.145 | 5.865 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 655   | 610   | 696   | 610   |
| Service Time           | 3.513 | 3.933 | 3.21  | 3.931 |
| HCM Lane V/C Ratio     | 0.313 | 0.336 | 0.431 | 0.425 |
| HCM Control Delay      | 11    | 11.9  | 12.1  | 13.2  |
| HCM Lane LOS           | B     | B     | B     | B     |
| HCM 95th-tile Q        | 1.3   | 1.5   | 2.2   | 2.1   |



22-1270: Black Mountain Village  
2024 Total AM Mitigated

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔    |      | ↔    |      |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 0    | 352  | 6    | 10   | 173  | 33   | 0    | 0    | 0    | 17   | 0    | 0    |
| Future Vol, veh/h        | 0    | 352  | 6    | 10   | 173  | 33   | 0    | 0    | 0    | 17   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 391  | 7    | 11   | 192  | 37   | 0    | 0    | 0    | 19   | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 229    | 0      | 398    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1338   | -      | 1159   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1338   | -      | 1159   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.4 | 11.6 |
| HCM LOS              | B  |     |      |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL  | WBT | WBR | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|------|-----|-----|-------|-----|-----|
| Capacity (veh/h)      | 1338 | -   | -   | 1159 | -   | -   | 562   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.01 | -   | -   | 0.034 | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 8.1  | 0   | -   | 11.6  | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A    | A   | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0    | -   | -   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔   |      | ↔    |      | ↔    |      |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 0    | 31   | 9    | 9    | 21   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 31   | 9    | 9    | 21   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 69   | 69   | 69   | 69   | 90   | 69   | 90   | 69   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 45   | 13   | 13   | 30   | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 77     | 0      | 58     |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1521   | -      | 1545   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1521   | -      | 1545   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 1.1 | 9.2 |
| HCM LOS              | A  |     |     |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-----|-----|-------|-----|-----|
| Capacity (veh/h)      | 1521 | -   | -   | 1545  | -   | -   | 886   | -   | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.008 | -   | -   | 0.038 | -   | -   |
| HCM Control Delay (s) | 0    | -   | -   | 7.3   | 0   | -   | 9.2   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 0    | 165  | 7    | 16   | 110  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 165  | 7    | 16   | 110  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 38   | 38   | 38   | 38   | 90   | 38   | 90   | 38   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 434  | 18   | 42   | 289  | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 336    | 0      | 452    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1222   | -      | 1107   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1222   | -      | 1107   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.9 | 14.2 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1222 | -   | -   | 1107  | -   | -   | 424   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.038 | -   | -   | 0.079 |
| HCM Control Delay (s) | 0    | -   | -   | 8.4   | 0   | -   | 14.2  |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0.1   | -   | -   | 0.3   |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      |      |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 4    | 375  | 0    | 0    | 227  | 55   | 2    | 0    | 60   | 24   | 0    | 8    |
| Future Vol, veh/h        | 4    | 375  | 0    | 0    | 227  | 55   | 2    | 0    | 60   | 24   | 0    | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 417  | 0    | 0    | 252  | 61   | 2    | 0    | 67   | 27   | 0    | 9    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 313    | 0      | -      | 712    |
| Stage 1              | -      | -      | -      | 425    |
| Stage 2              | -      | -      | -      | 287    |
| Critical Hdwy        | 4.13   | -      | -      | 7.33   |
| Critical Hdwy Stg 1  | -      | -      | -      | 6.53   |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.13   |
| Follow-up Hdwy       | 2.219  | -      | -      | 3.519  |
| Pot Cap-1 Maneuver   | *1337  | -      | 0      | *594   |
| Stage 1              | -      | 0      | 0      | *578   |
| Stage 2              | -      | 0      | 0      | *843   |
| Platoon blocked, %   | 1      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | *1337  | -      | -      | *586   |
| Mov Cap-2 Maneuver   | -      | -      | -      | *586   |
| Stage 1              | -      | -      | -      | *576   |
| Stage 2              | -      | -      | -      | *834   |

| Approach             | EB  | WB | NB | SB  |
|----------------------|-----|----|----|-----|
| HCM Control Delay, s | 0.1 | 0  | 10 | 9.7 |
| HCM LOS              |     |    | B  | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 789   | *1337 | -   | -   | -   | 797   |
| HCM Lane V/C Ratio    | 0.087 | 0.003 | -   | -   | -   | 0.045 |
| HCM Control Delay (s) | 10    | 7.7   | 0   | -   | -   | 9.7   |
| HCM Lane LOS          | B     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      | ↕    |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 4    | 68   | 0    | 0    | 91   | 49   | 3    | 0    | 20   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 68   | 0    | 0    | 91   | 49   | 3    | 0    | 20   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 78   | 78   | 78   | 78   | 90   | 78   | 90   | 78   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 87   | 0    | 0    | 117  | 54   | 4    | 0    | 26   | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 171    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1525   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1525   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB  | SB |
|----------------------|-----|----|-----|----|
| HCM Control Delay, s | 0.4 | 0  | 8.7 | 9  |
| HCM LOS              |     |    | A   | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 990   | 1525  | -   | -   | -   | 927   |
| HCM Lane V/C Ratio    | 0.03  | 0.003 | -   | -   | -   | 0.03  |
| HCM Control Delay (s) | 8.7   | 7.4   | 0   | -   | -   | 9     |
| HCM Lane LOS          | A     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      |      | ↕    |      |      | ↕    |      |      | ↕↕   |      |      |
| Traffic Vol, veh/h       | 4    | 202  | 0    | 0    | 185  | 49   | 3    | 0    | 63   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 202  | 0    | 0    | 185  | 49   | 3    | 0    | 63   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 39   | 39   | 39   | 39   | 90   | 39   | 90   | 39   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 518  | 0    | 0    | 474  | 54   | 8    | 0    | 162  | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 528    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1230   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1230   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.1 | 0  | 11.9 | 14.3 |
| HCM LOS              |     |    | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 687   | 1230  | -   | -   | -   | 413   |
| HCM Lane V/C Ratio    | 0.246 | 0.004 | -   | -   | -   | 0.067 |
| HCM Control Delay (s) | 11.9  | 7.9   | 0   | -   | -   | 14.3  |
| HCM Lane LOS          | B     | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 1     | 0     | -   | -   | -   | 0.2   |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 459  | 0    | 0    | 283  | 0    | 22   |
| Future Vol, veh/h        | 459  | 0    | 0    | 283  | 0    | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 510  | 0    | 0    | 314  | 0    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 510    | 0 | 824 255     |
| Stage 1              | -      | -      | -      | - | 510 -       |
| Stage 2              | -      | -      | -      | - | 314 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1053   | - | *557 745    |
| Stage 1              | -      | -      | -      | - | *569 -      |
| Stage 2              | -      | -      | -      | - | *818 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1 -         |
| Mov Cap-1 Maneuver   | -      | -      | 1053   | - | *557 745    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *557 -      |
| Stage 1              | -      | -      | -      | - | *569 -      |
| Stage 2              | -      | -      | -      | - | *818 -      |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 10 |
| HCM LOS              |    |    | B  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 745   | -   | -   | 1053 | -   |
| HCM Lane V/C Ratio    | 0.033 | -   | -   | -    | -   |
| HCM Control Delay (s) | 10    | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0    | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 105  | 1    | 1    | 142  | 0    | 19   |
| Future Vol, veh/h        | 105  | 1    | 1    | 142  | 0    | 19   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 131  | 1    | 1    | 178  | 0    | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 132    | 0 | 312 66      |
| Stage 1              | -      | -      | -      | - | 132 -       |
| Stage 2              | -      | -      | -      | - | 180 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1452   | - | *914 985    |
| Stage 1              | -      | -      | -      | - | *881 -      |
| Stage 2              | -      | -      | -      | - | *917 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1 -         |
| Mov Cap-1 Maneuver   | -      | -      | 1452   | - | *913 985    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *913 -      |
| Stage 1              | -      | -      | -      | - | *881 -      |
| Stage 2              | -      | -      | -      | - | *916 -      |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.1 | 8.7 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 985   | -   | -   | 1452  | -   |
| HCM Lane V/C Ratio    | 0.024 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.7   | -   | -   | 7.5   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 284  | 0    | 0    | 235  | 3    | 29   |
| Future Vol, veh/h        | 284  | 0    | 0    | 235  | 3    | 29   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 728  | 0    | 0    | 603  | 8    | 74   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 728    | 0      |
| Stage 1              | -      | -      | -      | 728    |
| Stage 2              | -      | -      | -      | 603    |
| Critical Hdwy        | -      | -      | 4.13   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83   |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43   |
| Follow-up Hdwy       | -      | -      | 2.219  | -      |
| Pot Cap-1 Maneuver   | -      | -      | 873    | -      |
| Stage 1              | -      | -      | -      | 440    |
| Stage 2              | -      | -      | -      | 767    |
| Platoon blocked, %   | -      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 873    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | 217    |
| Stage 1              | -      | -      | -      | 440    |
| Stage 2              | -      | -      | -      | 767    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 12.9 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-----|-----|
| Capacity (veh/h)      | 537   | -   | -   | 873 | -   |
| HCM Lane V/C Ratio    | 0.153 | -   | -   | -   | -   |
| HCM Control Delay (s) | 12.9  | -   | -   | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | A   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0   | -   |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 28   | 10   | 48   | 76   | 4    | 5    | 24   | 295  | 70   | 4    | 552  | 21   |
| Future Vol, veh/h        | 28   | 10   | 48   | 76   | 4    | 5    | 24   | 295  | 70   | 4    | 552  | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 31   | 11   | 53   | 84   | 4    | 6    | 27   | 328  | 78   | 4    | 613  | 23   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 853    | 1093   | 318    | 641    |
| Stage 1              | 633    | 633    | -      | 382    |
| Stage 2              | 220    | 460    | -      | 259    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *469   | *324   | 578    | *662   |
| Stage 1              | *366   | *472   | -      | *879   |
| Stage 2              | *879   | *803   | -      | *466   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *445   | *308   | 578    | *563   |
| Mov Cap-2 Maneuver   | *445   | *308   | -      | *563   |
| Stage 1              | *349   | *471   | -      | *838   |
| Stage 2              | *829   | *766   | -      | *607   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 13.4 | 12.4 | 0.7 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 584   | -   | -   | 445   | 502   | 563   | 532   | *1453 | -   | -   |
| HCM Lane V/C Ratio    | 0.046 | -   | -   | 0.07  | 0.128 | 0.15  | 0.019 | 0.003 | -   | -   |
| HCM Control Delay (s) | 11.5  | -   | -   | 13.7  | 13.2  | 12.5  | 11.9  | 7.5   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.2   | 0.4   | 0.5   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |                           |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.7                       |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL                       | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗ ↘ ↖ ↗ ↘ ↖ ↗ ↘ ↖ ↗ ↘ ↖ |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 47                        | 19   | 25   | 71   | 20   | 9    | 30   | 392  | 56   | 9    | 215  | 35   |
| Future Vol, veh/h        | 47                        | 19   | 25   | 71   | 20   | 9    | 30   | 392  | 56   | 9    | 215  | 35   |
| Conflicting Peds, #/hr   | 0                         | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop                      | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -                         | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155                       | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -                         | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -                         | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75                        | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2                         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 63                        | 25   | 33   | 95   | 27   | 12   | 40   | 523  | 75   | 12   | 287  | 47   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 690    | 1013   | 167    | 754    |
| Stage 1              | 335    | 335    | -      | 603    |
| Stage 2              | 355    | 678    | -      | 151    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | 358    | 237    | 721    | 325    |
| Stage 1              | 585    | 641    | -      | 439    |
| Stage 2              | 613    | 450    | -      | 798    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 308    | 223    | 721    | 270    |
| Mov Cap-2 Maneuver   | 308    | 223    | -      | 270    |
| Stage 1              | 556    | 633    | -      | 417    |
| Stage 2              | 540    | 428    | -      | 722    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 18.2 | 23.4 | 0.6 | 0.3 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 810   | -   | -   | 308   | 367   | 270   | 304   | 975   | -   | -   |
| HCM Lane V/C Ratio    | 0.049 | -   | -   | 0.203 | 0.16  | 0.351 | 0.127 | 0.012 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 19.6  | 16.7  | 25.4  | 18.6  | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | C     | D     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.7   | 0.6   | 1.5   | 0.4   | 0     | -   | -   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |                           |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1                       |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL                       | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗ ↘ ↖ ↗ ↘ ↖ ↗ ↘ ↖ ↗ ↘ ↖ |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 11                        | 6    | 28   | 53   | 6    | 9    | 25   | 238  | 51   | 2    | 243  | 22   |
| Future Vol, veh/h        | 11                        | 6    | 28   | 53   | 6    | 9    | 25   | 238  | 51   | 2    | 243  | 22   |
| Conflicting Peds, #/hr   | 0                         | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop                      | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -                         | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155                       | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -                         | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -                         | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89                        | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2                         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 12                        | 7    | 31   | 60   | 7    | 10   | 28   | 267  | 57   | 2    | 273  | 25   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 483    | 670    | 149    | 440    |
| Stage 1              | 290    | 290    | -      | 323    |
| Stage 2              | 193    | 380    | -      | 117    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *740   | 534    | 740    | *793   |
| Stage 1              | *627   | 671    | -      | *902   |
| Stage 2              | *902   | 804    | -      | *836   |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *707   | 516    | 740    | *732   |
| Mov Cap-2 Maneuver   | *707   | 516    | -      | *732   |
| Stage 1              | *606   | 670    | -      | *873   |
| Stage 2              | *856   | 777    | -      | *791   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.4 | 10.3 | 0.8 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 841   | -   | -   | 707   | 687   | 732   | 752   | *1492 | -   | -   |
| HCM Lane V/C Ratio    | 0.033 | -   | -   | 0.017 | 0.056 | 0.081 | 0.022 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 10.2  | 10.5  | 10.4  | 9.9   | 7.4   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.2   | 0.3   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM Mitigated

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 25   | 3    | 130  | 7    | 1    | 0    | 91   | 365  | 11   | 0    | 669  | 6    |
| Future Vol, veh/h        | 25   | 3    | 130  | 7    | 1    | 0    | 91   | 365  | 11   | 0    | 669  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | 0    | -    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | 0    | -    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 28   | 3    | 144  | 8    | 1    | 0    | 101  | 406  | 12   | 0    | 743  | 7    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1112   | 1367   | 375    | 913    |
| Stage 1              | 747    | 747    | -      | 614    |
| Stage 2              | 365    | 620    | -      | 299    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 299    | 194    | 532    | 399    |
| Stage 1              | 298    | 418    | -      | 566    |
| Stage 2              | 856    | 620    | -      | 628    |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | 253    | 156    | 532    | 243    |
| Mov Cap-2 Maneuver   | 253    | 156    | -      | 243    |
| Stage 1              | 240    | 418    | -      | 455    |
| Stage 2              | 687    | 498    | -      | 454    |

| Approach             | EB   | WB   | NB  | SB |
|----------------------|------|------|-----|----|
| HCM Control Delay, s | 18.7 | 21.5 | 2.7 | 0  |
| HCM LOS              | C    | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h)      | 516   | -   | -   | 436        | 227   | 990 | -   |
| HCM Lane V/C Ratio    | 0.196 | -   | -   | 0.403      | 0.039 | -   | -   |
| HCM Control Delay (s) | 13.7  | -   | -   | 18.7       | 21.5  | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | C          | C     | A   | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 1.9        | 0.1   | 0   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔↔↔  |      |      |      |
| Traffic Vol, veh/h       | 12   | 1    | 124  | 8    | 1    | 3    | 99   | 462  | 9    | 3    | 297  | 9    |
| Future Vol, veh/h        | 12   | 1    | 124  | 8    | 1    | 3    | 99   | 462  | 9    | 3    | 297  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | 185  | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | 0    | -    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | 0    | -    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 1    | 170  | 11   | 1    | 4    | 136  | 633  | 12   | 4    | 407  | 12   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 947    | 1338   | 210    | 1082   |
| Stage 1              | 421    | 421    | -      | 911    |
| Stage 2              | 526    | 917    | -      | 171    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 275    | 152    | 677    | 229    |
| Stage 1              | 495    | 587    | -      | 229    |
| Stage 2              | 459    | 349    | -      | 748    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 231    | 123    | 677    | 145    |
| Mov Cap-2 Maneuver   | 231    | 123    | -      | 145    |
| Stage 1              | 404    | 583    | -      | 187    |
| Stage 2              | 370    | 285    | -      | 555    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 14.6 | 27.7 | 1.9 | 0.1 |
| HCM LOS              | B    | D    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 739   | -   | -   | 563        | 175   | 579   | -   |
| HCM Lane V/C Ratio    | 0.184 | -   | -   | 0.333      | 0.094 | 0.007 | -   |
| HCM Control Delay (s) | 11    | -   | -   | 14.6       | 27.7  | 11.3  | -   |
| HCM Lane LOS          | B     | -   | -   | B          | D     | B     | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 1.5        | 0.3   | 0     | -   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      | ↔    |      |      | ↔    |      |      |      |
| Traffic Vol, veh/h       | 6    | 0    | 74   | 11   | 0    | 7    | 88   | 299  | 7    | 3    | 319  | 1    |
| Future Vol, veh/h        | 6    | 0    | 74   | 11   | 0    | 7    | 88   | 299  | 7    | 3    | 319  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 0    | 84   | 13   | 0    | 8    | 100  | 340  | 8    | 3    | 363  | 1    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 706    | 918    | 182    | 695    |
| Stage 1              | 370    | 370    | -      | 544    |
| Stage 2              | 336    | 548    | -      | 151    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 478    | 337    | 706    | 486    |
| Stage 1              | 536    | 619    | -      | 553    |
| Stage 2              | 785    | 616    | -      | 769    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 427    | 293    | 706    | 385    |
| Mov Cap-2 Maneuver   | 427    | 293    | -      | 385    |
| Stage 1              | 467    | 617    | -      | 482    |
| Stage 2              | 679    | 537    | -      | 675    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 11.2 | 12.7 | 2.3 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 784   | -   | -   | 673   | 491   | 975   | -   | -   |
| HCM Lane V/C Ratio    | 0.128 | -   | -   | 0.135 | 0.042 | 0.003 | -   | -   |
| HCM Control Delay (s) | 10.3  | -   | -   | 11.2  | 12.7  | 8.7   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.5   | 0.1   | 0     | -   | -   |

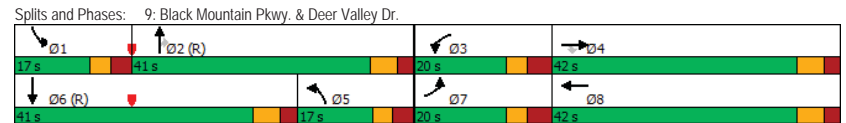
Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

22-1270: Black Mountain Village  
2024 Total AM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 92    | 712   | 453   | 259   | 191   | 357   | 329   | 270   | 89    | 651   |
| Future Volume (vph)  | 92    | 712   | 453   | 259   | 191   | 357   | 329   | 270   | 89    | 651   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (%)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (s)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 68 (57%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated





22-1270: Black Mountain Village  
2024 Total PM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔↔    |
| Traffic Volume (vph) | 69    | 401   | 218   | 265   | 424   | 249   | 413   | 213   | 77    | 300   |
| Future Volume (vph)  | 69    | 401   | 218   | 265   | 424   | 249   | 413   | 213   | 77    | 300   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     |       | 1     | 6     | 3     | 8     |       | 7     | 4     |
| Permitted Phases     |       |       | 2     |       |       |       |       | 8     |       |       |
| Detector Phase       | 5     | 2     | 2     | 1     | 6     | 3     | 8     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |       |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 13.1  | 42.6  | 42.6  | 19.0  | 48.5  | 18.0  | 45.3  | 45.3  | 13.1  | 40.4  |
| Total Split (%)      | 10.9% | 35.5% | 35.5% | 15.8% | 40.4% | 15.0% | 37.8% | 37.8% | 10.9% | 33.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   |

Intersection Summary

Cycle Length: 120

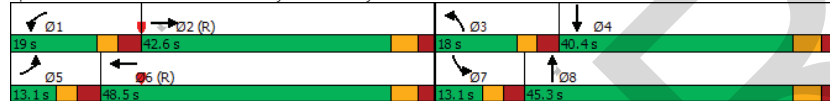
Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total School PM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL  | NBT   | NBR   | SBL  | SBT   |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔     | ↔↔    | ↔    | ↔↔    | ↔     | ↔    | ↔↔    |
| Traffic Volume (vph) | 104   | 379   | 275   | 241   | 226   | 323  | 243   | 222   | 49   | 318   |
| Future Volume (vph)  | 104   | 379   | 275   | 241   | 226   | 323  | 243   | 222   | 49   | 318   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot | NA    | Perm  | Prot | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5    | 2     |       | 1    | 6     |
| Permitted Phases     |       |       | 4     |       |       |      |       | 2     |      |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5    | 2     | 2     | 1    | 6     |
| Switch Phase         |       |       |       |       |       |      |       |       |      |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 3.9  | 15.0  | 15.0  | 2.9  | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 21.5  | 41.5  | 10.0 | 40.4  | 40.4  | 9.0  | 40.4  |
| Total Split (s)      | 13.0  | 41.5  | 41.5  | 27.5  | 56.0  | 10.0 | 42.0  | 42.0  | 9.0  | 41.0  |
| Total Split (%)      | 10.8% | 34.6% | 34.6% | 22.9% | 46.7% | 8.3% | 35.0% | 35.0% | 7.5% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0  | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1  | 2.4   | 2.4   | 3.1  | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1  | 6.4   | 6.4   | 6.1  | 6.4   |
| Lead/Lag             | Lag   | Lag   | Lag   | Lead  | Lead  | Lag  | Lag   | Lag   | Lead | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes  | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None | C-Max | C-Max | None | C-Max |

Intersection Summary

Cycle Length: 120

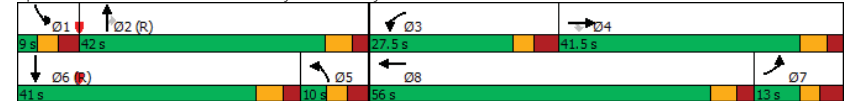
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2024 Total AM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement  | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |  |
|---|------|------|------|------|------|-------|------|------|------|------|------|------|--|
| Lane Configurations   | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |  |
| Traffic Volume (veh/h)  | 92   | 712  | 453  | 259  | 191  | 46    | 357  | 329  | 270  | 89   | 651  | 68   |  |
| Future Volume (veh/h)   | 92   | 712  | 453  | 259  | 191  | 46    | 357  | 329  | 270  | 89   | 651  | 68   |  |
| Initial Q (Ob), veh   | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A_pbT)   | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |  |
| Parking Bus, Adj  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Work Zone On Approach   | No   |      | No   |      | No   |       | No   |      | No   |      | No   |      |  |
| Adj Sat Flow, veh/h/ln  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |  |
| Adj Flow Rate, veh/h  | 102  | 791  | 0    | 288  | 212  | 38    | 397  | 366  | 0    | 99   | 723  | 57   |  |
| Peak Hour Factor  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Percent Heavy Veh, %  | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Cap, veh/h  | 156  | 1011 |      | 344  | 1106 | 191   | 688  | 2279 |      | 151  | 1392 | 109  |  |
| Arrive On Green   | 0.01 | 0.07 | 0.00 | 0.10 | 0.25 | 0.25  | 0.33 | 0.75 | 0.00 | 0.04 | 0.29 | 0.29 |  |
| Sat Flow, veh/h   | 3456 | 5106 | 1585 | 3456 | 4383 | 755   | 3456 | 5106 | 1585 | 3456 | 4828 | 378  |  |
| Grp Volume(v), veh/h  | 102  | 791  | 0    | 288  | 163  | 87    | 397  | 366  | 0    | 99   | 509  | 271  |  |
| Grp Sat Flow(s),veh/h/ln  | 1728 | 1702 | 1585 | 1728 | 1702 | 1734  | 1728 | 1702 | 1585 | 1728 | 1702 | 1802 |  |
| Q Serve(g_s), s   | 3.5  | 18.3 | 0.0  | 9.8  | 4.5  | 4.8   | 11.4 | 2.5  | 0.0  | 3.4  | 15.0 | 15.1 |  |
| Cycle Q Clear(g_c), s   | 3.5  | 18.3 | 0.0  | 9.8  | 4.5  | 4.8   | 11.4 | 2.5  | 0.0  | 3.4  | 15.0 | 15.1 |  |
| Prop In Lane  | 1.00 |      | 1.00 | 1.00 |      | 0.44  | 1.00 |      | 1.00 | 1.00 |      | 0.21 |  |
| Lane Grp Cap(c), veh/h  | 156  | 1011 |      | 344  | 859  | 438   | 688  | 2279 |      | 151  | 982  | 520  |  |
| V/C Ratio(X)  | 0.65 | 0.78 |      | 0.84 | 0.19 | 0.20  | 0.58 | 0.16 |      | 0.66 | 0.52 | 0.52 |  |
| Avail Cap(c_a), veh/h   | 389  | 1511 |      | 389  | 1007 | 513   | 688  | 2279 |      | 314  | 982  | 520  |  |
| HCM Platoon Ratio   | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00  | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 |  |
| Upstream Filter(I)  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |  |
| Uniform Delay (d), s/veh  | 58.2 | 53.5 | 0.0  | 53.1 | 35.2 | 35.3  | 35.9 | 8.8  | 0.0  | 56.5 | 35.7 | 35.8 |  |
| Incr Delay (d2), s/veh  | 1.7  | 0.8  | 0.0  | 12.2 | 0.0  | 0.1   | 0.8  | 0.2  | 0.0  | 1.8  | 2.0  | 3.7  |  |
| Initial Q Delay(d3),s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(95%),veh/ln  | 2.9  | 13.2 | 0.0  | 8.4  | 3.4  | 3.7   | 7.9  | 1.7  | 0.0  | 2.7  | 10.7 | 11.6 |  |
| Unsig. Movement Delay, s/veh  |      |      |      |      |      |       |      |      |      |      |      |      |  |
| LnGrp Delay(d),s/veh  | 59.9 | 54.3 | 0.0  | 65.2 | 35.3 | 35.4  | 36.7 | 8.9  | 0.0  | 58.3 | 37.7 | 39.5 |  |
| LnGrp LOS   | E    | D    |      | E    | D    | D     | D    | A    |      | E    | D    | D    |  |
| Approach Vol, veh/h   |      | 893  |      |      | 538  |       |      | 763  |      |      | 879  |      |  |
| Approach Delay, s/veh   |      | 54.9 |      |      | 51.3 |       |      | 23.4 |      |      | 40.6 |      |  |
| Approach LOS  |      | D    |      |      | D    |       |      | C    |      |      | D    |      |  |
| Timer - Assigned Phs  | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |  |
| Phs Duration (G+Y+Rc), s  | 11.3 | 60.0 | 18.4 | 30.3 | 30.3 | 41.0  | 11.9 | 36.8 |      |      |      |      |  |
| Change Period (Y+Rc), s   | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |      |      |      |      |  |
| Max Green Setting (Gmax), s   | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | * 35  | 13.5 | 35.5 |      |      |      |      |  |
| Max Q Clear Time (g_c+I1), s  | 5.4  | 4.5  | 11.8 | 20.3 | 13.4 | 17.1  | 5.5  | 6.8  |      |      |      |      |  |
| Green Ext Time (p_c), s   | 0.1  | 1.7  | 0.1  | 3.5  | 0.0  | 3.3   | 0.1  | 1.0  |      |      |      |      |  |
| Intersection Summary  |      |      |      |      |      |       |      |      |      |      |      |      |  |
| HCM 6th Ctrl Delay  |      |      |      |      |      |       | 42.4 |      |      |      |      |      |  |
| HCM 6th LOS   |      |      |      |      |      |       | D    |      |      |      |      |      |  |
| Notes   |      |      |      |      |      |       |      |      |      |      |      |      |  |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.<br>Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. |      |      |      |      |      |       |      |      |      |      |      |      |  |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement  | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |  |
|---|------|------|------|------|------|------|------|------|------|------|------|------|--|
| Lane Configurations   | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |  |
| Traffic Volume (veh/h)  | 69   | 401  | 218  | 265  | 424  | 87   | 249  | 413  | 213  | 77   | 300  | 52   |  |
| Future Volume (veh/h)   | 69   | 401  | 218  | 265  | 424  | 87   | 249  | 413  | 213  | 77   | 300  | 52   |  |
| Initial Q (Ob), veh   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A_pbT)   | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |  |
| Parking Bus, Adj  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Work Zone On Approach   | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |  |
| Adj Sat Flow, veh/h/ln  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |  |
| Adj Flow Rate, veh/h  | 79   | 461  | 0    | 305  | 487  | 75   | 286  | 475  | 0    | 89   | 345  | 45   |  |
| Peak Hour Factor  | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |  |
| Percent Heavy Veh, %  | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Cap, veh/h  | 134  | 1540 |      | 358  | 1641 | 248  | 342  | 1748 |      | 138  | 1299 | 166  |  |
| Arrive On Green   | 0.01 | 0.10 | 0.00 | 0.10 | 0.37 | 0.37 | 0.03 | 0.11 | 0.00 | 0.04 | 0.28 | 0.28 |  |
| Sat Flow, veh/h   | 3456 | 5106 | 1585 | 3456 | 4476 | 676  | 3456 | 5106 | 1585 | 3456 | 4585 | 585  |  |
| Grp Volume(v), veh/h  | 79   | 461  | 0    | 305  | 368  | 194  | 286  | 475  | 0    | 89   | 254  | 136  |  |
| Grp Sat Flow(s),veh/h/ln  | 1728 | 1702 | 1585 | 1728 | 1702 | 1749 | 1728 | 1702 | 1585 | 1728 | 1702 | 1765 |  |
| Q Serve(g_s), s   | 2.7  | 10.1 | 0.0  | 10.4 | 9.2  | 9.5  | 9.9  | 10.2 | 0.0  | 3.0  | 6.9  | 7.2  |  |
| Cycle Q Clear(g_c), s   | 2.7  | 10.1 | 0.0  | 10.4 | 9.2  | 9.5  | 9.9  | 10.2 | 0.0  | 3.0  | 6.9  | 7.2  |  |
| Prop In Lane  | 1.00 |      | 1.00 | 1.00 |      | 0.39 | 1.00 |      | 1.00 | 1.00 |      | 0.33 |  |
| Lane Grp Cap(c), veh/h  | 134  | 1540 |      | 358  | 1248 | 641  | 342  | 1748 |      | 138  | 964  | 500  |  |
| V/C Ratio(X)  | 0.59 | 0.30 |      | 0.85 | 0.30 | 0.30 | 0.84 | 0.27 |      | 0.64 | 0.26 | 0.27 |  |
| Avail Cap(c_a), veh/h   | 190  | 1540 |      | 360  | 1248 | 641  | 343  | 1748 |      | 202  | 964  | 500  |  |
| HCM Platoon Ratio   | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |  |
| Upstream Filter(I)  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |  |
| Uniform Delay (d), s/veh  | 58.3 | 42.3 | 0.0  | 52.9 | 27.0 | 27.1 | 57.1 | 39.5 | 0.0  | 56.8 | 33.3 | 33.4 |  |
| Incr Delay (d2), s/veh  | 1.5  | 0.5  | 0.0  | 16.7 | 0.6  | 1.2  | 15.4 | 0.4  | 0.0  | 1.9  | 0.7  | 1.3  |  |
| Initial Q Delay(d3),s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(95%),veh/ln  | 2.2  | 8.2  | 0.0  | 9.1  | 7.0  | 7.5  | 9.1  | 8.3  | 0.0  | 2.5  | 5.3  | 5.9  |  |
| Unsig. Movement Delay, s/veh  |      |      |      |      |      |      |      |      |      |      |      |      |  |
| LnGrp Delay(d),s/veh  | 59.8 | 42.8 | 0.0  | 69.6 | 27.6 | 28.3 | 72.5 | 39.9 | 0.0  | 58.6 | 34.0 | 34.7 |  |
| LnGrp LOS   | E    | D    |      | E    | C    | C    | E    | D    |      | E    | C    | C    |  |
| Approach Vol, veh/h   |      | 540  |      |      | 867  |      |      | 761  |      |      | 479  |      |  |
| Approach Delay, s/veh   |      | 45.3 |      |      | 42.5 |      |      | 52.2 |      |      | 38.8 |      |  |
| Approach LOS  |      | D    |      |      | D    |      |      | D    |      |      | D    |      |  |
| Timer - Assigned Phs  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |  |
| Phs Duration (G+Y+Rc), s  | 18.9 | 42.7 | 18.0 | 40.4 | 11.1 | 50.5 | 10.9 | 47.5 |      |      |      |      |  |
| Change Period (Y+Rc), s   | 6.5  | 6.5  | 6.1  | 6.4  | 6.5  | 6.5  | 6.1  | 6.4  |      |      |      |      |  |
| Max Green Setting (Gmax), s   | 12.5 | 36.1 | 11.9 | 34.0 | 6.6  | 42.0 | 7.0  | 38.9 |      |      |      |      |  |
| Max Q Clear Time (g_c+I1), s  | 12.4 | 12.1 | 11.9 | 9.2  | 4.7  | 11.5 | 5.0  | 12.2 |      |      |      |      |  |
| Green Ext Time (p_c), s   | 0.0  | 2.2  | 0.0  | 1.6  | 0.0  | 2.5  | 0.0  | 2.3  |      |      |      |      |  |
| Intersection Summary  |      |      |      |      |      |      |      |      |      |      |      |      |  |
| HCM 6th Ctrl Delay  |      |      |      |      |      |      | 45.2 |      |      |      |      |      |  |
| HCM 6th LOS   |      |      |      |      |      |      | D    |      |      |      |      |      |  |
| Notes   |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. |      |      |      |      |      |      |      |      |      |      |      |      |  |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|------|------|------|------|-------|------|------|------|-------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    |
| Traffic Volume (veh/h)       | 104  | 379  | 275  | 241  | 226  | 48    | 323  | 243  | 222  | 49    | 318  | 37   |
| Future Volume (veh/h)        | 104  | 379  | 275  | 241  | 226  | 48    | 323  | 243  | 222  | 49    | 318  | 37   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00  |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |       | No   |      | No   |       | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 151  | 549  | 0    | 349  | 328  | 53    | 468  | 352  | 0    | 71    | 461  | 41   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69  | 0.69 | 0.69 | 0.69 | 0.69  | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h                   | 531  | 707  |      | 412  | 464  | 73    | 826  | 2582 |      | 84    | 1378 | 121  |
| Arrive On Green              | 0.26 | 0.23 | 0.00 | 0.12 | 0.10 | 0.10  | 0.08 | 0.17 | 0.00 | 0.02  | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4450 | 699   | 3456 | 5106 | 1585 | 3456  | 4779 | 420  |
| Grp Volume(v), veh/h         | 151  | 549  | 0    | 349  | 249  | 132   | 468  | 352  | 0    | 71    | 327  | 175  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1745  | 1728 | 1702 | 1585 | 1728  | 1702 | 1795 |
| Q Serve(g_s), s              | 4.2  | 12.1 | 0.0  | 11.9 | 8.5  | 8.8   | 15.7 | 7.1  | 0.0  | 2.5   | 9.1  | 9.2  |
| Cycle Q Clear(g_c), s        | 4.2  | 12.1 | 0.0  | 11.9 | 8.5  | 8.8   | 15.7 | 7.1  | 0.0  | 2.5   | 9.1  | 9.2  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.40  | 1.00 |      | 1.00 | 1.00  |      | 0.23 |
| Lane Grp Cap(c), veh/h       | 531  | 707  |      | 412  | 355  | 182   | 826  | 2582 |      | 84    | 982  | 518  |
| V/C Ratio(X)                 | 0.28 | 0.78 |      | 0.85 | 0.70 | 0.73  | 0.57 | 0.14 |      | 0.85  | 0.33 | 0.34 |
| Avail Cap(c_a), veh/h        | 531  | 1489 |      | 605  | 1404 | 720   | 826  | 2582 |      | 84    | 982  | 518  |
| HCM Platoon Ratio            | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00  | 0.33 | 0.33 | 0.33 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 39.3 | 44.4 | 0.0  | 51.8 | 51.9 | 52.1  | 49.3 | 27.7 | 0.0  | 58.3  | 33.6 | 33.7 |
| Incr Delay (d2), s/veh       | 0.1  | 0.7  | 0.0  | 5.0  | 0.9  | 2.1   | 0.6  | 0.1  | 0.0  | 50.6  | 0.9  | 1.8  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 3.2  | 8.3  | 0.0  | 9.2  | 6.6  | 7.1   | 11.8 | 5.5  | 0.0  | 3.0   | 7.0  | 7.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |      |      |      |       |      |      |
| LnGrp Delay(d), s/veh        | 39.4 | 45.1 | 0.0  | 56.8 | 52.9 | 54.2  | 49.9 | 27.8 | 0.0  | 108.9 | 34.5 | 35.4 |
| LnGrp LOS                    | D    | D    |      | E    | D    | D     | D    | C    |      | F     | C    | D    |
| Approach Vol, veh/h          |      | 700  |      |      | 730  |       |      | 820  |      |       | 573  |      |
| Approach Delay, s/veh        |      | 43.9 |      |      | 55.0 |       |      | 40.4 |      |       | 44.0 |      |
| Approach LOS                 |      | D    |      |      | D    |       |      | D    |      |       | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 9.0  | 67.1 | 20.8 | 23.1 | 35.1 | 41.0  | 24.9 | 19.0 |      |       |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |      |       |      |      |
| Max Green Setting (Gmax), s  | 2.9  | 35.6 | 21.0 | 35.0 | 3.9  | * 35  | 6.5  | 49.5 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s | 4.5  | 9.1  | 13.9 | 14.1 | 17.7 | 11.2  | 6.2  | 10.8 |      |       |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.6  | 0.4  | 2.5  | 0.0  | 2.1   | 0.0  | 1.7  |      |       |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 45.8 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

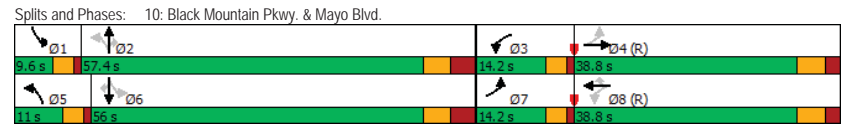
Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Total AM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 317   | 49    | 286   | 81    | 135   | 96    | 454   | 139   | 44    | 1119  | 106   |
| Future Volume (vph)  | 317   | 49    | 286   | 81    | 135   | 96    | 454   | 139   | 44    | 1119  | 106   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phases      | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 14.2  | 38.8  | 14.2  | 38.8  | 38.8  | 11.0  | 57.4  | 57.4  | 9.6   | 56.0  | 56.0  |
| Total Split (%)      | 11.8% | 32.3% | 11.8% | 32.3% | 32.3% | 9.2%  | 47.8% | 47.8% | 8.0%  | 46.7% | 46.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

| Intersection Summary  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|
| Cycle Length: 120   |  |  |  |  |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 120  |  |  |  |  |  |  |  |  |  |  |  |  |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |  |  |  |  |  |  |  |  |  |  |  |  |
| Natural Cycle: 105  |  |  |  |  |  |  |  |  |  |  |  |  |
| Control Type: Actuated-Coordinated                                    |  |  |  |  |  |  |  |  |  |  |  |  |



22-1270: Black Mountain Village  
2024 Total PM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 57    | 31    | 171   | 25    | 95    | 89    | 656   | 141   | 65    | 610   | 27    |
| Future Volume (vph)  | 57    | 31    | 171   | 25    | 95    | 89    | 656   | 141   | 65    | 610   | 27    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 10.0  | 41.0  | 16.0  | 47.0  | 47.0  | 13.0  | 52.0  | 52.0  | 11.0  | 50.0  | 50.0  |
| Total Split (%)      | 8.3%  | 34.2% | 13.3% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 9.2%  | 41.7% | 41.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

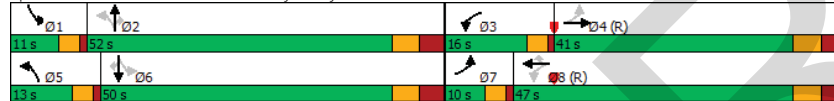
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2024 Total School PM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 154   | 50    | 111   | 31    | 98    | 115   | 469   | 148   | 97    | 568   | 88    |
| Future Volume (vph)  | 154   | 50    | 111   | 31    | 98    | 115   | 469   | 148   | 97    | 568   | 88    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 16.0  | 40.4  | 13.8  | 38.2  | 38.2  | 19.1  | 52.6  | 52.6  | 13.2  | 46.7  | 46.7  |
| Total Split (%)      | 13.3% | 33.7% | 11.5% | 31.8% | 31.8% | 15.9% | 43.8% | 43.8% | 11.0% | 38.9% | 38.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

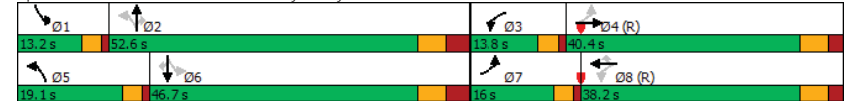
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2024 Total AM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↖ ↗  | ↖ ↗   |      | ↖ ↗  | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  |
| Traffic Volume (veh/h)       | 317  | 49    | 114  | 286  | 81   | 135   | 96   | 454  | 139  | 44   | 1119 | 106  |
| Future Volume (veh/h)        | 317  | 49    | 114  | 286  | 81   | 135   | 96   | 454  | 139  | 44   | 1119 | 106  |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 352  | 54    | 96   | 318  | 90   | 67    | 107  | 504  | 0    | 49   | 1243 | 59   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 508  | 168   | 298  | 468  | 520  | 441   | 175  | 2141 |      | 438  | 1430 | 638  |
| Arrive On Green              | 0.09 | 0.28  | 0.28 | 0.09 | 0.28 | 0.28  | 0.05 | 0.42 | 0.00 | 0.01 | 0.13 | 0.13 |
| Sat Flow, veh/h              | 1781 | 604   | 1073 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 352  | 0     | 150  | 318  | 90   | 67    | 107  | 504  | 0    | 49   | 1243 | 59   |
| Grp Sat Flow(s), veh/h/ln    | 1781 | 0     | 1677 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 10.2 | 0.0   | 8.5  | 10.2 | 4.4  | 3.8   | 4.2  | 7.6  | 0.0  | 1.9  | 41.1 | 3.9  |
| Cycle Q Clear(g_c), s        | 10.2 | 0.0   | 8.5  | 10.2 | 4.4  | 3.8   | 4.2  | 7.6  | 0.0  | 1.9  | 41.1 | 3.9  |
| Prop In Lane                 | 1.00 |       | 0.64 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 508  | 0     | 466  | 468  | 520  | 441   | 175  | 2141 |      | 438  | 1430 | 638  |
| V/C Ratio(X)                 | 0.69 | 0.00  | 0.32 | 0.68 | 0.17 | 0.15  | 0.61 | 0.24 |      | 0.11 | 0.87 | 0.09 |
| Avail Cap(c_a), veh/h        | 508  | 0     | 466  | 468  | 520  | 441   | 189  | 2141 |      | 461  | 1430 | 638  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 33.0 | 0.0   | 34.3 | 33.3 | 32.9 | 32.7  | 28.0 | 22.5 | 0.0  | 20.2 | 48.9 | 32.8 |
| Incr Delay (d2), s/veh       | 3.4  | 0.0   | 1.8  | 3.3  | 0.7  | 0.7   | 3.2  | 0.3  | 0.0  | 0.0  | 7.4  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 7.9  | 0.0   | 6.7  | 6.7  | 3.8  | 2.8   | 3.4  | 5.6  | 0.0  | 1.5  | 28.6 | 2.9  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 36.4 | 0.0   | 36.2 | 36.6 | 33.6 | 33.4  | 31.2 | 22.7 | 0.0  | 20.3 | 56.3 | 33.1 |
| LnGrp LOS                    | D    | A     | D    | D    | C    | C     | C    | C    |      | C    | E    | C    |
| Approach Vol, veh/h          |      | 502   |      |      | 475  |       |      | 611  |      |      | 1351 |      |
| Approach Delay, s/veh        |      | 36.3  |      |      | 35.6 |       |      | 24.2 |      |      | 54.0 |      |
| Approach LOS                 |      | D     |      |      | D    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 8.0  | 58.0  | 14.2 | 39.8 | 10.0 | 56.0  | 14.2 | 39.8 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.6  | * 50  | 10.2 | 32.4 | 7.0  | * 48  | 10.2 | 32.4 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 3.9  | 9.6   | 12.2 | 10.5 | 6.2  | 43.1  | 12.2 | 6.4  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.5   | 0.0  | 0.5  | 0.0  | 4.0   | 0.0  | 0.4  |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 41.8 |
| HCM 6th LOS        | D    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Total PM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↖ ↗  | ↖ ↗   |      | ↖ ↗  | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  |
| Traffic Volume (veh/h)       | 57   | 31    | 35   | 171  | 25   | 95    | 89   | 656  | 141  | 65   | 610  | 27   |
| Future Volume (veh/h)        | 57   | 31    | 35   | 171  | 25   | 95    | 89   | 656  | 141  | 65   | 610  | 27   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 64   | 35    | 29   | 192  | 28   | 53    | 100  | 737  | 0    | 73   | 685  | 15   |
| Peak Hour Factor             | 0.89 | 0.89  | 0.89 | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 549  | 304   | 252  | 609  | 694  | 588   | 350  | 1885 |      | 319  | 1271 | 567  |
| Arrive On Green              | 0.04 | 0.32  | 0.32 | 0.09 | 0.37 | 0.37  | 0.05 | 0.37 | 0.00 | 0.08 | 0.72 | 0.72 |
| Sat Flow, veh/h              | 1781 | 946   | 784  | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 64   | 0     | 64   | 192  | 28   | 53    | 100  | 737  | 0    | 73   | 685  | 15   |
| Grp Sat Flow(s), veh/h/ln    | 1781 | 0     | 1729 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 2.9  | 0.0   | 3.1  | 8.3  | 1.1  | 2.6   | 4.2  | 12.8 | 0.0  | 3.1  | 10.7 | 0.3  |
| Cycle Q Clear(g_c), s        | 2.9  | 0.0   | 3.1  | 8.3  | 1.1  | 2.6   | 4.2  | 12.8 | 0.0  | 3.1  | 10.7 | 0.3  |
| Prop In Lane                 | 1.00 |       | 0.45 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 549  | 0     | 556  | 609  | 694  | 588   | 350  | 1885 |      | 319  | 1271 | 567  |
| V/C Ratio(X)                 | 0.12 | 0.00  | 0.12 | 0.32 | 0.04 | 0.09  | 0.29 | 0.39 |      | 0.23 | 0.54 | 0.03 |
| Avail Cap(c_a), veh/h        | 572  | 0     | 556  | 633  | 694  | 588   | 394  | 1885 |      | 353  | 1271 | 567  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 25.6 | 0.0   | 28.7 | 22.4 | 24.1 | 24.6  | 22.8 | 27.9 | 0.0  | 22.4 | 12.5 | 11.0 |
| Incr Delay (d2), s/veh       | 0.0  | 0.0   | 0.4  | 0.1  | 0.1  | 0.3   | 0.2  | 0.6  | 0.0  | 0.1  | 1.6  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 2.2  | 0.0   | 2.5  | 6.3  | 1.0  | 1.9   | 3.2  | 9.1  | 0.0  | 2.3  | 6.1  | 0.2  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 25.7 | 0.0   | 29.1 | 22.5 | 24.2 | 24.9  | 23.0 | 28.5 | 0.0  | 22.6 | 14.1 | 11.1 |
| LnGrp LOS                    | C    | A     | C    | C    | C    | C     | C    | C    |      | C    | B    | B    |
| Approach Vol, veh/h          |      | 128   |      |      | 273  |       |      | 837  |      |      | 773  |      |
| Approach Delay, s/veh        |      | 27.4  |      |      | 23.1 |       |      | 27.9 |      |      | 14.9 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | B    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 8.7  | 52.0  | 14.4 | 45.0 | 10.0 | 50.6  | 8.4  | 50.9 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 7.0  | * 44  | 12.0 | 34.6 | 9.0  | * 42  | 6.0  | 40.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 5.1  | 14.8  | 10.3 | 5.1  | 6.2  | 12.7  | 4.9  | 4.6  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.8   | 0.0  | 0.2  | 0.0  | 3.4   | 0.0  | 0.2  |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 22.2 |
| HCM 6th LOS        | C    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 154  | 50    | 109  | 111  | 31   | 98    | 115  | 469  | 148  | 97   | 568  | 88   |
| Future Volume (veh/h)        | 154  | 50    | 109  | 111  | 31   | 98    | 115  | 469  | 148  | 97   | 568  | 88   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 233  | 76    | 124  | 168  | 47   | 74    | 174  | 711  | 0    | 147  | 861  | 66   |
| Peak Hour Factor             | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 563  | 187   | 306  | 439  | 514  | 435   | 278  | 1911 |      | 381  | 1291 | 576  |
| Arrive On Green              | 0.10 | 0.29  | 0.29 | 0.08 | 0.27 | 0.27  | 0.08 | 0.37 | 0.00 | 0.02 | 0.12 | 0.12 |
| Sat Flow, veh/h              | 1781 | 639   | 1043 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 233  | 0     | 200  | 168  | 47   | 74    | 174  | 711  | 0    | 147  | 861  | 66   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0     | 1683 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 11.3 | 0.0   | 11.4 | 8.0  | 2.2  | 4.3   | 7.3  | 12.1 | 0.0  | 6.1  | 27.8 | 4.5  |
| Cycle Q Clear(g_c), s        | 11.3 | 0.0   | 11.4 | 8.0  | 2.2  | 4.3   | 7.3  | 12.1 | 0.0  | 6.1  | 27.8 | 4.5  |
| Prop In Lane                 | 1.00 |       | 0.62 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 563  | 0     | 493  | 439  | 514  | 435   | 278  | 1911 |      | 381  | 1291 | 576  |
| V/C Ratio(X)                 | 0.41 | 0.00  | 0.41 | 0.38 | 0.09 | 0.17  | 0.63 | 0.37 |      | 0.39 | 0.67 | 0.11 |
| Avail Cap(c_a), veh/h        | 563  | 0     | 493  | 439  | 514  | 435   | 363  | 1911 |      | 398  | 1291 | 576  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 26.9 | 0.0   | 34.0 | 27.9 | 32.4 | 33.1  | 25.3 | 27.3 | 0.0  | 22.9 | 45.9 | 35.6 |
| Incr Delay (d2), s/veh       | 0.2  | 0.0   | 2.5  | 0.2  | 0.4  | 0.8   | 0.9  | 0.6  | 0.0  | 0.2  | 2.7  | 0.4  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 8.4  | 0.0   | 8.7  | 6.2  | 1.9  | 3.2   | 5.6  | 8.7  | 0.0  | 4.9  | 19.9 | 3.3  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 27.1 | 0.0   | 36.5 | 28.1 | 32.7 | 34.0  | 26.2 | 27.9 | 0.0  | 23.1 | 48.6 | 36.0 |
| LnGrp LOS                    | C    | A     | D    | C    | C    | C     | C    | C    |      | C    | D    | D    |
| Approach Vol, veh/h          |      | 433   |      |      | 289  |       |      | 885  |      |      | 1074 |      |
| Approach Delay, s/veh        |      | 31.4  |      |      | 30.3 |       |      | 27.5 |      |      | 44.3 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.0 | 52.6  | 13.8 | 41.6 | 13.3 | 51.3  | 16.0 | 39.4 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.2  | * 45  | 9.8  | 34.0 | 15.1 | * 39  | 12.0 | 31.8 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 8.1  | 14.1  | 10.0 | 13.4 | 9.3  | 29.8  | 13.3 | 6.3  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.6   | 0.0  | 0.7  | 0.1  | 3.0   | 0.0  | 0.3  |      |      |      |      |

| Intersection Summary |  |  |  |  |  |  |  |  |  |  |      |  |
|----------------------|--|--|--|--|--|--|--|--|--|--|------|--|
| HCM 6th Ctrl Delay   |  |  |  |  |  |  |  |  |  |  | 35.2 |  |
| HCM 6th LOS          |  |  |  |  |  |  |  |  |  |  | D    |  |

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2024 Total AM Mitigated

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |        |        |        |        |        |        |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Int Delay, s/veh         | 0      |        |        |        |        |        |
| Movement                 | EBL    | EBR    | NBL    | NBT    | SBT    | SBR    |
| Lane Configurations      |        | ↔      |        | ↔      | ↔      | ↔      |
| Traffic Vol, veh/h       | 0      | 1      | 0      | 690    | 1059   | 460    |
| Future Vol, veh/h        | 0      | 1      | 0      | 690    | 1059   | 460    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop   | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None | - None | - None | - None | - None |
| Storage Length           | -      | 0      | -      | -      | -      | 150    |
| Veh in Median Storage, # | 0      | -      | -      | 0      | 0      | -      |
| Grade, %                 | 0      | -      | -      | 0      | 0      | -      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1      | 0      | 767    | 1177   | 511    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 589  | - 0    | - 0    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | - 6.94 | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | - 3.32 | -      | -      |
| Pot Cap-1 Maneuver   | 0 *633 | 0      | -      |
| Stage 1              | 0      | - 0    | -      |
| Stage 2              | 0      | - 0    | -      |
| Platoon blocked, %   |        | 1      | -      |
| Mov Cap-1 Maneuver   | - *633 | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.7 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | 633   | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.002 | -   | -   |
| HCM Control Delay (s) | -   | 10.7  | -   | -   |
| HCM Lane LOS          | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 7    | 0    | 887  | 771  | 44   |
| Future Vol, veh/h        | 0    | 7    | 0    | 887  | 771  | 44   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 7    | 0    | 934  | 812  | 46   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 406  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *763 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *763 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.8 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 763     | - - | - - |
| HCM Lane V/C Ratio    | - 0.01    | - - | - - |
| HCM Control Delay (s) | - 9.8     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 9    | 0    | 732  | 597  | 190  |
| Future Vol, veh/h        | 0    | 9    | 0    | 732  | 597  | 190  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 12   | 0    | 976  | 796  | 253  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 398  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *841 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *841 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.3 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 841     | - - | - - |
| HCM Lane V/C Ratio    | - 0.014   | - - | - - |
| HCM Control Delay (s) | - 9.3     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2024 Total AM Mitigated

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 7.5   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 33    | 770   |       | 1450  |       |
| Demand Flow Rate, veh/h     | 33    | 786   |       | 1479  |       |
| Vehicles Circulating, veh/h | 1458  | 12    |       | 27    |       |
| Vehicles Exiting, veh/h     | 48    | 1479  |       | 771   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 9.9   | 5.2   |       | 8.7   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.469 | 0.531 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 33    | 369   | 417   | 695   | 784   |
| Cap Entry Lane, veh/h       | 411   | 1335  | 1406  | 1317  | 1388  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.979 | 0.981 | 0.981 |
| Flow Entry, veh/h           | 33    | 362   | 408   | 682   | 769   |
| Cap Entry, veh/h            | 411   | 1310  | 1376  | 1292  | 1361  |
| V/C Ratio                   | 0.080 | 0.276 | 0.297 | 0.528 | 0.565 |
| Control Delay, s/veh        | 9.9   | 5.2   | 5.2   | 8.5   | 8.8   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 3     | 4     |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.6   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 4     | 946   |       | 826   |       |
| Demand Flow Rate, veh/h     | 4     | 965   |       | 842   |       |
| Vehicles Circulating, veh/h | 838   | 1     |       | 3     |       |
| Vehicles Exiting, veh/h     | 7     | 841   |       | 963   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 5.2   | 5.8   |       | 5.3   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 454   | 511   | 396   | 446   |
| Cap Entry Lane, veh/h       | 697   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.979 | 0.981 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 4     | 445   | 501   | 388   | 438   |
| Cap Entry, veh/h            | 697   | 1321  | 1392  | 1319  | 1390  |
| V/C Ratio                   | 0.006 | 0.337 | 0.360 | 0.294 | 0.315 |
| Control Delay, s/veh        | 5.2   | 5.8   | 5.8   | 5.3   | 5.4   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 1     | 1     |



22-1270: Black Mountain Village  
2024 Total School PM Mitigated

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 6.6   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 29    | 1100  |       | 1107  |       |
| Demand Flow Rate, veh/h     | 29    | 1122  |       | 1129  |       |
| Vehicles Circulating, veh/h | 1122  | 7     |       | 15    |       |
| Vehicles Exiting, veh/h     | 22    | 1144  |       | 1114  |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 7.2   | 6.5   |       | 6.6   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 29    | 527   | 595   | 531   | 598   |
| Cap Entry Lane, veh/h       | 547   | 1341  | 1412  | 1331  | 1402  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 29    | 517   | 583   | 520   | 587   |
| Cap Entry, veh/h            | 547   | 1316  | 1384  | 1304  | 1376  |
| V/C Ratio                   | 0.053 | 0.393 | 0.421 | 0.399 | 0.426 |
| Control Delay, s/veh        | 7.2   | 6.5   | 6.6   | 6.6   | 6.7   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 2     | 2     |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |  |      |      |        |      |      |        |       |       |        |      |      |  |
|--------------------------|--|------|------|--------|------|------|--------|-------|-------|--------|------|------|--|
| Int Delay, s/veh         | 5.6  |      |      |        |      |      |        |       |       |        |      |      |  |
| Movement                 | EBL  | EBT  | EBR  | WBL    | WBT  | WBR  | NBL    | NBT   | NBR   | SBL    | SBT  | SBR  |  |
| Lane Configurations      | ↔  | ↔    | ↔    | ↔      | ↔    | ↔    | ↔      | ↔     | ↔     | ↔      | ↔    | ↔    |  |
| Traffic Vol, veh/h       | 173  | 97   | 7    | 14     | 171  | 79   | 12     | 4     | 7     | 24     | 3    | 162  |  |
| Future Vol, veh/h        | 173  | 97   | 7    | 14     | 171  | 79   | 12     | 4     | 7     | 24     | 3    | 162  |  |
| Conflicting Peds, #/hr   | 0  | 0    | 0    | 0      | 0    | 0    | 0      | 0     | 0     | 0      | 0    | 0    |  |
| Sign Control             | Free   | Free | Free | Free   | Free | Free | Stop   | Stop  | Stop  | Stop   | Stop | Stop |  |
| RT Channelized           | -  | -    | None | -      | -    | None | -      | -     | None  | -      | -    | None |  |
| Storage Length           | 150  | -    | -    | 145    | -    | -    | -      | -     | -     | -      | -    | -    |  |
| Veh in Median Storage, # | -  | 0    | -    | -      | 0    | -    | -      | -     | 0     | -      | -    | 0    |  |
| Grade, %                 | -  | 0    | -    | -      | 0    | -    | -      | -     | 0     | -      | -    | 0    |  |
| Peak Hour Factor         | 90   | 90   | 90   | 90     | 90   | 90   | 90     | 90    | 90    | 90     | 90   | 90   |  |
| Heavy Vehicles, %        | 2  | 2    | 2    | 2      | 2    | 2    | 2      | 2     | 2     | 2      | 2    | 2    |  |
| Mvmt Flow                | 192  | 108  | 8    | 16     | 190  | 88   | 13     | 4     | 8     | 27     | 3    | 180  |  |
| Major/Minor              | Major1   |      |      | Major2 |      |      | Minor1 |       |       | Minor2 |      |      |  |
| Conflicting Flow All     | 278  | 0    | 0    | 116    | 0    | 0    | 625    | 806   | 58    | 706    | 766  | 139  |  |
| Stage 1                  | -  | -    | -    | -      | -    | -    | 496    | 496   | -     | 266    | 266  | -    |  |
| Stage 2                  | -  | -    | -    | -      | -    | -    | 129    | 310   | -     | 440    | 500  | -    |  |
| Critical Hdwy            | 4.14   | -    | -    | 4.14   | -    | -    | 7.54   | 6.54  | 6.94  | 7.54   | 6.54 | 6.94 |  |
| Critical Hdwy Stg 1      | -  | -    | -    | -      | -    | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Critical Hdwy Stg 2      | -  | -    | -    | -      | -    | -    | 6.54   | 5.54  | -     | 6.54   | 5.54 | -    |  |
| Follow-up Hdwy           | 2.22   | -    | -    | 2.22   | -    | -    | 3.52   | 4.02  | 3.32  | 3.52   | 4.02 | 3.32 |  |
| Pot Cap-1 Maneuver       | 1282   | -    | -    | 1541   | -    | -    | 406    | 334   | *1049 | 354    | 353  | 884  |  |
| Stage 1                  | -  | -    | -    | -      | -    | -    | 567    | 572   | -     | 716    | 687  | -    |  |
| Stage 2                  | -  | -    | -    | -      | -    | -    | 861    | 658   | -     | 612    | 570  | -    |  |
| Platoon blocked, %       | -  | -    | -    | 1      | -    | -    | 1      | 1     | 1     | 1      | 1    | 1    |  |
| Mov Cap-1 Maneuver       | 1282   | -    | -    | 1541   | -    | -    | 282    | 281   | *1049 | 305    | 297  | 884  |  |
| Mov Cap-2 Maneuver       | -  | -    | -    | -      | -    | -    | 282    | 281   | -     | 305    | 297  | -    |  |
| Stage 1                  | -  | -    | -    | -      | -    | -    | 482    | 486   | -     | 609    | 680  | -    |  |
| Stage 2                  | -  | -    | -    | -      | -    | -    | 675    | 651   | -     | 512    | 484  | -    |  |
| Approach                 | EB   | WB   |      |        |      | NB   | SB     |       |       |        |      |      |  |
| HCM Control Delay, s     | 5.2  | 0.4  |      |        |      | 15.7 | 12.4   |       |       |        |      |      |  |
| HCM LOS                  |  |      |      |        |      | C    | B      |       |       |        |      |      |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL  | EBT  | EBR    | WBL  | WBT  | WBR    | SBLn1 |       |        |      |      |  |
| Capacity (veh/h)         | 362  | 1282 | -    | -      | 1541 | -    | -      | 695   |       |        |      |      |  |
| HCM Lane V/C Ratio       | 0.071  | 0.15 | -    | -      | 0.01 | -    | -      | 0.302 |       |        |      |      |  |
| HCM Control Delay (s)    | 15.7   | 8.3  | -    | -      | 7.4  | -    | -      | 12.4  |       |        |      |      |  |
| HCM Lane LOS             | C  | A    | -    | -      | A    | -    | -      | B     |       |        |      |      |  |
| HCM 95th %tile Q(veh)    | 0.2  | 0.5  | -    | -      | 0    | -    | -      | 1.3   |       |        |      |      |  |
| Notes                    | -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |      |      |        |      |      |        |       |       |        |      |      |  |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 81   | 146  | 10   | 24   | 139  | 27   | 9    | 4    | 3    | 28   | 4    | 136  |
| Future Vol, veh/h        | 81   | 146  | 10   | 24   | 139  | 27   | 9    | 4    | 3    | 28   | 4    | 136  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 111  | 200  | 14   | 33   | 190  | 37   | 12   | 5    | 4    | 38   | 5    | 186  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 227    | 0      | 0      | 214    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1339   | -      | -      | 1414   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1339   | -      | -      | 1414   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 2.7 | 1  | 15.5 | 12.3 |
| HCM LOS              |     |    | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 365   | 1339  | -   | -   | 1414  | -   | -   | 721   |
| HCM Lane V/C Ratio    | 0.06  | 0.083 | -   | -   | 0.023 | -   | -   | 0.319 |
| HCM Control Delay (s) | 15.5  | 7.9   | -   | -   | 7.6   | -   | -   | 12.3  |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0.1   | -   | -   | 1.4   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 115  | 163  | 17   | 12   | 145  | 41   | 10   | 3    | 6    | 7    | 3    | 52   |
| Future Vol, veh/h        | 115  | 163  | 17   | 12   | 145  | 41   | 10   | 3    | 6    | 7    | 3    | 52   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 140  | 199  | 21   | 15   | 177  | 50   | 12   | 4    | 7    | 9    | 4    | 63   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 227    | 0      | 0      | 220    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1339   | -      | -      | 1459   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1339   | -      | -      | 1459   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.1 | 0.5 | 13.2 | 10.3 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 462   | 1339  | -   | -   | 1459 | -   | -   | 749   |
| HCM Lane V/C Ratio    | 0.05  | 0.105 | -   | -   | 0.01 | -   | -   | 0.101 |
| HCM Control Delay (s) | 13.2  | 8     | -   | -   | 7.5  | -   | -   | 10.3  |
| HCM Lane LOS          | B     | A     | -   | -   | A    | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0    | -   | -   | 0.3   |

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

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14: Aviano Way & Deer Valley Dr.  
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| Intersection             |       |      |       |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|-------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.2   |      |       |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 47    | 861  | 62    | 59   | 539  | 25   | 46   | 6    | 88   | 38   | 7    | 37   |
| Future Vol, veh/h        | 47    | 861  | 62    | 59   | 539  | 25   | 46   | 6    | 88   | 38   | 7    | 37   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None  | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -     | 125  | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -     | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 52    | 957  | 69    | 66   | 599  | 28   | 51   | 7    | 98   | 42   | 8    | 41   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 627    | 0      | 0      | 1026   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 590    | -      | -      | 380    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 590    | -      | -      | 380    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.6 | 1.6 | 44.5 | 41.3 |
| HCM LOS              |     |     | E    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 90    | 301   | 590   | -   | -   | 380   | -   | -   | 106   | 225   |
| HCM Lane V/C Ratio    | 0.568 | 0.347 | 0.089 | -   | -   | 0.173 | -   | -   | 0.398 | 0.217 |
| HCM Control Delay (s) | 88    | 23.2  | 11.7  | -   | -   | 16.4  | -   | -   | 59.8  | 25.4  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | C     | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 2.6   | 1.5   | 0.3   | -   | -   | 0.6   | -   | -   | 1.6   | 0.8   |

22-1270: Black Mountain Village  
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HCM 6th TWSC

| Intersection             |       |      |       |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|-------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.7   |      |       |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 66    | 609  | 31    | 55   | 704  | 58   | 58   | 4    | 84   | 26   | 4    | 46   |
| Future Vol, veh/h        | 66    | 609  | 31    | 55   | 704  | 58   | 58   | 4    | 84   | 26   | 4    | 46   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None  | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -     | 125  | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -     | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 85    | 85   | 85    | 85   | 85   | 85   | 85   | 85   | 85   | 85   | 85   | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 78    | 716  | 36    | 65   | 828  | 68   | 68   | 5    | 99   | 31   | 5    | 54   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 896    | 0      | 0      | 752    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 439    | -      | -      | 515    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 439    | -      | -      | 515    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 1.4 | 0.9 | 48.3 | 38.5 |
| HCM LOS              |     |     | E    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 102   | 364   | 439   | -   | -   | 515   | -   | -   | 83    | 281   |
| HCM Lane V/C Ratio    | 0.669 | 0.284 | 0.177 | -   | -   | 0.126 | -   | -   | 0.369 | 0.209 |
| HCM Control Delay (s) | 93    | 18.8  | 15    | -   | -   | 13    | -   | -   | 71.8  | 21.2  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | B     | -   | -   | F     | C     |
| HCM 95th %tile Q(veh) | 3.4   | 1.2   | 0.6   | -   | -   | 0.4   | -   | -   | 1.4   | 0.8   |

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HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |      |      |      |      |      |      |
|--------------------------|-------|------|-------|------|-------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5   |      |       |      |       |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↔ ↔ |      | ↔ ↘  |      | ↔ ↘  |      | ↔ ↘  |      |
| Traffic Vol, veh/h       | 48    | 546  | 42    | 40   | 494   | 46   | 8    | 4    | 37   | 28   | 10   | 30   |
| Future Vol, veh/h        | 48    | 546  | 42    | 40   | 494   | 46   | 8    | 4    | 37   | 28   | 10   | 30   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 74    | 74   | 74    | 74   | 74    | 74   | 74   | 74   | 74   | 74   | 74   | 74   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 65    | 738  | 57    | 54   | 668   | 62   | 11   | 5    | 50   | 38   | 14   | 41   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 730    | 0      | 0      | 795    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 527    | -      | -      | 491    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 527    | -      | -      | 491    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 1  | 0.9 | 22.3 | 35.5 |
| HCM LOS              |    |     | C    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 115   | 313   | 527   | -   | -   | 491  | -   | -   | 131   | 197   |
| HCM Lane V/C Ratio    | 0.094 | 0.177 | 0.123 | -   | -   | 0.11 | -   | -   | 0.289 | 0.274 |
| HCM Control Delay (s) | 39.5  | 19    | 12.8  | -   | -   | 13.2 | -   | -   | 43.3  | 30    |
| HCM Lane LOS          | E     | C     | B     | -   | -   | B    | -   | -   | E     | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0.6   | 0.4   | -   | -   | 0.4  | -   | -   | 1.1   | 1.1   |

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2024 Total AM Mitigated

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔ ↘  |      | ↔ ↘  |      | ↔ ↘  |      |
| Traffic Vol, veh/h       | 155  | 19   | 43   | 51   | 24   | 243  |
| Future Vol, veh/h        | 155  | 19   | 43   | 51   | 24   | 243  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 172  | 21   | 48   | 57   | 27   | 270  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 180    | 27     | 297    |
| Stage 1              | 27     | -      | -      |
| Stage 2              | 153    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 810    | 1048   | 1264   |
| Stage 1              | 996    | -      | -      |
| Stage 2              | 875    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 779    | 1048   | 1264   |
| Mov Cap-2 Maneuver   | 779    | -      | -      |
| Stage 1              | 958    | -      | -      |
| Stage 2              | 875    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.6 | 3.6 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1264  | -   | 779   | 1048  | -   | -   |
| HCM Lane V/C Ratio    | 0.038 | -   | 0.221 | 0.02  | -   | -   |
| HCM Control Delay (s) | 8     | -   | 10.9  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.8   | 0.1   | -   | -   |

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2024 Total PM Mitigated

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 95   | 39   | 28   | 43   | 56   | 148  |
| Future Vol, veh/h        | 95   | 39   | 28   | 43   | 56   | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 106  | 43   | 31   | 48   | 62   | 164  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 172    | 62     | 226    | 0 | - | 0 |
| Stage 1              | 62     | -      | -      | - | - | - |
| Stage 2              | 110    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 818    | 1003   | 1342   | - | - | - |
| Stage 1              | 961    | -      | -      | - | - | - |
| Stage 2              | 915    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 799    | 1003   | 1342   | - | - | - |
| Mov Cap-2 Maneuver   | 799    | -      | -      | - | - | - |
| Stage 1              | 939    | -      | -      | - | - | - |
| Stage 2              | 915    | -      | -      | - | - | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.8 | 3.1 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1342  | -   | 799   | 1003  | -   | -   |
| HCM Lane V/C Ratio    | 0.023 | -   | 0.132 | 0.043 | -   | -   |
| HCM Control Delay (s) | 7.7   | -   | 10.2  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.5   | 0.1   | -   | -   |

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15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 114  | 24   | 26   | 48   | 47   | 116  |
| Future Vol, veh/h        | 114  | 24   | 26   | 48   | 47   | 116  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 163  | 34   | 37   | 69   | 67   | 166  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 210    | 67     | 233    | 0 | - | 0 |
| Stage 1              | 67     | -      | -      | - | - | - |
| Stage 2              | 143    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 778    | 997    | 1335   | - | - | - |
| Stage 1              | 956    | -      | -      | - | - | - |
| Stage 2              | 884    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 756    | 997    | 1335   | - | - | - |
| Mov Cap-2 Maneuver   | 756    | -      | -      | - | - | - |
| Stage 1              | 929    | -      | -      | - | - | - |
| Stage 2              | 884    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 2.7 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1335  | -   | 756   | 997   | -   | -   |
| HCM Lane V/C Ratio    | 0.028 | -   | 0.215 | 0.034 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 11.1  | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.8   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.4  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    | W    | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 22   | 69   | 150  | 2    | 81   | 359  |
| Future Vol, veh/h        | 22   | 69   | 150  | 2    | 81   | 359  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 24   | 77   | 167  | 2    | 90   | 399  |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 747    | 168    | 0      |
| Stage 1              | 168    | -      | -      |
| Stage 2              | 579    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 381    | 876    | -      |
| Stage 1              | 862    | -      | -      |
| Stage 2              | 560    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 350    | 876    | -      |
| Mov Cap-2 Maneuver   | 350    | -      | -      |
| Stage 1              | 862    | -      | -      |
| Stage 2              | 514    | -      | -      |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 11.6 | 0  | 1.4 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 643   | 1409  |
| HCM Lane V/C Ratio    | -   | -        | 0.157 | 0.064 |
| HCM Control Delay (s) | -   | -        | 11.6  | 7.7   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.8  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    | W    | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 26   | 82   | 27   | 2    | 90   | 22   |
| Future Vol, veh/h        | 26   | 82   | 27   | 2    | 90   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 30   | 2    | 100  | 24   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 255    | 31     | 0      |
| Stage 1              | 31     | -      | -      |
| Stage 2              | 224    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 734    | 1043   | -      |
| Stage 1              | 992    | -      | -      |
| Stage 2              | 813    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 687    | 1043   | -      |
| Mov Cap-2 Maneuver   | 687    | -      | -      |
| Stage 1              | 992    | -      | -      |
| Stage 2              | 761    | -      | -      |

| Approach             | WB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.5 | 0  | 6  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 927   | 1580  |
| HCM Lane V/C Ratio    | -   | -        | 0.129 | 0.063 |
| HCM Control Delay (s) | -   | -        | 9.5   | 7.4   |
| HCM Lane LOS          | -   | -        | A     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.4   | 0.2   |

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 26   | 82   | 165  | 2    | 90   | 95   |
| Future Vol, veh/h        | 26   | 82   | 165  | 2    | 90   | 95   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 183  | 2    | 100  | 106  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 490    | 184    | 0 0 185 0   |
| Stage 1              | 184    | -      | - - - -     |
| Stage 2              | 306    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 537    | 858    | - - 1390 -  |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 747    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 496    | 858    | - - 1390 -  |
| Mov Cap-2 Maneuver   | 496    | -      | - - - -     |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 690    | -      | - - - -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 10.9 | 0  | 3.8 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT |
|-----------------------|-----|----------|-------|-----|
| Capacity (veh/h)      | -   | - 730    | 1390  | -   |
| HCM Lane V/C Ratio    | -   | - 0.164  | 0.072 | -   |
| HCM Control Delay (s) | -   | - 10.9   | 7.8   | 0   |
| HCM Lane LOS          | -   | - B      | A     | A   |
| HCM 95th %tile Q(veh) | -   | - 0.6    | 0.2   | -   |

22-1270: Black Mountain Village  
2024 Total AM Mitigated

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔↔↔  | ↔    | ↔    | ↔↔↔  | ↔    | ↔    |
| Traffic Vol, veh/h       | 1118 | 114  | 0    | 627  | 0    | 127  |
| Future Vol, veh/h        | 1118 | 114  | 0    | 627  | 0    | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1242 | 127  | 0    | 697  | 0    | 141  |

| Major/Minor          | Major1 | Major2 | Minor1     |
|----------------------|--------|--------|------------|
| Conflicting Flow All | 0      | 0      | - - - 621  |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |
| Critical Hdwy        | -      | -      | - - - 7.14 |
| Critical Hdwy Stg 1  | -      | -      | - - - -    |
| Critical Hdwy Stg 2  | -      | -      | - - - -    |
| Follow-up Hdwy       | -      | -      | - - - 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 0 - 0 369  |
| Stage 1              | -      | -      | 0 - 0 -    |
| Stage 2              | -      | -      | 0 - 0 -    |
| Platoon blocked, %   | -      | -      | - - - -    |
| Mov Cap-1 Maneuver   | -      | -      | - - - 369  |
| Mov Cap-2 Maneuver   | -      | -      | - - - -    |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 20.7 |
| HCM LOS              |    |    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 369   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.382 | -   | -   | -   |
| HCM Control Delay (s) | 20.7  | -   | -   | -   |
| HCM Lane LOS          | C     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 1.8   | -   | -   | -   |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 525  | 117  | 0    | 740  | 0    | 148  |
| Future Vol, veh/h        | 525  | 117  | 0    | 740  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 583  | 130  | 0    | 822  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 292    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *800 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *800   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 800   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.206 | -   | -   | -   |
| HCM Control Delay (s) | 10.7  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 595  | 117  | 0    | 601  | 0    | 148  |
| Future Vol, veh/h        | 595  | 117  | 0    | 601  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 661  | 130  | 0    | 668  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 331    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *778 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *778   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 778   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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



22-1270: Black Mountain Village  
2024 Total AM Mitigated

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 367  | 209  | 29   | 13   | 7    |
| Future Vol, veh/h        | 2    | 367  | 209  | 29   | 13   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 408  | 232  | 32   | 14   | 8    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 264    | 0      | 456    |
| Stage 1              | -      | -      | 248    |
| Stage 2              | -      | -      | 208    |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2,219  | -      | 3,519  |
| Pot Cap-1 Maneuver   | 1299   | -      | 547    |
| Stage 1              | -      | -      | 793    |
| Stage 2              | -      | -      | 807    |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1299   | -      | 546    |
| Mov Cap-2 Maneuver   | -      | -      | 546    |
| Stage 1              | -      | -      | 791    |
| Stage 2              | -      | -      | 807    |

| Approach             | EB | WB | SB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.1 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1299  | -   | -   | -   | 612   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.036 |
| HCM Control Delay (s) | 7.8   | 0   | -   | -   | 11.1  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2024 Total PM Mitigated

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 3    | 57   | 66   | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 57   | 66   | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 63   | 73   | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 110    | 0      | 130    |
| Stage 1              | -      | -      | 92     |
| Stage 2              | -      | -      | 38     |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2,219  | -      | 3,519  |
| Pot Cap-1 Maneuver   | 1549   | -      | *941   |
| Stage 1              | -      | -      | *990   |
| Stage 2              | -      | -      | *980   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | 1549   | -      | *939   |
| Mov Cap-2 Maneuver   | -      | -      | *939   |
| Stage 1              | -      | -      | *988   |
| Stage 2              | -      | -      | *980   |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 8.8 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1549  | -   | -   | -   | 967   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.025 |
| HCM Control Delay (s) | 7.3   | 0   | -   | -   | 8.8   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 191  | 162  | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 191  | 162  | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 212  | 180  | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 217    | 0      | 311    |
| Stage 1              | -      | -      | 199    |
| Stage 2              | -      | -      | 112    |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2,219  | -      | 3,319  |
| Pot Cap-1 Maneuver   | *1454  | -      | *916   |
| Stage 1              | -      | -      | *917   |
| Stage 2              | -      | -      | *901   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *1454  | -      | *914   |
| Mov Cap-2 Maneuver   | -      | -      | *914   |
| Stage 1              | -      | -      | *915   |
| Stage 2              | -      | -      | *901   |

| Approach             | EB  | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.1 | 0  | 9  |
| HCM LOS              |     |    | A  |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1454 | -   | -   | -   | 929   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.026 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9     |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2024 Total AM Mitigated

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      | ↕↕↕  | ↕↕↕  |      |
| Traffic Vol, veh/h       | 0    | 37   | 0    | 956  | 1301 | 61   |
| Future Vol, veh/h        | 0    | 37   | 0    | 956  | 1301 | 61   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 41   | 0    | 1062 | 1446 | 68   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 757    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *624   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   |        | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *624   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 11.2 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | 624   | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.066 | -   | -   |
| HCM Control Delay (s) | -   | 11.2  | -   | -   |
| HCM Lane LOS          | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 875  | 723  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 875  | 723  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 972  | 803  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 435    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *756   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *756   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.1 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 756   | -   |
| HCM Lane V/C Ratio    | -         | 0.065 | -   |
| HCM Control Delay (s) | -         | 10.1  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 788  | 774  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 788  | 774  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 876  | 860  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 463    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *734   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *734   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 734   | -   |
| HCM Lane V/C Ratio    | -         | 0.067 | -   |
| HCM Control Delay (s) | -         | 10.3  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM Mitigated

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 133  | 32   | 83   | 823  | 1228 | 110  |
| Future Vol, veh/h        | 133  | 32   | 83   | 823  | 1228 | 110  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 148  | 36   | 92   | 914  | 1364 | 122  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1975   | 743    | 1486   |
| Stage 1              | 1425   | -      | -      |
| Stage 2              | 550    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *453   | *624   | 729    |
| Stage 1              | *640   | -      | -      |
| Stage 2              | *753   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *396   | *624   | 729    |
| Mov Cap-2 Maneuver   | *396   | -      | -      |
| Stage 1              | *560   | -      | -      |
| Stage 2              | *753   | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 17.8 | 1  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 729   | -   | 396   | 624   | -   | -   |
| HCM Lane V/C Ratio    | 0.127 | -   | 0.373 | 0.057 | -   | -   |
| HCM Control Delay (s) | 10.7  | -   | 19.4  | 11.1  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 1.7   | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 723  | 655  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 723  | 655  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 803  | 728  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1303   | 426    | 852    |
| Stage 1              | 790    | -      | -      |
| Stage 2              | 513    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *634   | *778   | 791    |
| Stage 1              | *675   | -      | -      |
| Stage 2              | *776   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *557   | *778   | 791    |
| Mov Cap-2 Maneuver   | *557   | -      | -      |
| Stage 1              | *593   | -      | -      |
| Stage 2              | *776   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.6 | 1.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 791   | -   | 557   | 778   | -   | -   |
| HCM Lane V/C Ratio    | 0.121 | -   | 0.303 | 0.043 | -   | -   |
| HCM Control Delay (s) | 10.2  | -   | 14.3  | 9.8   | -   | -   |
| HCM Lane LOS          | B     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 1.3   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 636  | 706  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 636  | 706  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 707  | 784  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1321   | 454    | 908    |
| Stage 1              | 846    | -      | -      |
| Stage 2              | 475    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *414   | *756   | 817    |
| Stage 1              | *709   | -      | -      |
| Stage 2              | *799   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *365   | *756   | 817    |
| Mov Cap-2 Maneuver   | *365   | -      | -      |
| Stage 1              | *626   | -      | -      |
| Stage 2              | *799   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.9 | 1.2 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 817   | -   | 365   | 756   | -   | -   |
| HCM Lane V/C Ratio    | 0.117 | -   | 0.463 | 0.044 | -   | -   |
| HCM Control Delay (s) | 10    | -   | 23.1  | 10    | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 2.4   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total AM Mitigated

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 0    | 40   | 0    | 907  | 1229 | 31   |
| Future Vol, veh/h        | 0    | 40   | 0    | 907  | 1229 | 31   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 44   | 0    | 1008 | 1366 | 34   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 700    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *554   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   |        | 1      |        |
| Mov Cap-1 Maneuver   | -      | *554   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

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

| Minor Lane/Major Mvmt | NBL | NBT  | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|------|-------|-------|-----|-----|
| Capacity (veh/h)      | -   | 554  | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.08 | -     | -     | -   | -   |
| HCM Control Delay (s) | -   | 12.1 | -     | -     | -   | -   |
| HCM Lane LOS          | -   | B    | -     | -     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.3  | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2024 Total PM Mitigated

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↕    | ↖    | ↗    | ↖    |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 808  | 652  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 808  | 652  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 898  | 724  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 381    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *815   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *815   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.7 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 815   | -   |
| HCM Lane V/C Ratio    | -         | 0.068 | -   |
| HCM Control Delay (s) | -         | 9.7   | -   |
| HCM Lane LOS          | -         | A     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

22-1270: Black Mountain Village  
2024 Total School PM Mitigated

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↕    | ↖    | ↗    | ↖    |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 721  | 703  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 721  | 703  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 801  | 781  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 409    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *789   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *789   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT  | SBR |
|-----------------------|-----------|------|-----|
| Capacity (veh/h)      | -         | 789  | -   |
| HCM Lane V/C Ratio    | -         | 0.07 | -   |
| HCM Control Delay (s) | -         | 9.9  | -   |
| HCM Lane LOS          | -         | A    | -   |
| HCM 95th %tile Q(veh) | -         | 0.2  | -   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 25    | 1455  | 13    | 630   | 13    | 3     | 122   | 2     | 22    |
| Future Volume (vph)  | 25    | 1455  | 13    | 630   | 13    | 3     | 122   | 2     | 22    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 9.0   | 61.0  | 9.0   | 61.0  | 9.0   | 38.0  | 12.0  | 41.0  | 41.0  |
| Total Split (%)      | 7.5%  | 50.8% | 7.5%  | 50.8% | 7.5%  | 31.7% | 10.0% | 34.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

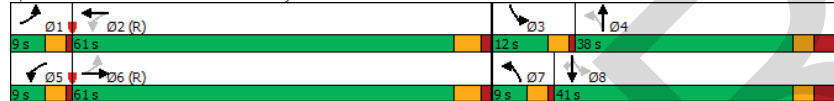
Actuated Cycle Length: 120

Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total PM Mitigated

1: 32nd St. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 33    | 677   | 17    | 758   | 7     | 3     | 89    | 3     | 44    |
| Future Volume (vph)  | 33    | 677   | 17    | 758   | 7     | 3     | 89    | 3     | 44    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     | 8     | 8     | 8     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 13.0  | 54.6  | 12.0  | 53.6  | 11.0  | 37.4  | 16.0  | 42.4  | 42.4  |
| Total Split (%)      | 10.8% | 45.5% | 10.0% | 44.7% | 9.2%  | 31.2% | 13.3% | 35.3% | 35.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Splits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total School PM Mitigated

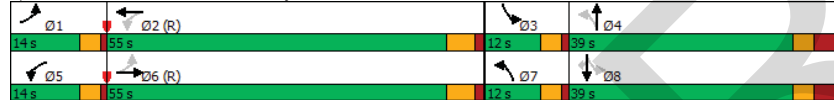
1: 32nd St. & Deer Valley Dr.  
Timings

|                      | ↖     | →     | ↗     | ↖     | ↖     | ↑     | ↗     | ↓     | ↖     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 17    | 704   | 6     | 649   | 8     | 5     | 78    | 1     | 20    |
| Future Volume (vph)  | 17    | 704   | 6     | 649   | 8     | 5     | 78    | 1     | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     | 2     | 4     | 8     | 8     |       |       |       |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 28.7  | 9.0   | 28.7  | 9.0   | 37.4  | 9.0   | 37.4  | 37.4  |
| Total Split (s)      | 14.0  | 55.0  | 14.0  | 55.0  | 12.0  | 39.0  | 12.0  | 39.0  | 39.0  |
| Total Split (%)      | 11.7% | 45.8% | 11.7% | 45.8% | 10.0% | 32.5% | 10.0% | 32.5% | 32.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 3.4   | 1.0   | 3.4   | 3.4   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 5.7   | 4.0   | 5.7   | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
Natural Cycle: 85  
Control Type: Actuated-Coordinated

Spplits and Phases: 1: 32nd St. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total AM Mitigated

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

|                              | ↖    | →     | ↗    | ↖    | ↖    | ↑     | ↗    | ↓    | ↖    |      |      |      |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  | ↖ ↗  |
| Traffic Volume (veh/h)       | 25   | 1455  | 7    | 13   | 630  | 42    | 13   | 3    | 22   | 122  | 2    | 22   |
| Future Volume (veh/h)        | 25   | 1455  | 7    | 13   | 630  | 42    | 13   | 3    | 22   | 122  | 2    | 22   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 28   | 1617  | 7    | 14   | 700  | 37    | 14   | 3    | 18   | 136  | 2    | 13   |
| Peak Hour Factor             | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 387  | 2555  | 11   | 168  | 2370 | 125   | 460  | 61   | 366  | 532  | 588  | 498  |
| Arrive On Green              | 0.03 | 0.49  | 0.49 | 0.02 | 0.48 | 0.48  | 0.02 | 0.26 | 0.26 | 0.07 | 0.31 | 0.31 |
| Sat Flow, veh/h              | 1781 | 5248  | 23   | 1781 | 4966 | 261   | 1781 | 231  | 1389 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h         | 28   | 1049  | 575  | 14   | 479  | 258   | 14   | 0    | 21   | 136  | 2    | 13   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1702  | 1866 | 1781 | 1702 | 1823  | 1781 | 0    | 1620 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s              | 1.0  | 27.4  | 27.4 | 0.5  | 10.3 | 10.3  | 0.7  | 0.0  | 1.2  | 6.5  | 0.1  | 0.7  |
| Cycle Q Clear(g_c), s        | 1.0  | 27.4  | 27.4 | 0.5  | 10.3 | 10.3  | 0.7  | 0.0  | 1.2  | 6.5  | 0.1  | 0.7  |
| Prop In Lane                 | 1.00 | 0.01  | 1.00 | 1.00 | 0.14 | 1.00  | 0.86 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 387  | 1658  | 909  | 168  | 1624 | 870   | 460  | 0    | 427  | 532  | 588  | 498  |
| V/C Ratio(X)                 | 0.07 | 0.63  | 0.63 | 0.08 | 0.29 | 0.30  | 0.03 | 0.00 | 0.05 | 0.26 | 0.00 | 0.03 |
| Avail Cap(c_a), veh/h        | 416  | 1658  | 909  | 214  | 1624 | 870   | 507  | 0    | 427  | 532  | 588  | 498  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 15.6 | 22.8  | 22.8 | 18.6 | 19.1 | 19.1  | 31.4 | 0.0  | 33.0 | 27.8 | 28.2 | 28.4 |
| Incr Delay (d2), s/veh       | 0.0  | 1.9   | 3.3  | 0.1  | 0.5  | 0.9   | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 0.7  | 16.7  | 18.5 | 0.4  | 7.5  | 8.1   | 0.5  | 0.0  | 0.9  | 5.0  | 0.1  | 0.5  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 15.6 | 24.7  | 26.2 | 18.6 | 19.5 | 20.0  | 31.5 | 0.0  | 33.2 | 27.9 | 28.2 | 28.5 |
| LnGrp LOS                    | B    | C     | C    | B    | B    | B     | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 1652 |       |      | 751  |      |       | 35   |      |      | 151  |      |      |
| Approach Delay, s/veh        | 25.0 |       |      | 19.7 |      |       | 32.5 |      |      | 27.9 |      |      |
| Approach LOS                 | C    |       |      | B    |      |       | C    |      |      | C    |      |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 7.0  | 63.0  | 12.0 | 38.0 | 5.9  | 64.1  | 5.9  | 44.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.0  | * 55  | 8.0  | 31.6 | 5.0  | * 55  | 5.0  | 34.6 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 3.0  | 12.3  | 8.5  | 3.2  | 2.5  | 29.4  | 2.7  | 2.7  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.5   | 0.0  | 0.0  | 0.0  | 9.1   | 0.0  | 0.0  |      |      |      |      |

Intersection Summary

HCM 6th Ctrl Delay: 23.8  
HCM 6th LOS: C

Notes

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



22-1270: Black Mountain Village  
2029 Total PM Mitigated

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

|  | ↖ ↗  |       | ← →  |      | ↙ ↘  |       | ↖ ↗  |      | ← →  |       | ↙ ↘  |      | ↖ ↗  |       | ← →  |      | ↙ ↘  |      |      |      |      |      |      |      |
|--|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|
| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations  | ↖    | ↖↗    | ↖↗   | ↖↗   | ↖↗   | ↖↗    | ↖    | ↖    | ↖    | ↖     | ↖    | ↖    | ↖    | ↖↗    | ↖↗   | ↖↗   | ↖↗   | ↖↗   | ↖    | ↖    | ↖    | ↖    | ↖    | ↖    |
| Traffic Volume (veh/h)   | 33   | 677   | 8    | 17   | 758  | 98    | 7    | 3    | 8    | 89    | 3    | 44   | 17   | 704   | 9    | 6    | 649  | 75   | 8    | 5    | 9    | 78   | 1    | 20   |
| Future Volume (veh/h)  | 33   | 677   | 8    | 17   | 758  | 98    | 7    | 3    | 8    | 89    | 3    | 44   | 17   | 704   | 9    | 6    | 649  | 75   | 8    | 5    | 9    | 78   | 1    | 20   |
| Initial Q (Ob), veh  | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 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 | 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 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  | No   |       |      | No   |      |       | No   |      |      | No    |      |      | No   |       |      | No   |      |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 35   | 720   | 7    | 18   | 806  | 78    | 7    | 3    | 7    | 95    | 3    | 24   | 25   | 1051  | 10   | 9    | 969  | 84   | 12   | 7    | 10   | 116  | 1    | 15   |
| Peak Hour Factor   | 0.94 | 0.94  | 0.94 | 0.94 | 0.94 | 0.94  | 0.94 | 0.94 | 0.94 | 0.94  | 0.94 | 0.94 | 0.67 | 0.67  | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 355  | 2622  | 25   | 401  | 2334 | 225   | 433  | 129  | 300  | 510   | 565  | 479  | 286  | 2552  | 24   | 271  | 2281 | 197  | 464  | 189  | 270  | 537  | 596  | 505  |
| Arrive On Green  | 0.03 | 0.50  | 0.50 | 0.02 | 0.49 | 0.49  | 0.01 | 0.26 | 0.26 | 0.05  | 0.30 | 0.30 | 0.02 | 0.49  | 0.49 | 0.01 | 0.48 | 0.48 | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 |
| Sat Flow, veh/h  | 1781 | 5215  | 51   | 1781 | 4736 | 456   | 1781 | 498  | 1163 | 1781  | 1870 | 1585 | 1781 | 5215  | 50   | 1781 | 4786 | 414  | 1781 | 696  | 995  | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h   | 35   | 470   | 257  | 18   | 578  | 306   | 7    | 0    | 10   | 95    | 3    | 24   | 25   | 686   | 375  | 9    | 689  | 364  | 12   | 0    | 17   | 116  | 1    | 15   |
| Grp Sat Flow(s), veh/h/ln  | 1781 | 1702  | 1861 | 1781 | 1702 | 1788  | 1781 | 0    | 1661 | 1781  | 1870 | 1585 | 1781 | 1702  | 1861 | 1781 | 1702 | 1796 | 1781 | 0    | 1691 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s  | 1.2  | 9.6   | 9.6  | 0.6  | 12.5 | 12.6  | 0.3  | 0.0  | 0.5  | 4.5   | 0.1  | 1.3  | 0.9  | 15.5  | 15.5 | 0.3  | 15.9 | 16.0 | 0.6  | 0.0  | 0.9  | 5.4  | 0.0  | 0.8  |
| Cycle Q Clear(g_c), s  | 1.2  | 9.6   | 9.6  | 0.6  | 12.5 | 12.6  | 0.3  | 0.0  | 0.5  | 4.5   | 0.1  | 1.3  | 0.9  | 15.5  | 15.5 | 0.3  | 15.9 | 16.0 | 0.6  | 0.0  | 0.9  | 5.4  | 0.0  | 0.8  |
| Prop In Lane   | 1.00 |       | 0.03 | 1.00 |      | 0.26  | 1.00 |      | 0.70 | 1.00  |      | 1.00 | 1.00 |       | 0.03 | 1.00 |      | 0.23 | 1.00 |      | 0.59 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 355  | 1711  | 936  | 401  | 1678 | 881   | 433  | 0    | 429  | 510   | 565  | 479  | 286  | 1665  | 911  | 271  | 1622 | 856  | 464  | 0    | 459  | 537  | 596  | 505  |
| V/C Ratio(X)   | 0.10 | 0.27  | 0.27 | 0.04 | 0.34 | 0.35  | 0.02 | 0.00 | 0.02 | 0.19  | 0.01 | 0.05 | 0.09 | 0.41  | 0.41 | 0.03 | 0.42 | 0.43 | 0.03 | 0.00 | 0.04 | 0.22 | 0.00 | 0.03 |
| Avail Cap(c_a), veh/h  | 438  | 1711  | 936  | 487  | 1678 | 881   | 521  | 0    | 429  | 595   | 565  | 479  | 392  | 1665  | 911  | 400  | 1622 | 856  | 558  | 0    | 459  | 548  | 596  | 505  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 14.7 | 17.2  | 17.2 | 14.8 | 18.6 | 18.6  | 32.4 | 0.0  | 33.2 | 28.7  | 29.3 | 29.7 | 16.3 | 19.6  | 19.6 | 16.7 | 20.6 | 20.6 | 30.8 | 0.0  | 32.2 | 27.2 | 27.9 | 28.1 |
| Incr Delay (d2), s/veh   | 0.0  | 0.4   | 0.7  | 0.0  | 0.6  | 1.1   | 0.0  | 0.0  | 0.1  | 0.1   | 0.0  | 0.2  | 0.0  | 0.8   | 1.4  | 0.0  | 0.8  | 1.6  | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.1  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln  | 0.8  | 6.9   | 7.7  | 0.4  | 8.7  | 9.3   | 0.3  | 0.0  | 0.4  | 3.5   | 0.1  | 0.9  | 0.6  | 10.3  | 11.3 | 0.2  | 10.7 | 11.4 | 0.5  | 0.0  | 0.7  | 4.2  | 0.0  | 0.6  |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh  | 14.7 | 17.6  | 17.9 | 14.8 | 19.2 | 19.7  | 32.4 | 0.0  | 33.3 | 28.7  | 29.3 | 29.9 | 16.4 | 20.4  | 21.0 | 16.7 | 21.4 | 22.2 | 30.9 | 0.0  | 32.3 | 27.3 | 27.9 | 28.2 |
| LnGrp LOS  | B    | B     | B    | B    | B    | B     | C    | A    | C    | C     | C    | C    | B    | C     | C    | B    | C    | C    | C    | A    | C    | C    | C    | C    |
| Approach Vol, veh/h  | 762  |       |      | 902  |      |       | 17   |      |      | 122   |      |      | 1086 |       |      | 1062 |      |      | 29   |      |      | 132  |      |      |
| Approach Delay, s/veh  | 17.6 |       |      | 19.2 |      |       | 32.9 |      |      | 29.0  |      |      | 20.5 |       |      | 21.6 |      |      | 31.7 |      |      | 27.4 |      |      |
| Approach LOS   | B    |       |      | B    |      |       | C    |      |      | C     |      |      | C    |       |      | C    |      |      | C    |      |      | C    |      |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 7.4  | 64.8  | 10.3 | 37.4 | 6.3  | 66.0  | 5.0  | 42.7 | 6.8  | 62.9  | 11.3 | 39.0 | 5.3  | 64.4  | 5.6  | 44.6 |      |      |      |      |      |      |      |      |
| Change Period (Y+Rc), s  | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  | 4.0  | * 5.7 | 4.0  | 6.4  |      |      |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.0  | * 48  | 12.0 | 31.0 | 8.0  | * 49  | 7.0  | 36.0 | 10.0 | * 49  | 8.0  | 32.6 | 10.0 | * 49  | 8.0  | 32.6 |      |      |      |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 3.2  | 14.6  | 6.5  | 2.5  | 2.6  | 11.6  | 2.3  | 3.3  | 2.9  | 18.0  | 7.4  | 2.9  | 2.3  | 17.5  | 2.6  | 2.8  |      |      |      |      |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 4.3   | 0.0  | 0.0  | 0.0  | 3.4   | 0.0  | 0.0  | 0.0  | 5.3   | 0.0  | 0.0  | 0.0  | 5.3   | 0.0  | 0.0  |      |      |      |      |      |      |      |      |
| Intersection Summary   |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       |      |      |      |       | 19.3 |      |      |       |      |      |      |       |      |      |      |      | 21.6 |      |      |      |      |      |
| HCM 6th LOS  |      |       |      |      |      |       | B    |      |      |       |      |      |      |       |      |      |      |      | C    |      |      |      |      |      |
| Notes  |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |      |      |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |      |      |      |      |      |      |      |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

1: 32nd St. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

|                           | ↖ ↗  |      | ← →  |      | ↙ ↘  |      | ↖ ↗  |      | ← →  |      | ↙ ↘  |      | ↖ ↗  |      | ← →  |      | ↙ ↘  |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                  | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations       | ↖    | ↖↗   | ↖↗   | ↖↗   | ↖↗   | ↖↗   | ↖    | ↖    | ↖    | ↖    | ↖    | ↖    | ↖    | ↖↗   | ↖↗   | ↖↗   | ↖↗   | ↖↗   | ↖    | ↖    | ↖    | ↖    | ↖    | ↖    |
| Traffic Volume (veh/h)    | 17   | 704  | 9    | 6    | 649  | 75   | 8    | 5    | 9    | 78   | 1    | 20   | 17   | 704  | 9    | 6    | 649  | 75   | 8    | 5    | 9    | 78   | 1    | 20   |
| Future Volume (veh/h)     | 17   | 704  | 9    | 6    | 649  | 75   | 8    | 5    | 9    | 78   | 1    | 20   | 17   | 704  | 9    | 6    | 649  | 75   | 8    | 5    | 9    | 78   | 1    | 20   |
| Initial Q (Ob), veh       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 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 | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach     | No   |      |      | No   |      |      | No   |      |      | No   |      |      | No   |      |      | No   |      |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln    | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h      | 25   | 1051 | 10   | 9    | 969  | 84   | 12   | 7    | 10   | 116  | 1    | 15   | 25   | 1051 | 10   | 9    | 969  | 84   | 12   | 7    | 10   | 116  | 1    | 15   |
| Peak Hour Factor          | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| Percent Heavy Veh, %      | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                | 286  | 2552 | 24   | 271  | 2281 | 197  | 464  | 189  | 270  | 537  | 596  | 505  | 286  | 2552 | 24   | 271  | 2281 | 197  | 464  | 189  | 270  | 537  | 596  | 505  |
| Arrive On Green           | 0.02 | 0.49 | 0.49 | 0.01 | 0.48 | 0.48 | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 | 0.02 | 0.49 | 0.49 | 0.01 | 0.48 | 0.48 | 0.01 | 0.27 | 0.27 | 0.06 | 0.32 | 0.32 |
| Sat Flow, veh/h           | 1781 | 5215 | 50   | 1781 | 4786 | 414  | 1781 | 696  | 995  | 1781 | 1870 | 1585 | 1781 | 5215 | 50   | 1781 | 4786 | 414  | 1781 | 696  | 995  | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h      | 25   | 686  | 375  | 9    | 689  | 364  | 12   | 0    | 17   | 116  | 1    | 15   | 25   | 686  | 375  | 9    | 689  | 364  | 12   | 0    | 17   | 116  | 1    | 15   |
| Grp Sat Flow(s), veh/h/ln | 1781 | 1702 | 1861 | 1781 | 1702 | 1796 | 1781 | 0    | 1691 | 1781 | 1870 | 1585 | 1781 | 1702 | 1861 | 1781 | 1702 | 1796 | 1781 | 0    | 1691 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s           | 0.9  | 15.5 | 15.5 | 0.3  | 15.9 | 16.0 | 0.6  | 0.0  | 0.9  | 5.4  | 0.0  | 0.8  | 0.9  | 15.5 | 15.5 | 0.3  | 15.9 | 16.0 | 0.6  | 0.0  | 0.9  | 5.4  | 0.0  | 0.8  |
| Cycle Q Clear(g_c), s     | 0.9  | 15.5 | 15.5 | 0.3  | 15.9 | 16.0 | 0.6  | 0.0  | 0.9  | 5.4  | 0.0  | 0.8  | 0.9  | 15.5 | 15.5 | 0.3  | 15.9 | 16.0 | 0.6  |      |      |      |      |      |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 1217 | 382  | 94   | 581  | 104  | 148  |
| Future Vol, veh/h        | 1217 | 382  | 94   | 581  | 104  | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1352 | 424  | 104  | 646  | 116  | 164  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 1776   | 0 | 2030 888  |
| Stage 1              | -      | -      | -      | - | 1564 -    |
| Stage 2              | -      | -      | -      | - | 466 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 463    | - | 246 *624  |
| Stage 1              | -      | -      | -      | - | 502 -     |
| Stage 2              | -      | -      | -      | - | 547 -     |
| Platoon blocked, %   | -      | -      | 1      | - | 1 1       |
| Mov Cap-1 Maneuver   | -      | -      | 463    | - | 190 *624  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 348 -     |
| Stage 1              | -      | -      | -      | - | 502 -     |
| Stage 2              | -      | -      | -      | - | 424 -     |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.1 | 15.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 348   | 624   | -   | -   | 463   | -   |
| HCM Lane V/C Ratio    | 0.332 | 0.264 | -   | -   | 0.226 | -   |
| HCM Control Delay (s) | 20.4  | 12.8  | -   | -   | 15    | -   |
| HCM Lane LOS          | C     | B     | -   | -   | C     | -   |
| HCM 95th %tile Q(veh) | 1.4   | 1.1   | -   | -   | 0.9   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑   | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 688  | 85   | 29   | 766  | 106  | 29   |
| Future Vol, veh/h        | 688  | 85   | 29   | 766  | 106  | 29   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 724  | 89   | 31   | 806  | 112  | 31   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 813    | 0 | 1153 407  |
| Stage 1              | -      | -      | -      | - | 769 -     |
| Stage 2              | -      | -      | -      | - | 384 -     |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 7.14 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 -    |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 923    | - | 482 *756  |
| Stage 1              | -      | -      | -      | - | 776 -     |
| Stage 2              | -      | -      | -      | - | 602 -     |
| Platoon blocked, %   | -      | -      | 1      | - | 1 1       |
| Mov Cap-1 Maneuver   | -      | -      | 923    | - | 465 *756  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 542 -     |
| Stage 1              | -      | -      | -      | - | 776 -     |
| Stage 2              | -      | -      | -      | - | 582 -     |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 12.7 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 542   | 756   | -   | -   | 923   | -   |
| HCM Lane V/C Ratio    | 0.206 | 0.04  | -   | -   | 0.033 | -   |
| HCM Control Delay (s) | 13.4  | 10    | -   | -   | 9     | -   |
| HCM Lane LOS          | B     | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.8   | 0.1   | -   | -   | 0.1   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

2: 34th St. & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.9  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  |      | ↑↑↑  | ↑↑↑  | ↑    | ↑    |
| Traffic Vol, veh/h       | 628  | 161  | 33   | 609  | 119  | 167  |
| Future Vol, veh/h        | 628  | 161  | 33   | 609  | 119  | 167  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 150  | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 2    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 60   | 60   | 60   | 60   | 60   | 60   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1047 | 268  | 55   | 1015 | 198  | 278  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 1315   | 0 | 1697 |
| Stage 1              | -      | -      | -      | - | 1181 |
| Stage 2              | -      | -      | -      | - | 516  |
| Critical Hdwy        | -      | -      | 5.34   | - | 5.74 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 6.64 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 6.04 |
| Follow-up Hdwy       | -      | -      | 3.12   | - | 3.82 |
| Pot Cap-1 Maneuver   | -      | -      | 439    | - | 210  |
| Stage 1              | -      | -      | -      | - | 362  |
| Stage 2              | -      | -      | -      | - | 515  |
| Platoon blocked, %   | -      | -      | 1      | - | 1    |
| Mov Cap-1 Maneuver   | -      | -      | 439    | - | 183  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 308  |
| Stage 1              | -      | -      | -      | - | 362  |
| Stage 2              | -      | -      | -      | - | 451  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.7 | 21.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 308   | 778   | -   | -   | 439   | -   |
| HCM Lane V/C Ratio    | 0.644 | 0.358 | -   | -   | 0.125 | -   |
| HCM Control Delay (s) | 35.6  | 12.2  | -   | -   | 14.4  | -   |
| HCM Lane LOS          | E     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 4.2   | 1.6   | -   | -   | 0.4   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 12.2 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↑↓   |      |      | ↑↓   |      |      | ↑↓   |      |      | ↑↓   |      |
| Traffic Vol, veh/h  | 2    | 13   | 0    | 36   | 0    | 152  | 0    | 11   | 21   | 362  | 36   | 0    |
| Future Vol, veh/h   | 2    | 13   | 0    | 36   | 0    | 152  | 0    | 11   | 21   | 362  | 36   | 0    |
| 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 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 2    | 14   | 0    | 40   | 0    | 169  | 0    | 12   | 23   | 402  | 40   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB |
|----------------------------|-----|-----|-----|----|
| Opposing Approach          | WB  | EB  | SB  | NB |
| Opposing Lanes             | 1   | 1   | 1   | 1  |
| Conflicting Approach Left  | SB  | NB  | EB  | WB |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1  |
| Conflicting Approach Right | NB  | SB  | WB  | EB |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1  |
| HCM Control Delay          | 8.6 | 9.5 | 7.9 | 14 |
| HCM LOS                    | A   | A   | A   | B  |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 13%   | 19%   | 91%   |
| Vol Thru, %            | 34%   | 87%   | 0%    | 9%    |
| Vol Right, %           | 66%   | 0%    | 81%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 32    | 15    | 188   | 398   |
| LT Vol                 | 0     | 2     | 36    | 362   |
| Through Vol            | 11    | 13    | 0     | 36    |
| RT Vol                 | 21    | 0     | 152   | 0     |
| Lane Flow Rate         | 36    | 17    | 209   | 442   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.045 | 0.025 | 0.271 | 0.576 |
| Departure Headway (Hd) | 4.603 | 5.4   | 4.666 | 4.69  |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 772   | 659   | 767   | 765   |
| Service Time           | 2.669 | 3.467 | 2.71  | 2.736 |
| HCM Lane V/C Ratio     | 0.047 | 0.026 | 0.272 | 0.578 |
| HCM Control Delay      | 7.9   | 8.6   | 9.5   | 14    |
| HCM Lane LOS           | A     | A     | A     | B     |
| HCM 95th-tile Q        | 0.1   | 0.1   | 1.1   | 3.7   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |   |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 7 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | A |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 1    | 3    | 0    | 2    | 0    | 20   | 0    | 10   | 20   | 21   | 5    | 0    |
| Future Vol, veh/h   | 1    | 3    | 0    | 2    | 0    | 20   | 0    | 10   | 20   | 21   | 5    | 0    |
| Peak Hour Factor    | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 1    | 4    | 0    | 3    | 0    | 29   | 0    | 15   | 29   | 31   | 7    | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB  | WB  | NB  | SB  |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach          | WB  | EB  | SB  | NB  |
| Opposing Lanes             | 1   | 1   | 1   | 1   |
| Conflicting Approach Left  | SB  | NB  | EB  | WB  |
| Conflicting Lanes Left     | 1   | 1   | 1   | 1   |
| Conflicting Approach Right | NB  | SB  | WB  | EB  |
| Conflicting Lanes Right    | 1   | 1   | 1   | 1   |
| HCM Control Delay          | 7.2 | 6.7 | 6.8 | 7.4 |
| HCM LOS                    | A   | A   | A   | A   |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 25%   | 9%    | 81%   |
| Vol Thru, %            | 33%   | 75%   | 0%    | 19%   |
| Vol Right, %           | 67%   | 0%    | 91%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 30    | 4     | 22    | 26    |
| LT Vol                 | 0     | 1     | 2     | 21    |
| Through Vol            | 10    | 3     | 0     | 5     |
| RT Vol                 | 20    | 0     | 20    | 0     |
| Lane Flow Rate         | 44    | 6     | 32    | 38    |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.044 | 0.007 | 0.032 | 0.045 |
| Departure Headway (Hd) | 3.629 | 4.151 | 3.553 | 4.195 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 987   | 860   | 1005  | 856   |
| Service Time           | 1.648 | 2.185 | 1.585 | 2.209 |
| HCM Lane V/C Ratio     | 0.045 | 0.007 | 0.032 | 0.044 |
| HCM Control Delay      | 6.8   | 7.2   | 6.7   | 7.4   |
| HCM Lane LOS           | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.1   | 0     | 0.1   | 0.1   |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

3: 34th St. & Mayo Blvd.  
HCM 6th AWSC

| Intersection              |      |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| Intersection Delay, s/veh | 13.8 |  |  |  |  |  |  |  |  |  |  |  |
| Intersection LOS          | B    |  |  |  |  |  |  |  |  |  |  |  |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↔    |      |      | ↕    |      |      | ↕    |      |      | ↔    |      |
| Traffic Vol, veh/h  | 45   | 38   | 1    | 16   | 0    | 105  | 0    | 33   | 51   | 101  | 5    | 0    |
| Future Vol, veh/h   | 45   | 38   | 1    | 16   | 0    | 105  | 0    | 33   | 51   | 101  | 5    | 0    |
| Peak Hour Factor    | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 122  | 103  | 3    | 43   | 0    | 284  | 0    | 89   | 138  | 273  | 14   | 0    |
| Number of Lanes     | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | WB | NB   | SB   |
|----------------------------|------|----|------|------|
| Opposing Approach          | WB   | EB | SB   | NB   |
| Opposing Lanes             | 1    | 1  | 1    | 1    |
| Conflicting Approach Left  | SB   | NB | EB   | WB   |
| Conflicting Lanes Left     | 1    | 1  | 1    | 1    |
| Conflicting Approach Right | NB   | SB | WB   | EB   |
| Conflicting Lanes Right    | 1    | 1  | 1    | 1    |
| HCM Control Delay          | 13.3 | 14 | 12.3 | 15.3 |
| HCM LOS                    | B    | B  | B    | C    |

| Lane                   | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, %            | 0%    | 54%   | 13%   | 95%   |
| Vol Thru, %            | 39%   | 45%   | 0%    | 5%    |
| Vol Right, %           | 61%   | 1%    | 87%   | 0%    |
| Sign Control           | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 84    | 84    | 121   | 106   |
| LT Vol                 | 0     | 45    | 16    | 101   |
| Through Vol            | 33    | 38    | 0     | 5     |
| RT Vol                 | 51    | 1     | 105   | 0     |
| Lane Flow Rate         | 227   | 227   | 327   | 286   |
| Geometry Grp           | 1     | 1     | 1     | 1     |
| Degree of Util (X)     | 0.368 | 0.394 | 0.502 | 0.497 |
| Departure Headway (Hd) | 5.837 | 6.253 | 5.528 | 6.247 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 615   | 574   | 654   | 579   |
| Service Time           | 3.885 | 4.301 | 3.546 | 4.269 |
| HCM Lane V/C Ratio     | 0.369 | 0.395 | 0.5   | 0.494 |
| HCM Control Delay      | 12.3  | 13.3  | 14    | 15.3  |
| HCM Lane LOS           | B     | B     | B     | C     |
| HCM 95th-tile Q        | 1.7   | 1.9   | 2.8   | 2.8   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      |      |      | ↕    |      |      |      |
| Traffic Vol, veh/h       | 0    | 388  | 7    | 11   | 189  | 33   | 0    | 0    | 0    | 17   | 0    | 0    |
| Future Vol, veh/h        | 0    | 388  | 7    | 11   | 189  | 33   | 0    | 0    | 0    | 17   | 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 | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 431  | 8    | 12   | 210  | 37   | 0    | 0    | 0    | 19   | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 247    | 0      | 439    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1317   | -      | 1119   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1317   | -      | 1119   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 0.4 | 12 |
| HCM LOS              | B  |     |    |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1317 | -   | -   | 1119  | -   | -   | 532   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.011 | -   | -   | 0.036 |
| HCM Control Delay (s) | 0    | -   | -   | 8.3   | 0   | -   | 12    |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      |      |      | ↕    |      |      |      |
| Traffic Vol, veh/h       | 0    | 33   | 10   | 10   | 22   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 33   | 10   | 10   | 22   | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 69   | 69   | 69   | 69   | 90   | 69   | 90   | 69   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 48   | 14   | 14   | 32   | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 79     | 0      | 62     |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1518   | -      | 1540   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1518   | -      | 1540   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | SB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 1.1 | 9.3 |
| HCM LOS              | A  |     |     |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1518 | -   | -   | 1540  | -   | -   | 879   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.009 | -   | -   | 0.038 |
| HCM Control Delay (s) | 0    | -   | -   | 7.4   | 0   | -   | 9.3   |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0     | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

4: HS Bus Entrance/Access A & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      | -    |      | ↕    |      | -    |      |
| Traffic Vol, veh/h       | 0    | 181  | 8    | 17   | 120  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Future Vol, veh/h        | 0    | 181  | 8    | 17   | 120  | 42   | 0    | 0    | 0    | 29   | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 38   | 38   | 38   | 38   | 90   | 38   | 90   | 38   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 476  | 21   | 45   | 316  | 47   | 0    | 0    | 0    | 32   | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor2 | Minor1 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 363    | 0      | 0      | 497    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | 4.13   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | 2.219  |
| Pot Cap-1 Maneuver   | 1194   | -      | -      | 1065   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1194   | -      | -      | 1065   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.9 | 15.1 |
| HCM LOS              | C  |     |      |

| Minor Lane/Major Mvmt | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 1194 | -   | -   | 1065  | -   | -   | 391   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.042 | -   | -   | 0.085 |
| HCM Control Delay (s) | 0    | -   | -   | 8.5   | 0   | -   | 15.1  |
| HCM Lane LOS          | A    | -   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0.1   | -   | -   | 0.3   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕↕   |      | ↕    |      | ↕    |      | -    |      | ↕    |      | -    |      |
| Traffic Vol, veh/h       | 4    | 411  | 0    | 0    | 244  | 55   | 2    | 0    | 67   | 24   | 0    | 8    |
| Future Vol, veh/h        | 4    | 411  | 0    | 0    | 244  | 55   | 2    | 0    | 67   | 24   | 0    | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 457  | 0    | 0    | 271  | 61   | 2    | 0    | 74   | 27   | 0    | 9    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 332    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | *1337  | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *1337  | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB  |
|----------------------|-----|----|------|-----|
| HCM Control Delay, s | 0.1 | 0  | 10.2 | 9.9 |
| HCM LOS              | B   |    | A    |     |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 763   | *1337 | -   | -   | -   | 775   |
| HCM Lane V/C Ratio    | 0.1   | 0.003 | -   | -   | -   | 0.046 |
| HCM Control Delay (s) | 10.2  | 7.7   | 0   | -   | -   | 9.9   |
| HCM Lane LOS          | B     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 1.7     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕↕   |      |      | ↕    |      |      | ↕    |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 4    | 70   | 0    | 0    | 92   | 49   | 3    | 0    | 22   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 70   | 0    | 0    | 92   | 49   | 3    | 0    | 22   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 78   | 78   | 78   | 78   | 90   | 78   | 90   | 78   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 90   | 0    | 0    | 118  | 54   | 4    | 0    | 28   | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 172    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1524   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1524   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB  | SB |
|----------------------|-----|----|-----|----|
| HCM Control Delay, s | 0.3 | 0  | 8.8 | 9  |
| HCM LOS              |     |    | A   | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 990   | 1524  | -   | -   | -   | 922   |
| HCM Lane V/C Ratio    | 0.032 | 0.003 | -   | -   | -   | 0.03  |
| HCM Control Delay (s) | 8.8   | 7.4   | 0   | -   | -   | 9     |
| HCM Lane LOS          | A     | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

5: HS Bus Exit/Access B & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 2.1     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕↕   |      |      | ↕    |      |      | ↕    |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 4    | 218  | 0    | 0    | 196  | 49   | 3    | 0    | 70   | 18   | 0    | 7    |
| Future Vol, veh/h        | 4    | 218  | 0    | 0    | 196  | 49   | 3    | 0    | 70   | 18   | 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           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 39   | 39   | 39   | 39   | 90   | 39   | 90   | 39   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 559  | 0    | 0    | 503  | 54   | 8    | 0    | 179  | 20   | 0    | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 557    | 0      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.13   | -      | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.219  | -      | -      | -      |
| Pot Cap-1 Maneuver   | 1243   | -      | 0      | 0      |
| Stage 1              | -      | -      | 0      | 0      |
| Stage 2              | -      | -      | 0      | 0      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1243   | -      | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.1 | 0  | 12.5 | 14.7 |
| HCM LOS              |     |    | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 669   | 1243  | -   | -   | -   | 399   |
| HCM Lane V/C Ratio    | 0.28  | 0.004 | -   | -   | -   | 0.07  |
| HCM Control Delay (s) | 12.5  | 7.9   | 0   | -   | -   | 14.7  |
| HCM Lane LOS          | B     | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 1.1   | 0     | -   | -   | -   | 0.2   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↓   |      |      | ↑    | ↓    |      |
| Traffic Vol, veh/h       | 501  | 0    | 0    | 301  | 0    | 24   |
| Future Vol, veh/h        | 501  | 0    | 0    | 301  | 0    | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 557  | 0    | 0    | 334  | 0    | 27   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 557    | 0 | 891 279     |
| Stage 1              | -      | -      | -      | - | 557 -       |
| Stage 2              | -      | -      | -      | - | 334 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1012   | - | *539 719    |
| Stage 1              | -      | -      | -      | - | *538 -      |
| Stage 2              | -      | -      | -      | - | *794 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1           |
| Mov Cap-1 Maneuver   | -      | -      | 1012   | - | *539 719    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *539 -      |
| Stage 1              | -      | -      | -      | - | *538 -      |
| Stage 2              | -      | -      | -      | - | *794 -      |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 10.2 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 719   | -   | -   | 1012 | -   |
| HCM Lane V/C Ratio    | 0.037 | -   | -   | -    | -   |
| HCM Control Delay (s) | 10.2  | -   | -   | 0    | -   |
| HCM Lane LOS          | B     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0    | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↓   |      |      | ↑    | ↓    |      |
| Traffic Vol, veh/h       | 109  | 1    | 1    | 143  | 0    | 21   |
| Future Vol, veh/h        | 109  | 1    | 1    | 143  | 0    | 21   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 136  | 1    | 1    | 179  | 0    | 26   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 137    | 0 | 318 69      |
| Stage 1              | -      | -      | -      | - | 137 -       |
| Stage 2              | -      | -      | -      | - | 181 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.63 6.93   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.83 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.219  | - | 3.519 3.319 |
| Pot Cap-1 Maneuver   | -      | -      | 1446   | - | *906 980    |
| Stage 1              | -      | -      | -      | - | *876 -      |
| Stage 2              | -      | -      | -      | - | *917 -      |
| Platoon blocked, %   | -      | -      | -      | - | 1           |
| Mov Cap-1 Maneuver   | -      | -      | 1446   | - | *905 980    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | *905 -      |
| Stage 1              | -      | -      | -      | - | *876 -      |
| Stage 2              | -      | -      | -      | - | *916 -      |

| Approach             | EB | WB  | NB  |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0  | 0.1 | 8.8 |
| HCM LOS              |    |     | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 980   | -   | -   | 1446  | -   |
| HCM Lane V/C Ratio    | 0.027 | -   | -   | 0.001 | -   |
| HCM Control Delay (s) | 8.8   | -   | -   | 7.5   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

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



22-1270: Black Mountain Village  
2029 Total School PM Mitigated

6: HS Eastern Drwy. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 306  | 0    | 0    | 247  | 3    | 32   |
| Future Vol, veh/h        | 306  | 0    | 0    | 247  | 3    | 32   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 39   | 39   | 39   | 39   | 39   | 39   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 785  | 0    | 0    | 633  | 8    | 82   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 785    | 0      |
| Stage 1              | -      | -      | -      | 785    |
| Stage 2              | -      | -      | -      | 633    |
| Critical Hdwy        | -      | -      | 4.13   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.83   |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.43   |
| Follow-up Hdwy       | -      | -      | 2.219  | -      |
| Pot Cap-1 Maneuver   | -      | -      | 832    | -      |
| Stage 1              | -      | -      | -      | 411    |
| Stage 2              | -      | -      | -      | 739    |
| Platoon blocked, %   | -      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 832    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | 186    |
| Stage 1              | -      | -      | -      | 411    |
| Stage 2              | -      | -      | -      | 739    |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-----|-----|
| Capacity (veh/h)      | 508   | -   | -   | 832 | -   |
| HCM Lane V/C Ratio    | 0.177 | -   | -   | -   | -   |
| HCM Control Delay (s) | 13.6  | -   | -   | 0   | -   |
| HCM Lane LOS          | B     | -   | -   | A   | -   |
| HCM 95th %tile Q(veh) | 0.6   | -   | -   | 0   | -   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 31   | 11   | 52   | 83   | 5    | 6    | 26   | 324  | 77   | 5    | 606  | 23   |
| Future Vol, veh/h        | 31   | 11   | 52   | 83   | 5    | 6    | 26   | 324  | 77   | 5    | 606  | 23   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 34   | 12   | 58   | 92   | 6    | 7    | 29   | 360  | 86   | 6    | 673  | 26   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 939    | 1202   | 350    | 705    |
| Stage 1              | 698    | 698    | -      | 418    |
| Stage 2              | 241    | 504    | -      | 287    |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   |
| Pot Cap-1 Maneuver   | *407   | 275    | 552    | *597   |
| Stage 1              | *330   | 440    | -      | *879   |
| Stage 2              | *879   | 769    | -      | *661   |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *381   | 260    | 552    | *493   |
| Mov Cap-2 Maneuver   | *381   | 260    | -      | *493   |
| Stage 1              | *313   | 438    | -      | *832   |
| Stage 2              | *820   | 728    | -      | *573   |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 14.6 | 13.9 | 0.7 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 545   | -   | -   | 381   | 462   | 493   | 470   | *1453 | -   | -   |
| HCM Lane V/C Ratio    | 0.053 | -   | -   | 0.09  | 0.152 | 0.187 | 0.026 | 0.004 | -   | -   |
| HCM Control Delay (s) | 12    | -   | -   | 15.4  | 14.2  | 14    | 12.9  | 7.5   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.3   | 0.5   | 0.7   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 52   | 21   | 27   | 78   | 22   | 10   | 33   | 430  | 61   | 10   | 234  | 39   |
| Future Vol, veh/h        | 52   | 21   | 27   | 78   | 22   | 10   | 33   | 430  | 61   | 10   | 234  | 39   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 69   | 28   | 36   | 104  | 29   | 13   | 44   | 573  | 81   | 13   | 312  | 52   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |       |   |   |  |  |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|-------|---|---|--|--|
| Conflicting Flow All | 753    | 1106   | 182    | 826    | 1051 | 287  | 364  | 0 | 0 | 654   | 0 | 0 |  |  |
| Stage 1              | 364    | 364    | -      | 661    | 661  | -    | -    | - | - | -     | - | - |  |  |
| Stage 2              | 389    | 742    | -      | 165    | 390  | -    | -    | - | - | -     | - | - |  |  |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   | 6.54 | 6.94 | 5.34 | - | - | 4.14  | - | - |  |  |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   | 5.54 | -    | -    | - | - | -     | - | - |  |  |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   | 5.54 | -    | -    | - | - | -     | - | - |  |  |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   | 4.02 | 3.32 | 3.12 | - | - | 2.22  | - | - |  |  |
| Pot Cap-1 Maneuver   | *737   | 400    | 706    | *651   | *435 | *919 | 784  | - | - | *1375 | - | - |  |  |
| Stage 1              | *559   | 622    | -      | *832   | *760 | -    | -    | - | - | -     | - | - |  |  |
| Stage 2              | *832   | 708    | -      | *783   | *606 | -    | -    | - | - | -     | - | - |  |  |
| Platoon blocked, %   | 1      | 1      | -      | 1      | 1    | -    | 1    | - | - | 1     | - | - |  |  |
| Mov Cap-1 Maneuver   | *652   | 374    | 706    | *554   | *407 | *919 | 784  | - | - | *1375 | - | - |  |  |
| Mov Cap-2 Maneuver   | *652   | 374    | -      | *554   | *407 | -    | -    | - | - | -     | - | - |  |  |
| Stage 1              | *528   | 616    | -      | *785   | *717 | -    | -    | - | - | -     | - | - |  |  |
| Stage 2              | *742   | 668    | -      | *703   | *601 | -    | -    | - | - | -     | - | - |  |  |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 12.1 | 13 | 0.6 | 0.3 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 784   | -   | -   | 652   | 509   | 554   | 493   | *1375 | -   | -   |
| HCM Lane V/C Ratio    | 0.056 | -   | -   | 0.106 | 0.126 | 0.188 | 0.087 | 0.01  | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 11.2  | 13.1  | 13    | 13    | 7.6   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.4   | 0.4   | 0.7   | 0.3   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

7: Black Mountain Pkwy. & Rough Rider Rd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 13   | 7    | 30   | 58   | 7    | 10   | 27   | 260  | 56   | 2    | 265  | 24   |
| Future Vol, veh/h        | 13   | 7    | 30   | 58   | 7    | 10   | 27   | 260  | 56   | 2    | 265  | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 155  | -    | -    | 220  | -    | -    | 170  | -    | 245  | 160  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 8    | 34   | 65   | 8    | 11   | 30   | 292  | 63   | 2    | 298  | 27   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |       |   |   |  |  |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|-------|---|---|--|--|
| Conflicting Flow All | 526    | 731    | 163    | 479    | 681  | 146  | 325  | 0 | 0 | 355   | 0 | 0 |  |  |
| Stage 1              | 316    | 316    | -      | 352    | 352  | -    | -    | - | - | -     | - | - |  |  |
| Stage 2              | 210    | 415    | -      | 127    | 329  | -    | -    | - | - | -     | - | - |  |  |
| Critical Hdwy        | 6.99   | 6.54   | 7.14   | 6.99   | 6.54 | 6.94 | 5.34 | - | - | 4.14  | - | - |  |  |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 6.54   | 5.54 | -    | -    | - | - | -     | - | - |  |  |
| Critical Hdwy Stg 2  | 6.54   | 5.54   | -      | 6.74   | 5.54 | -    | -    | - | - | -     | - | - |  |  |
| Follow-up Hdwy       | 3.67   | 4.02   | 3.92   | 3.67   | 4.02 | 3.32 | 3.12 | - | - | 2.22  | - | - |  |  |
| Pot Cap-1 Maneuver   | *693   | 490    | 725    | *746   | *526 | *997 | 818  | - | - | *1492 | - | - |  |  |
| Stage 1              | *602   | 654    | -      | *902   | *824 | -    | -    | - | - | -     | - | - |  |  |
| Stage 2              | *902   | 774    | -      | *824   | *645 | -    | -    | - | - | -     | - | - |  |  |
| Platoon blocked, %   | 1      | 1      | -      | 1      | 1    | -    | 1    | - | - | 1     | - | - |  |  |
| Mov Cap-1 Maneuver   | *657   | 471    | 725    | *682   | *506 | *997 | 818  | - | - | *1492 | - | - |  |  |
| Mov Cap-2 Maneuver   | *657   | 471    | -      | *682   | *506 | -    | -    | - | - | -     | - | - |  |  |
| Stage 1              | *580   | 653    | -      | *869   | *794 | -    | -    | - | - | -     | - | - |  |  |
| Stage 2              | *851   | 746    | -      | *775   | *644 | -    | -    | - | - | -     | - | - |  |  |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.7 | 10.7 | 0.8 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 818   | -   | -   | 657   | 658   | 682   | 712   | *1492 | -   | -   |
| HCM Lane V/C Ratio    | 0.037 | -   | -   | 0.022 | 0.063 | 0.096 | 0.027 | 0.002 | -   | -   |
| HCM Control Delay (s) | 9.6   | -   | -   | 10.6  | 10.8  | 10.8  | 10.2  | 7.4   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.2   | 0.3   | 0.1   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 28   | 3    | 144  | 8    | 1    | 0    | 100  | 399  | 13   | 0    | 735  | 7    |
| Future Vol, veh/h        | 28   | 3    | 144  | 8    | 1    | 0    | 100  | 399  | 13   | 0    | 735  | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 31   | 3    | 160  | 9    | 1    | 0    | 111  | 443  | 14   | 0    | 817  | 8    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1221   | 1500   | 413    | 1000   |
| Stage 1              | 821    | 821    | -      | 672    |
| Stage 2              | 400    | 679    | -      | 328    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 255    | 159    | 503    | 352    |
| Stage 1              | 265    | 387    | -      | 515    |
| Stage 2              | 814    | 581    | -      | 604    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 208    | 122    | 503    | 193    |
| Mov Cap-2 Maneuver   | 208    | 122    | -      | 193    |
| Stage 1              | 203    | 387    | -      | 394    |
| Stage 2              | 622    | 445    | -      | 408    |

| Approach             | EB   | WB   | NB  | SB |
|----------------------|------|------|-----|----|
| HCM Control Delay, s | 22.8 | 25.9 | 2.9 | 0  |
| HCM LOS              | C    | D    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 475   | -   | -   | 393   | 182   | 947 | -   | -   |
| HCM Lane V/C Ratio    | 0.234 | -   | -   | 0.495 | 0.055 | -   | -   | -   |
| HCM Control Delay (s) | 14.9  | -   | -   | 22.8  | 25.9  | 0   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | C     | D     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.9   | -   | -   | 2.7   | 0.2   | 0   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14   | 1    | 137  | 9    | 1    | 3    | 109  | 506  | 10   | 3    | 324  | 10   |
| Future Vol, veh/h        | 14   | 1    | 137  | 9    | 1    | 3    | 109  | 506  | 10   | 3    | 324  | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 19   | 1    | 188  | 12   | 1    | 4    | 149  | 693  | 14   | 4    | 444  | 14   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1035   | 1464   | 229    | 1184   |
| Stage 1              | 459    | 459    | -      | 998    |
| Stage 2              | 576    | 1005   | -      | 186    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 416    | 205    | 659    | 333    |
| Stage 1              | 467    | 565    | -      | 390    |
| Stage 2              | 818    | 475    | -      | 733    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 344    | 161    | 659    | 198    |
| Mov Cap-2 Maneuver   | 344    | 161    | -      | 198    |
| Stage 1              | 369    | 562    | -      | 308    |
| Stage 2              | 640    | 375    | -      | 521    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 14.2 | 21.6 | 2  | 0.1 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 709   | -   | -   | 597   | 235   | 856   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | 0.349 | 0.076 | 0.005 | -   | -   |
| HCM Control Delay (s) | 11.4  | -   | -   | 14.2  | 21.6  | 9.2   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | 1.6   | 0.2   | 0     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

8: Black Mountain Pkwy. & Bryce Ln.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      |
| Traffic Vol, veh/h       | 7    | 0    | 82   | 13   | 0    | 8    | 98   | 327  | 8    | 3    | 348  | 1    |
| Future Vol, veh/h        | 7    | 0    | 82   | 13   | 0    | 8    | 98   | 327  | 8    | 3    | 348  | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 160  | -    | -    | 185  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8    | 0    | 93   | 15   | 0    | 9    | 111  | 372  | 9    | 3    | 395  | 1    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 773    | 1005   | 198    | 763    |
| Stage 1              | 402    | 402    | -      | 599    |
| Stage 2              | 371    | 603    | -      | 164    |
| Critical Hdwy        | 6.44   | 6.54   | 7.14   | 6.44   |
| Critical Hdwy Stg 1  | 7.34   | 5.54   | -      | 7.34   |
| Critical Hdwy Stg 2  | 6.74   | 5.54   | -      | 6.74   |
| Follow-up Hdwy       | 3.82   | 4.02   | 3.92   | 3.82   |
| Pot Cap-1 Maneuver   | 486    | 332    | 689    | 493    |
| Stage 1              | 510    | 599    | -      | 581    |
| Stage 2              | 849    | 632    | -      | 755    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | 426    | 282    | 689    | 377    |
| Mov Cap-2 Maneuver   | 426    | 282    | -      | 377    |
| Stage 1              | 436    | 597    | -      | 496    |
| Stage 2              | 717    | 539    | -      | 651    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 11.5 | 12.9 | 2.4 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 758   | -   | -   | 657   | 478   | 1032  | -   | -   |
| HCM Lane V/C Ratio    | 0.147 | -   | -   | 0.154 | 0.05  | 0.003 | -   | -   |
| HCM Control Delay (s) | 10.6  | -   | -   | 11.5  | 12.9  | 8.5   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0.5   | 0.2   | 0     | -   | -   |

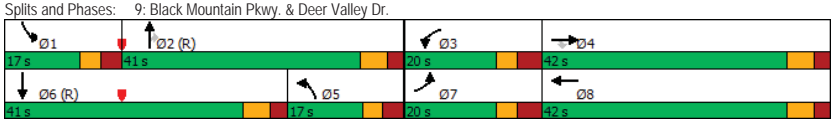
Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

22-1270: Black Mountain Village  
2029 Total AM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 98    | 782   | 497   | 274   | 214   | 388   | 364   | 294   | 99    | 714   |
| Future Volume (vph)  | 98    | 782   | 497   | 274   | 214   | 388   | 364   | 294   | 99    | 714   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 16.5  | 41.5  | 41.5  | 11.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (%)      | 20.0  | 42.0  | 42.0  | 20.0  | 42.0  | 17.0  | 41.0  | 41.0  | 17.0  | 41.0  |
| Total Split (s)      | 16.7% | 35.0% | 35.0% | 16.7% | 35.0% | 14.2% | 34.2% | 34.2% | 14.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 68 (57%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated



22-1270: Black Mountain Village  
2029 Total PM Mitigated

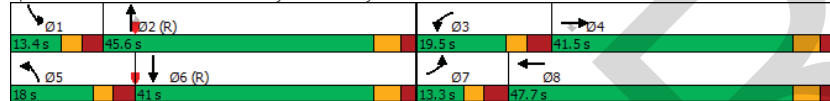
9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Traffic Volume (vph) | 72    | 438   | 239   | 280   | 471   | 267   | 457   | 231   | 85    | 328   |
| Future Volume (vph)  | 72    | 438   | 239   | 280   | 471   | 267   | 457   | 231   | 85    | 328   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 13.0  | 5.0   | 10.0  | 15.0  | 15.0  | 5.0   | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 19.5  | 41.5  | 16.1  | 40.4  | 40.4  | 11.1  | 40.4  |
| Total Split (s)      | 13.3  | 41.5  | 41.5  | 19.5  | 47.7  | 18.0  | 45.6  | 45.6  | 13.4  | 41.0  |
| Total Split (%)      | 11.1% | 34.6% | 34.6% | 16.3% | 39.8% | 15.0% | 38.0% | 38.0% | 11.2% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1   | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1   | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
Natural Cycle: 120  
Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total School PM Mitigated

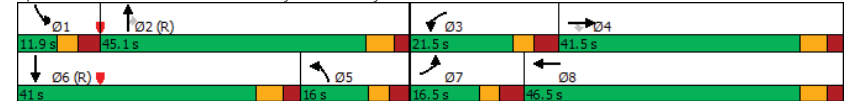
9: Black Mountain Pkwy. & Deer Valley Dr.  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL  | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗  | ↖ ↗   |
| Traffic Volume (vph) | 111   | 414   | 302   | 253   | 253   | 349   | 269   | 241   | 54   | 347   |
| Future Volume (vph)  | 111   | 414   | 302   | 253   | 253   | 349   | 269   | 241   | 54   | 347   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  | Prot | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1    | 6     |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |      |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 5     | 2     | 2     | 1    | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |      |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  | 5.0  | 15.0  |
| Minimum Split (s)    | 11.5  | 41.5  | 41.5  | 21.5  | 41.5  | 11.1  | 40.4  | 40.4  | 11.1 | 40.4  |
| Total Split (s)      | 16.5  | 41.5  | 41.5  | 21.5  | 46.5  | 16.0  | 45.1  | 45.1  | 11.9 | 41.0  |
| Total Split (%)      | 13.8% | 34.6% | 34.6% | 17.9% | 38.8% | 13.3% | 37.6% | 37.6% | 9.9% | 34.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)     | 3.5   | 2.5   | 2.5   | 3.5   | 2.5   | 3.1   | 2.4   | 2.4   | 3.1  | 2.4   |
| 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)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.1   | 6.4   | 6.4   | 6.1  | 6.4   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lag   | Lag   | Lead | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None | C-Max |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
Natural Cycle: 125  
Control Type: Actuated-Coordinated

Splits and Phases: 9: Black Mountain Pkwy. & Deer Valley Dr.



22-1270: Black Mountain Village  
2029 Total AM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 98   | 782  | 497  | 274  | 214  | 51   | 388  | 364  | 294  | 99   | 714  | 74   |
| Future Volume (veh/h)        | 98   | 782  | 497  | 274  | 214  | 51   | 388  | 364  | 294  | 99   | 714  | 74   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 109  | 869  | 0    | 304  | 238  | 43   | 431  | 404  | 0    | 110  | 793  | 62   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 280  | 1096 | 0    | 359  | 1038 | 181  | 616  | 2154 | 0    | 163  | 1393 | 108  |
| Arrive On Green              | 0.03 | 0.07 | 0.00 | 0.10 | 0.24 | 0.24 | 0.30 | 0.70 | 0.00 | 0.05 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4376 | 761  | 3456 | 5106 | 1585 | 3456 | 4831 | 376  |
| Grp Volume(v), veh/h         | 109  | 869  | 0    | 304  | 183  | 98   | 431  | 404  | 0    | 110  | 558  | 297  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1733 | 1728 | 1702 | 1585 | 1728 | 1702 | 1803 |
| Q Serve(g_s), s              | 3.7  | 20.1 | 0.0  | 10.4 | 5.2  | 5.5  | 13.3 | 3.2  | 0.0  | 3.8  | 16.7 | 16.9 |
| Cycle Q Clear(g_c), s        | 3.7  | 20.1 | 0.0  | 10.4 | 5.2  | 5.5  | 13.3 | 3.2  | 0.0  | 3.8  | 16.7 | 16.9 |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 0.44 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.21 |
| Lane Grp Cap(c), veh/h       | 280  | 1096 | 0    | 359  | 807  | 411  | 616  | 2154 | 163  | 982  | 520  | 297  |
| V/C Ratio(X)                 | 0.39 | 0.79 | 0.00 | 0.85 | 0.23 | 0.24 | 0.70 | 0.19 | 0.00 | 0.67 | 0.57 | 0.57 |
| Avail Cap(c_a), veh/h        | 389  | 1511 | 0    | 389  | 1007 | 513  | 616  | 2154 | 314  | 982  | 520  | 297  |
| HCM Platoon Ratio            | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 55.5 | 53.1 | 0.0  | 52.8 | 36.9 | 37.0 | 39.3 | 10.7 | 0.0  | 56.2 | 36.3 | 36.4 |
| Incr Delay (d2), s/veh       | 0.3  | 1.4  | 0.0  | 13.9 | 0.1  | 0.1  | 3.0  | 0.2  | 0.0  | 1.8  | 2.4  | 4.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 3.0  | 14.4 | 0.0  | 8.9  | 3.9  | 4.2  | 9.1  | 2.2  | 0.0  | 3.0  | 11.7 | 12.7 |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 55.8 | 54.5 | 0.0  | 66.7 | 36.9 | 37.1 | 42.3 | 10.9 | 0.0  | 58.0 | 38.7 | 40.9 |
| LnGrp LOS                    | E    | D    |      | E    | D    | D    | D    | B    |      | E    | D    | D    |
| Approach Vol, veh/h          |      | 978  |      |      | 585  |      |      | 835  |      |      | 965  |      |
| Approach Delay, s/veh        |      | 54.6 |      |      | 52.5 |      |      | 27.1 |      |      | 41.6 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 11.8 | 57.0 | 19.0 | 32.2 | 27.8 | 41.0 | 16.2 | 35.0 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | 6.4  | 6.5  | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.9 | 34.6 | 13.5 | 35.5 | 10.9 | 35   | 13.5 | 35.5 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 5.8  | 5.2  | 12.4 | 22.1 | 15.3 | 18.9 | 5.7  | 7.5  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.1  | 1.9  | 0.1  | 3.6  | 0.0  | 3.5  | 0.1  | 1.2  |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 43.7 |
| HCM 6th LOS        | D    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Total PM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 72   | 438  | 239  | 280  | 471  | 96   | 267  | 457  | 231  | 85   | 328  | 57   |
| Future Volume (veh/h)        | 72   | 438  | 239  | 280  | 471  | 96   | 267  | 457  | 231  | 85   | 328  | 57   |
| Initial Q (Ob), 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 83   | 503  | 0    | 322  | 541  | 82   | 307  | 525  | 0    | 98   | 377  | 50   |
| Peak Hour Factor             | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 135  | 669  | 0    | 374  | 898  | 134  | 343  | 2579 | 149  | 2054 | 267  | 297  |
| Arrive On Green              | 0.04 | 0.13 | 0.00 | 0.11 | 0.20 | 0.20 | 0.03 | 0.17 | 0.00 | 0.04 | 0.45 | 0.45 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4485 | 669  | 3456 | 5106 | 1585 | 3456 | 4574 | 594  |
| Grp Volume(v), veh/h         | 83   | 503  | 0    | 322  | 408  | 215  | 307  | 525  | 0    | 98   | 278  | 149  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1750 | 1728 | 1702 | 1585 | 1728 | 1702 | 1763 |
| Q Serve(g_s), s              | 2.8  | 11.4 | 0.0  | 11.0 | 13.1 | 13.4 | 10.6 | 10.6 | 0.0  | 3.4  | 5.9  | 6.1  |
| Cycle Q Clear(g_c), s        | 2.8  | 11.4 | 0.0  | 11.0 | 13.1 | 13.4 | 10.6 | 10.6 | 0.0  | 3.4  | 5.9  | 6.1  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 0.38 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.34 |
| Lane Grp Cap(c), veh/h       | 135  | 669  | 0    | 374  | 682  | 350  | 343  | 2579 | 149  | 1529 | 792  | 297  |
| V/C Ratio(X)                 | 0.62 | 0.75 | 0.00 | 0.86 | 0.60 | 0.61 | 0.90 | 0.20 | 0.00 | 0.66 | 0.18 | 0.19 |
| Avail Cap(c_a), veh/h        | 196  | 1489 | 0    | 374  | 1169 | 601  | 343  | 2579 | 210  | 1529 | 792  | 297  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 56.8 | 50.3 | 0.0  | 52.6 | 43.6 | 43.7 | 57.4 | 29.2 | 0.0  | 56.5 | 19.8 | 19.9 |
| Incr Delay (d2), s/veh       | 1.7  | 0.7  | 0.0  | 17.2 | 0.3  | 0.6  | 24.1 | 0.2  | 0.0  | 1.8  | 0.3  | 0.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 2.3  | 8.5  | 0.0  | 9.6  | 9.4  | 9.8  | 10.1 | 8.5  | 0.0  | 2.7  | 4.3  | 4.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 58.5 | 50.9 | 0.0  | 69.8 | 43.9 | 44.4 | 81.5 | 29.4 | 0.0  | 58.4 | 20.1 | 20.4 |
| LnGrp LOS                    | E    | D    |      | E    | D    | D    | F    | C    |      | E    | C    | C    |
| Approach Vol, veh/h          |      | 586  |      |      | 945  |      |      | 832  |      |      | 525  |      |
| Approach Delay, s/veh        |      | 52.0 |      |      | 52.9 |      |      | 48.6 |      |      | 27.3 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | D    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 11.3 | 67.0 | 19.5 | 22.2 | 18.0 | 60.3 | 11.2 | 30.5 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.1  | 6.4  | 6.5  | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 7.3  | 39.2 | 13.0 | 35.0 | 11.9 | 34.6 | 6.8  | 41.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 5.4  | 12.6 | 13.0 | 13.4 | 12.6 | 8.1  | 4.8  | 15.4 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.5  | 0.0  | 2.3  | 0.0  | 1.8  | 0.0  | 2.8  |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 46.8 |
| HCM 6th LOS        | D    |

Notes

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

9: Black Mountain Pkwy. & Deer Valley Dr.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 111  | 414  | 302  | 253  | 253  | 53    | 349  | 269  | 241  | 54   | 347  | 41   |
| Future Volume (veh/h)        | 111  | 414  | 302  | 253  | 253  | 53    | 349  | 269  | 241  | 54   | 347  | 41   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 161  | 600  | 0    | 367  | 367  | 58    | 506  | 390  | 0    | 78   | 503  | 45   |
| Peak Hour Factor             | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69  | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 214  | 755  |      | 420  | 926  | 143   | 785  | 2449 |      | 133  | 1377 | 122  |
| Arrive On Green              | 0.12 | 0.30 | 0.00 | 0.12 | 0.21 | 0.21  | 0.08 | 0.16 | 0.00 | 0.04 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 3456 | 5106 | 1585 | 3456 | 4463 | 687   | 3456 | 5106 | 1585 | 3456 | 4776 | 422  |
| Grp Volume(v), veh/h         | 161  | 600  | 0    | 367  | 278  | 147   | 506  | 390  | 0    | 78   | 357  | 191  |
| Grp Sat Flow(s), veh/h/ln    | 1728 | 1702 | 1585 | 1728 | 1702 | 1747  | 1728 | 1702 | 1585 | 1728 | 1702 | 1794 |
| Q Serve(g_s), s              | 5.4  | 13.0 | 0.0  | 12.5 | 8.4  | 8.8   | 17.1 | 7.9  | 0.0  | 2.7  | 10.0 | 10.2 |
| Cycle Q Clear(g_c), s        | 5.4  | 13.0 | 0.0  | 12.5 | 8.4  | 8.8   | 17.1 | 7.9  | 0.0  | 2.7  | 10.0 | 10.2 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.39  | 1.00 |      | 1.00 | 1.00 |      | 0.24 |
| Lane Grp Cap(c), veh/h       | 214  | 755  |      | 420  | 706  | 362   | 785  | 2449 |      | 133  | 982  | 517  |
| V/C Ratio(X)                 | 0.75 | 0.79 |      | 0.87 | 0.39 | 0.41  | 0.64 | 0.16 |      | 0.59 | 0.36 | 0.37 |
| Avail Cap(c_a), veh/h        | 288  | 1489 |      | 432  | 1135 | 582   | 785  | 2449 |      | 167  | 982  | 517  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00  | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 51.7 | 40.6 | 0.0  | 51.8 | 41.0 | 41.2  | 50.8 | 29.6 | 0.0  | 56.7 | 33.9 | 34.0 |
| Incr Delay (d2), s/veh       | 4.6  | 0.7  | 0.0  | 16.7 | 0.1  | 0.3   | 1.4  | 0.1  | 0.0  | 1.5  | 1.0  | 2.0  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%), veh/ln    | 4.3  | 8.3  | 0.0  | 10.5 | 6.4  | 6.9   | 12.8 | 6.3  | 0.0  | 2.1  | 7.7  | 8.3  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 56.3 | 41.3 | 0.0  | 68.5 | 41.2 | 41.4  | 52.2 | 29.8 | 0.0  | 58.3 | 35.0 | 36.0 |
| LnGrp LOS                    | E    | D    |      | E    | D    | D     | D    | C    |      | E    | C    | D    |
| Approach Vol, veh/h          |      | 761  |      |      | 792  |       |      | 896  |      |      | 626  |      |
| Approach Delay, s/veh        |      | 44.5 |      |      | 53.9 |       |      | 42.4 |      |      | 38.2 |      |
| Approach LOS                 |      | D    |      |      | D    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.7 | 63.9 | 21.1 | 24.3 | 33.7 | 41.0  | 13.9 | 31.4 |      |      |      |      |
| Change Period (Y+Rc), s      | 6.1  | 6.4  | 6.5  | 6.5  | 6.4  | * 6.4 | 6.5  | 6.5  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.8  | 38.7 | 15.0 | 35.0 | 9.9  | * 35  | 10.0 | 40.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 4.7  | 9.9  | 14.5 | 15.0 | 19.1 | 12.2  | 7.4  | 10.8 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.8  | 0.0  | 2.8  | 0.0  | 2.3   | 0.1  | 1.9  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 45.0 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

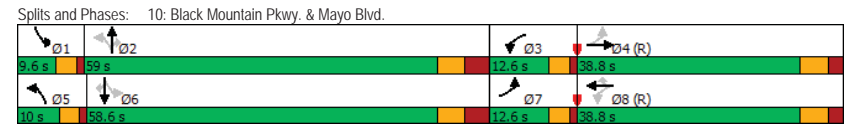
Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Total AM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 348   | 52    | 316   | 87    | 149   | 98    | 498   | 154   | 48    | 1228  | 116   |
| Future Volume (vph)  | 348   | 52    | 316   | 87    | 149   | 98    | 498   | 154   | 48    | 1228  | 116   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phases      | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (%)      | 12.6  | 38.8  | 12.6  | 38.8  | 38.8  | 10.0  | 59.0  | 59.0  | 9.6   | 58.6  | 58.6  |
| Total Split (%)      | 10.5% | 32.3% | 10.5% | 32.3% | 32.3% | 8.3%  | 49.2% | 49.2% | 8.0%  | 48.8% | 48.8% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

| Intersection Summary  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|
| Cycle Length: 120   |  |  |  |  |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 120  |  |  |  |  |  |  |  |  |  |  |  |  |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |  |  |  |  |  |  |  |  |  |  |  |  |
| Natural Cycle: 105  |  |  |  |  |  |  |  |  |  |  |  |  |
| Control Type: Actuated-Coordinated                                    |  |  |  |  |  |  |  |  |  |  |  |  |



22-1270: Black Mountain Village  
2029 Total PM Mitigated

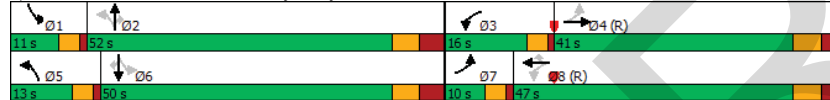
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 60    | 32    | 188   | 25    | 105   | 90    | 723   | 156   | 71    | 666   | 28    |
| Future Volume (vph)  | 60    | 32    | 188   | 25    | 105   | 90    | 723   | 156   | 71    | 666   | 28    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 10.0  | 41.0  | 16.0  | 47.0  | 47.0  | 13.0  | 52.0  | 52.0  | 11.0  | 50.0  | 50.0  |
| Total Split (%)      | 8.3%  | 34.2% | 13.3% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 9.2%  | 41.7% | 41.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
Natural Cycle: 105  
Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.



22-1270: Black Mountain Village  
2029 Total School PM Mitigated

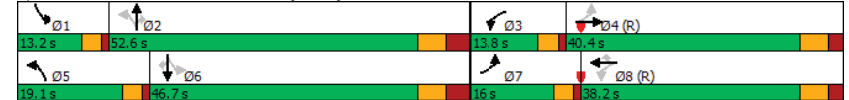
10: Black Mountain Pkwy. & Mayo Blvd.  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 167   | 53    | 123   | 32    | 108   | 119   | 517   | 163   | 107   | 620   | 95    |
| Future Volume (vph)  | 167   | 53    | 123   | 32    | 108   | 119   | 517   | 163   | 107   | 620   | 95    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 37.4  | 9.5   | 37.4  | 37.4  | 9.5   | 25.7  | 25.7  | 9.5   | 43.7  | 43.7  |
| Total Split (s)      | 16.0  | 40.4  | 13.8  | 38.2  | 38.2  | 19.1  | 52.6  | 52.6  | 13.2  | 46.7  | 46.7  |
| Total Split (%)      | 13.3% | 33.7% | 11.5% | 31.8% | 31.8% | 15.9% | 43.8% | 43.8% | 11.0% | 38.9% | 38.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 2.4   | 1.0   | 2.4   | 2.4   | 1.0   | 3.7   | 3.7   | 1.0   | 3.7   | 3.7   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.4   | 4.0   | 6.4   | 6.4   | 4.0   | 7.7   | 7.7   | 4.0   | 7.7   | 7.7   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
Natural Cycle: 105  
Control Type: Actuated-Coordinated

Splits and Phases: 10: Black Mountain Pkwy. & Mayo Blvd.





22-1270: Black Mountain Village  
2029 Total AM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Movement</b>              | ←    | →    | ↘    | ←    | →    | ↘    | ←    | →    | ↘    | ←    | →    | ↘    |
| Lane Configurations          | ↘    | ↘    |      | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    |
| Traffic Volume (veh/h)       | 348  | 52   | 125  | 316  | 87   | 149  | 98   | 498  | 154  | 48   | 1228 | 116  |
| Future Volume (veh/h)        | 348  | 52   | 125  | 316  | 87   | 149  | 98   | 498  | 154  | 48   | 1228 | 116  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 387  | 58   | 105  | 351  | 97   | 83   | 109  | 553  | 0    | 53   | 1364 | 65   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 465  | 161  | 292  | 422  | 506  | 429  | 169  | 2243 |      | 439  | 1507 | 672  |
| Arrive On Green              | 0.07 | 0.27 | 0.27 | 0.07 | 0.27 | 0.27 | 0.05 | 0.44 | 0.00 | 0.02 | 0.28 | 0.28 |
| Sat Flow, veh/h              | 1781 | 596  | 1080 | 1781 | 1870 | 1585 | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 387  | 0    | 163  | 351  | 97   | 83   | 109  | 553  | 0    | 53   | 1364 | 65   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0    | 1676 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 8.6  | 0.0  | 9.4  | 8.6  | 4.8  | 4.8  | 4.1  | 8.2  | 0.0  | 2.0  | 44.4 | 3.6  |
| Cycle Q Clear(g_c), s        | 8.6  | 0.0  | 9.4  | 8.6  | 4.8  | 4.8  | 4.1  | 8.2  | 0.0  | 2.0  | 44.4 | 3.6  |
| Prop In Lane                 | 1.00 |      | 0.64 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 465  | 0    | 453  | 422  | 506  | 429  | 169  | 2243 |      | 439  | 1507 | 672  |
| V/C Ratio(X)                 | 0.83 | 0.00 | 0.36 | 0.83 | 0.19 | 0.19 | 0.65 | 0.25 |      | 0.12 | 0.90 | 0.10 |
| Avail Cap(c_a), veh/h        | 465  | 0    | 453  | 422  | 506  | 429  | 169  | 2243 |      | 461  | 1507 | 672  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 38.0 | 0.0  | 35.4 | 39.0 | 33.7 | 33.7 | 27.9 | 21.2 | 0.0  | 18.5 | 40.6 | 26.0 |
| Incr Delay (d2), s/veh       | 11.5 | 0.0  | 2.2  | 12.5 | 0.8  | 1.0  | 6.4  | 0.3  | 0.0  | 0.0  | 9.3  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 12.9 | 0.0  | 7.5  | 11.8 | 4.2  | 3.6  | 3.6  | 6.0  | 0.0  | 1.5  | 29.8 | 2.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 49.5 | 0.0  | 37.6 | 51.4 | 34.5 | 34.7 | 34.3 | 21.4 | 0.0  | 18.6 | 49.9 | 26.3 |
| LnGrp LOS                    | D    | A    | D    | D    | C    | C    | C    | C    |      | B    | D    | C    |
| Approach Vol, veh/h          |      | 550  |      |      | 531  |      |      | 662  |      |      | 1482 |      |
| Approach Delay, s/veh        |      | 46.0 |      |      | 45.7 |      |      | 23.5 |      |      | 47.8 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | C    |      |      | D    |      |

| Timer - Assigned Phs         | 1   | 2     | 3    | 4    | 5    | 6     | 7    | 8    |
|------------------------------|-----|-------|------|------|------|-------|------|------|
| Phs Duration (G+Y+Rc), s     | 8.1 | 60.4  | 12.6 | 38.8 | 10.0 | 58.6  | 12.6 | 38.8 |
| Change Period (Y+Rc), s      | 4.0 | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |
| Max Green Setting (Gmax), s  | 5.6 | * 51  | 8.6  | 32.4 | 6.0  | * 51  | 8.6  | 32.4 |
| Max Q Clear Time (g_c+I1), s | 4.0 | 10.2  | 10.6 | 11.4 | 6.1  | 46.4  | 10.6 | 6.8  |
| Green Ext Time (p_c), s      | 0.0 | 2.8   | 0.0  | 0.6  | 0.0  | 3.8   | 0.0  | 0.4  |

**Intersection Summary**

HCM 6th Ctrl Delay 42.2  
 HCM 6th LOS D

**Notes**

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Total PM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Movement</b>              | ←    | →    | ↘    | ←    | →    | ↘    | ←    | →    | ↘    | ←    | →    | ↘    |
| Lane Configurations          | ↘    | ↘    |      | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    | ↘    |
| Traffic Volume (veh/h)       | 60   | 32   | 37   | 188  | 25   | 105  | 90   | 723  | 156  | 71   | 666  | 28   |
| Future Volume (veh/h)        | 60   | 32   | 37   | 188  | 25   | 105  | 90   | 723  | 156  | 71   | 666  | 28   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 67   | 36   | 32   | 211  | 28   | 58   | 101  | 812  | 0    | 80   | 748  | 15   |
| Peak Hour Factor             | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 534  | 283  | 252  | 604  | 687  | 582  | 263  | 1885 |      | 302  | 1281 | 571  |
| Arrive On Green              | 0.04 | 0.31 | 0.31 | 0.09 | 0.37 | 0.37 | 0.05 | 0.37 | 0.00 | 0.01 | 0.12 | 0.12 |
| Sat Flow, veh/h              | 1781 | 913  | 811  | 1781 | 1870 | 1585 | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 67   | 0    | 68   | 211  | 28   | 58   | 101  | 812  | 0    | 80   | 748  | 15   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0    | 1724 | 1781 | 1870 | 1585 | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 3.1  | 0.0  | 3.4  | 9.3  | 1.2  | 2.9  | 4.2  | 14.3 | 0.0  | 3.4  | 23.9 | 1.0  |
| Cycle Q Clear(g_c), s        | 3.1  | 0.0  | 3.4  | 9.3  | 1.2  | 2.9  | 4.2  | 14.3 | 0.0  | 3.4  | 23.9 | 1.0  |
| Prop In Lane                 | 1.00 |      | 0.47 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 534  | 0    | 535  | 604  | 687  | 582  | 263  | 1885 |      | 302  | 1281 | 571  |
| V/C Ratio(X)                 | 0.13 | 0.00 | 0.13 | 0.35 | 0.04 | 0.10 | 0.38 | 0.43 |      | 0.26 | 0.58 | 0.03 |
| Avail Cap(c_a), veh/h        | 556  | 0    | 535  | 614  | 687  | 582  | 307  | 1885 |      | 332  | 1281 | 571  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 26.5 | 0.0  | 29.7 | 22.9 | 24.4 | 24.9 | 24.9 | 28.4 | 0.0  | 24.0 | 44.3 | 34.3 |
| Incr Delay (d2), s/veh       | 0.0  | 0.0  | 0.5  | 0.1  | 0.1  | 0.3  | 0.3  | 0.7  | 0.0  | 0.2  | 2.0  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 2.4  | 0.0  | 2.7  | 7.1  | 1.0  | 2.1  | 3.3  | 10.0 | 0.0  | 2.7  | 17.4 | 0.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 26.5 | 0.0  | 30.2 | 23.0 | 24.5 | 25.3 | 25.2 | 29.1 | 0.0  | 24.1 | 46.3 | 34.3 |
| LnGrp LOS                    | C    | A    | C    | C    | C    | C    | C    | C    |      | C    | D    | C    |
| Approach Vol, veh/h          |      | 135  |      |      | 297  |      |      | 913  |      |      | 843  |      |
| Approach Delay, s/veh        |      | 28.4 |      |      | 23.6 |      |      | 28.7 |      |      | 44.0 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | C    |      |      | D    |      |

| Timer - Assigned Phs         | 1   | 2     | 3    | 4    | 5    | 6     | 7   | 8    |
|------------------------------|-----|-------|------|------|------|-------|-----|------|
| Phs Duration (G+Y+Rc), s     | 9.0 | 52.0  | 15.3 | 43.7 | 10.1 | 50.9  | 8.5 | 50.5 |
| Change Period (Y+Rc), s      | 4.0 | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0 | 6.4  |
| Max Green Setting (Gmax), s  | 7.0 | * 44  | 12.0 | 34.6 | 9.0  | * 42  | 6.0 | 40.6 |
| Max Q Clear Time (g_c+I1), s | 5.4 | 16.3  | 11.3 | 5.4  | 6.2  | 25.9  | 5.1 | 4.9  |
| Green Ext Time (p_c), s      | 0.0 | 4.2   | 0.0  | 0.2  | 0.0  | 3.3   | 0.0 | 0.2  |

**Intersection Summary**

HCM 6th Ctrl Delay 33.9  
 HCM 6th LOS C

**Notes**

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

10: Black Mountain Pkwy. & Mayo Blvd.  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 53    | 118  | 123  | 32   | 108   | 119  | 517  | 163  | 107  | 620  | 95   |
| Future Volume (veh/h)        | 167  | 53    | 118  | 123  | 32   | 108   | 119  | 517  | 163  | 107  | 620  | 95   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 253  | 80    | 135  | 186  | 48   | 82    | 180  | 783  | 0    | 162  | 939  | 71   |
| Peak Hour Factor             | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66  | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 554  | 180   | 304  | 420  | 505  | 428   | 264  | 1911 |      | 368  | 1302 | 581  |
| Arrive On Green              | 0.10 | 0.29  | 0.29 | 0.08 | 0.27 | 0.27  | 0.08 | 0.37 | 0.00 | 0.02 | 0.12 | 0.12 |
| Sat Flow, veh/h              | 1781 | 625   | 1055 | 1781 | 1870 | 1585  | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h         | 253  | 0     | 215  | 186  | 48   | 82    | 180  | 783  | 0    | 162  | 939  | 71   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 0     | 1680 | 1781 | 1870 | 1585  | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s              | 12.0 | 0.0   | 12.5 | 9.1  | 2.3  | 4.8   | 7.5  | 13.6 | 0.0  | 6.6  | 30.5 | 4.8  |
| Cycle Q Clear(g_c), s        | 12.0 | 0.0   | 12.5 | 9.1  | 2.3  | 4.8   | 7.5  | 13.6 | 0.0  | 6.6  | 30.5 | 4.8  |
| Prop In Lane                 | 1.00 |       | 0.63 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 554  | 0     | 484  | 420  | 505  | 428   | 264  | 1911 |      | 368  | 1302 | 581  |
| V/C Ratio(X)                 | 0.46 | 0.00  | 0.44 | 0.44 | 0.10 | 0.19  | 0.68 | 0.41 |      | 0.44 | 0.72 | 0.12 |
| Avail Cap(c_a), veh/h        | 554  | 0     | 484  | 420  | 505  | 428   | 347  | 1911 |      | 377  | 1302 | 581  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I)           | 1.00 | 0.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 27.7 | 0.0   | 34.9 | 28.7 | 32.8 | 33.7  | 26.2 | 27.8 | 0.0  | 22.8 | 46.8 | 35.5 |
| Incr Delay (d2), s/veh       | 0.2  | 0.0   | 2.9  | 0.3  | 0.4  | 1.0   | 1.7  | 0.7  | 0.0  | 0.3  | 3.5  | 0.4  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     | 9.1  | 0.0   | 9.4  | 7.0  | 2.0  | 3.6   | 5.8  | 9.6  | 0.0  | 5.4  | 21.6 | 3.6  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 28.0 | 0.0   | 37.8 | 29.0 | 33.2 | 34.7  | 27.9 | 28.4 | 0.0  | 23.1 | 50.3 | 36.0 |
| LnGrp LOS                    | C    | A     | D    | C    | C    | C     | C    | C    |      | C    | D    | D    |
| Approach Vol, veh/h          |      | 468   |      |      | 316  |       |      | 963  |      |      | 1172 |      |
| Approach Delay, s/veh        |      | 32.5  |      |      | 31.1 |       |      | 28.3 |      |      | 45.7 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.6 | 52.6  | 13.8 | 41.0 | 13.6 | 51.7  | 16.0 | 38.8 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | * 7.7 | 4.0  | 6.4  | 4.0  | * 7.7 | 4.0  | 6.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.2  | * 45  | 9.8  | 34.0 | 15.1 | * 39  | 12.0 | 31.8 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 8.6  | 15.6  | 11.1 | 14.5 | 9.5  | 32.5  | 14.0 | 6.8  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 4.0   | 0.0  | 0.8  | 0.1  | 2.7   | 0.0  | 0.3  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 36.3 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

22-1270: Black Mountain Village  
2029 Total AM Mitigated

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |        |        |        |        |        |        |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Int Delay, s/veh         | 0      |        |        |        |        |        |
| Movement                 | EBL    | EBR    | NBL    | NBT    | SBT    | SBR    |
| Lane Configurations      |        | ↔      |        | ↔      | ↔      | ↔      |
| Traffic Vol, veh/h       | 0      | 1      | 0      | 751    | 1161   | 508    |
| Future Vol, veh/h        | 0      | 1      | 0      | 751    | 1161   | 508    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop   | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None | - None | - None | - None | - None |
| Storage Length           | - 0    | -      | -      | -      | -      | 150    |
| Veh in Median Storage, # | 0      | -      | -      | 0      | 0      | -      |
| Grade, %                 | 0      | -      | -      | 0      | 0      | -      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1      | 0      | 834    | 1290   | 564    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 645  | - 0    | - 0    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | - 6.94 | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | - 3.32 | -      | -      |
| Pot Cap-1 Maneuver   | 0 *607 | 0      | -      |
| Stage 1              | 0      | - 0    | -      |
| Stage 2              | 0      | - 0    | -      |
| Platoon blocked, %   | 1      | -      | -      |
| Mov Cap-1 Maneuver   | - *607 | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.9 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT     | EBLn1 | SBT | SBR |
|-----------------------|---------|-------|-----|-----|
| Capacity (veh/h)      | - 607   | -     | -   | -   |
| HCM Lane V/C Ratio    | - 0.002 | -     | -   | -   |
| HCM Control Delay (s) | - 10.9  | -     | -   | -   |
| HCM Lane LOS          | - B     | -     | -   | -   |
| HCM 95th %tile Q(veh) | - 0     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 8    | 0    | 969  | 842  | 48   |
| Future Vol, veh/h        | 0    | 8    | 0    | 969  | 842  | 48   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 8    | 0    | 1020 | 886  | 51   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 443  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *737 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *737 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 737     | - - | - - |
| HCM Lane V/C Ratio    | - 0.011   | - - | - - |
| HCM Control Delay (s) | - 9.9     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0       | - - | - - |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

11: Black Mountain Pkwy. & HS North Drwy  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↗↗   | ↗↗   | ↗    |
| Traffic Vol, veh/h       | 0    | 10   | 0    | 798  | 650  | 210  |
| Future Vol, veh/h        | 0    | 10   | 0    | 798  | 650  | 210  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | 150  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 75   | 75   | 75   | 75   | 75   | 75   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 13   | 0    | 1064 | 867  | 280  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 434  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 6.94 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.32 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *815 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *815 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.5 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 815     | - - | - - |
| HCM Lane V/C Ratio    | - 0.016   | - - | - - |
| HCM Control Delay (s) | - 9.5     | - - | - - |
| HCM Lane LOS          | - A       | - - | - - |
| HCM 95th %tile Q(veh) | - 0.1     | - - | - - |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 8.3   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 37    | 838   |       | 1591  |       |
| Demand Flow Rate, veh/h     | 37    | 855   |       | 1622  |       |
| Vehicles Circulating, veh/h | 1599  | 14    |       | 29    |       |
| Vehicles Exiting, veh/h     | 52    | 1622  |       | 840   |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 11.5  | 5.5   |       | 9.7   |       |
| Approach LOS                | B     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 37    | 402   | 453   | 762   | 860   |
| Cap Entry Lane, veh/h       | 365   | 1333  | 1403  | 1314  | 1386  |
| Entry HV Adj Factor         | 1.000 | 0.980 | 0.980 | 0.981 | 0.980 |
| Flow Entry, veh/h           | 37    | 394   | 444   | 748   | 843   |
| Cap Entry, veh/h            | 365   | 1305  | 1376  | 1289  | 1358  |
| V/C Ratio                   | 0.101 | 0.302 | 0.323 | 0.580 | 0.621 |
| Control Delay, s/veh        | 11.5  | 5.5   | 5.5   | 9.5   | 10.0  |
| LOS                         | B     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 1     | 1     | 4     | 5     |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 5.9   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     |       | 2     |       |
| Conflicting Circle Lanes    | 2     | 2     |       | 2     |       |
| Adj Approach Flow, veh/h    | 4     | 1033  |       | 903   |       |
| Demand Flow Rate, veh/h     | 4     | 1054  |       | 921   |       |
| Vehicles Circulating, veh/h | 916   | 1     |       | 3     |       |
| Vehicles Exiting, veh/h     | 8     | 919   |       | 1052  |       |
| Ped Vol Crossing Leg, #/h   | 0     | 0     |       | 0     |       |
| Ped Cap Adj                 | 1.000 | 1.000 |       | 1.000 |       |
| Approach Delay, s/veh       | 5.6   | 6.2   |       | 5.6   |       |
| Approach LOS                | A     | A     |       | A     |       |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT    | TR    | LT    | TR    |
| Assumed Moves               | LR    | LT    | TR    | LT    | TR    |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 4     | 495   | 559   | 433   | 488   |
| Cap Entry Lane, veh/h       | 652   | 1349  | 1419  | 1346  | 1417  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h           | 4     | 486   | 548   | 424   | 479   |
| Cap Entry, veh/h            | 652   | 1323  | 1390  | 1319  | 1389  |
| V/C Ratio                   | 0.006 | 0.367 | 0.394 | 0.322 | 0.345 |
| Control Delay, s/veh        | 5.6   | 6.1   | 6.2   | 5.6   | 5.7   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 1     | 2     |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

12: Black Mountain Pkwy. & Roundabout  
HCM 6th Roundabout

| Intersection                |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh   | 7.1   |       |       |       |       |
| Intersection LOS            | A     |       |       |       |       |
| Approach                    | EB    | NB    |       | SB    |       |
| Entry Lanes                 | 1     | 2     | 2     |       | 2     |
| Conflicting Circle Lanes    | 2     | 2     | 2     |       | 2     |
| Adj Approach Flow, veh/h    | 33    | 1200  | 1210  |       | 1210  |
| Demand Flow Rate, veh/h     | 33    | 1224  | 1234  |       | 1234  |
| Vehicles Circulating, veh/h | 1225  | 9     | 16    |       | 16    |
| Vehicles Exiting, veh/h     | 25    | 1249  | 1217  |       | 1217  |
| Ped Vol Crossing Leg, #/h   | 0     | 0     | 0     |       | 0     |
| Ped Cap Adj                 | 1.000 | 1.000 | 1.000 |       | 1.000 |
| Approach Delay, s/veh       | 8.0   | 7.0   | 7.1   |       | 7.1   |
| Approach LOS                | A     | A     | A     |       | A     |
| Lane                        | Left  | Left  | Right | Left  | Right |
| Designated Moves            | LR    | LT TR | LT TR | LT TR | LT TR |
| Assumed Moves               | LR    | LT TR | LT TR | LT TR | LT TR |
| RT Channelized              |       |       |       |       |       |
| Lane Util                   | 1.000 | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s        | 2.535 | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s         | 4.328 | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h           | 33    | 575   | 649   | 580   | 654   |
| Cap Entry Lane, veh/h       | 501   | 1339  | 1409  | 1330  | 1401  |
| Entry HV Adj Factor         | 1.000 | 0.981 | 0.980 | 0.981 | 0.981 |
| Flow Entry, veh/h           | 33    | 564   | 636   | 569   | 641   |
| Cap Entry, veh/h            | 501   | 1313  | 1381  | 1304  | 1374  |
| V/C Ratio                   | 0.066 | 0.430 | 0.461 | 0.436 | 0.467 |
| Control Delay, s/veh        | 8.0   | 6.9   | 7.1   | 7.1   | 7.2   |
| LOS                         | A     | A     | A     | A     | A     |
| 95th %tile Queue, veh       | 0     | 2     | 2     | 2     | 3     |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection               |                        |        |                            |        |                                |        |      |       |       |      |      |      |   |
|----------------------------|------------------------|--------|----------------------------|--------|--------------------------------|--------|------|-------|-------|------|------|------|---|
| Int Delay, s/veh           | 6                      |        |                            |        |                                |        |      |       |       |      |      |      |   |
| Movement                   | EBL                    | EBT    | EBR                        | WBL    | WBT                            | WBR    | NBL  | NBT   | NBR   | SBL  | SBT  | SBR  |   |
| Lane Configurations        | ↔                      | ↔      | ↔                          | ↔      | ↔                              | ↔      | ↔    | ↔     | ↔     | ↔    | ↔    | ↔    | ↔ |
| Traffic Vol, veh/h         | 190                    | 106    | 8                          | 15     | 187                            | 87     | 14   | 5     | 8     | 26   | 3    | 179  |   |
| Future Vol, veh/h          | 190                    | 106    | 8                          | 15     | 187                            | 87     | 14   | 5     | 8     | 26   | 3    | 179  |   |
| Conflicting Peds, #/hr     | 0                      | 0      | 0                          | 0      | 0                              | 0      | 0    | 0     | 0     | 0    | 0    | 0    |   |
| Sign Control               | Free                   | Free   | Free                       | Free   | Free                           | Free   | Stop | Stop  | Stop  | Stop | Stop | Stop |   |
| RT Channelized             | -                      | -      | None                       | -      | -                              | None   | -    | -     | None  | -    | -    | None |   |
| Storage Length             | 150                    | -      | -                          | 145    | -                              | -      | -    | -     | -     | -    | -    | -    |   |
| Veh in Median Storage, #   | -                      | 0      | -                          | -      | 0                              | -      | -    | -     | 0     | -    | -    | 0    |   |
| Grade, %                   | -                      | 0      | -                          | -      | 0                              | -      | -    | -     | 0     | -    | -    | 0    |   |
| Peak Hour Factor           | 90                     | 90     | 90                         | 90     | 90                             | 90     | 90   | 90    | 90    | 90   | 90   | 90   |   |
| Heavy Vehicles, %          | 2                      | 2      | 2                          | 2      | 2                              | 2      | 2    | 2     | 2     | 2    | 2    | 2    |   |
| Mvmt Flow                  | 211                    | 118    | 9                          | 17     | 208                            | 97     | 16   | 6     | 9     | 29   | 3    | 199  |   |
| Major/Minor                | Major1                 | Major2 |                            | Minor1 |                                | Minor2 |      |       |       |      |      |      |   |
| Conflicting Flow All       | 305                    | 0      | 0                          | 127    | 0                              | 0      | 685  | 884   | 64    | 775  | 840  | 153  |   |
| Stage 1                    | -                      | -      | -                          | -      | -                              | -      | 545  | 545   | -     | 291  | 291  | -    |   |
| Stage 2                    | -                      | -      | -                          | -      | -                              | -      | 140  | 339   | -     | 484  | 549  | -    |   |
| Critical Hdwy              | 4.14                   | -      | -                          | 4.14   | -                              | -      | 7.54 | 6.54  | 6.94  | 7.54 | 6.54 | 6.94 |   |
| Critical Hdwy Stg 1        | -                      | -      | -                          | -      | -                              | -      | 6.54 | 5.54  | -     | 6.54 | 5.54 | -    |   |
| Critical Hdwy Stg 2        | -                      | -      | -                          | -      | -                              | -      | 6.54 | 5.54  | -     | 6.54 | 5.54 | -    |   |
| Follow-up Hdwy             | 2.22                   | -      | -                          | 2.22   | -                              | -      | 3.52 | 4.02  | 3.32  | 3.52 | 4.02 | 3.32 |   |
| Pot Cap-1 Maneuver         | 1253                   | -      | -                          | 1525   | -                              | -      | 366  | 300   | *1049 | 314  | 319  | 866  |   |
| Stage 1                    | -                      | -      | -                          | -      | -                              | -      | 529  | 543   | -     | 693  | 670  | -    |   |
| Stage 2                    | -                      | -      | -                          | -      | -                              | -      | 849  | 638   | -     | 577  | 541  | -    |   |
| Platoon blocked, %         | -                      | -      | -                          | 1      | -                              | -      | 1    | 1     | 1     | 1    | 1    | 1    |   |
| Mov Cap-1 Maneuver         | 1253                   | -      | -                          | 1525   | -                              | -      | 241  | 247   | *1049 | 264  | 262  | 866  |   |
| Mov Cap-2 Maneuver         | -                      | -      | -                          | -      | -                              | -      | 241  | 247   | -     | 264  | 262  | -    |   |
| Stage 1                    | -                      | -      | -                          | -      | -                              | -      | 440  | 451   | -     | 577  | 663  | -    |   |
| Stage 2                    | -                      | -      | -                          | -      | -                              | -      | 643  | 631   | -     | 470  | 450  | -    |   |
| Approach                   | EB                     | WB     |                            | NB     |                                | SB     |      |       |       |      |      |      |   |
| HCM Control Delay, s       | 5.3                    | 0.4    |                            | 17.7   |                                | 13.4   |      |       |       |      |      |      |   |
| HCM LOS                    |                        |        |                            | C      |                                | B      |      |       |       |      |      |      |   |
| Minor Lane/Major Mvmt      | NBLn1                  | EBL    | EBT                        | EBR    | WBL                            | WBT    | WBR  | SBLn1 |       |      |      |      |   |
| Capacity (veh/h)           | 314                    | 1253   | -                          | -      | 1525                           | -      | -    | 657   |       |      |      |      |   |
| HCM Lane V/C Ratio         | 0.096                  | 0.168  | -                          | -      | 0.011                          | -      | -    | 0.352 |       |      |      |      |   |
| HCM Control Delay (s)      | 17.7                   | 8.5    | -                          | -      | 7.4                            | -      | -    | 13.4  |       |      |      |      |   |
| HCM Lane LOS               | C                      | A      | -                          | -      | A                              | -      | -    | B     |       |      |      |      |   |
| HCM 95th %tile Q(veh)      | 0.3                    | 0.6    | -                          | -      | 0                              | -      | -    | 1.6   |       |      |      |      |   |
| Notes                      |                        |        |                            |        |                                |        |      |       |       |      |      |      |   |
| -: Volume exceeds capacity | \$: Delay exceeds 300s |        | +: Computation Not Defined |        | *: All major volume in platoon |        |      |       |       |      |      |      |   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 89   | 159  | 11   | 26   | 151  | 30   | 10   | 5    | 3    | 31   | 5    | 150  |
| Future Vol, veh/h        | 89   | 159  | 11   | 26   | 151  | 30   | 10   | 5    | 3    | 31   | 5    | 150  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 122  | 218  | 15   | 36   | 207  | 41   | 14   | 7    | 4    | 42   | 7    | 205  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 248    | 0      | 0      | 233    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1315   | -      | -      | 1442   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1315   | -      | -      | 1442   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 2.8 | 0.9 | 16.5 | 13 |
| HCM LOS              |     |     | C    | B  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 339   | 1315  | -   | -   | 1442  | -   | -   | 702   |
| HCM Lane V/C Ratio    | 0.073 | 0.093 | -   | -   | 0.025 | -   | -   | 0.363 |
| HCM Control Delay (s) | 16.5  | 8     | -   | -   | 7.6   | -   | -   | 13    |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.3   | -   | -   | 0.1   | -   | -   | 1.7   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

13: Mayo Blvd. & Lone Cactus Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕ ↕  |      | ↕ ↕  |      | ↕ ↕  |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 127  | 178  | 18   | 14   | 158  | 45   | 11   | 3    | 7    | 8    | 3    | 57   |
| Future Vol, veh/h        | 127  | 178  | 18   | 14   | 158  | 45   | 11   | 3    | 7    | 8    | 3    | 57   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | -    | 145  | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 155  | 217  | 22   | 17   | 193  | 55   | 13   | 4    | 9    | 10   | 4    | 70   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 248    | 0      | 0      | 239    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1315   | -      | -      | 1434   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | 1      | -      |
| Mov Cap-1 Maneuver   | 1315   | -      | -      | 1434   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 3.2 | 0.5 | 14.1 | 10.7 |
| HCM LOS              |     |     | B    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 422   | 1315  | -   | -   | 1434  | -   | -   | 713   |
| HCM Lane V/C Ratio    | 0.061 | 0.118 | -   | -   | 0.012 | -   | -   | 0.116 |
| HCM Control Delay (s) | 14.1  | 8.1   | -   | -   | 7.5   | -   | -   | 10.7  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.4   | -   | -   | 0     | -   | -   | 0.4   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 10.3  |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 51    | 942  | 69    | 65   | 586   | 28   | 51    | 7    | 98    | 43   | 8     | 41   |
| Future Vol, veh/h        | 51    | 942  | 69    | 65   | 586   | 28   | 51    | 7    | 98    | 43   | 8     | 41   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   | 90    | 90   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 57    | 1047 | 77    | 72   | 651   | 31   | 57    | 8    | 109   | 48   | 9     | 46   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 682    | 0      | 0      | 1124   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 556    | -      | -      | 341    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 556    | -      | -      | 341    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.6 | 1.8 | 78.6 | 69.3 |
| HCM LOS              |     |     | F    | F    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 66    | 251   | 556   | -   | -   | 341   | -   | -   | 77    | 176   |
| HCM Lane V/C Ratio    | 0.859 | 0.465 | 0.102 | -   | -   | 0.212 | -   | -   | 0.62  | 0.309 |
| HCM Control Delay (s) | 176.3 | 31.2  | 12.2  | -   | -   | 18.4  | -   | -   | 109   | 34.4  |
| HCM Lane LOS          | F     | D     | B     | -   | -   | C     | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 4.1   | 2.3   | 0.3   | -   | -   | 0.8   | -   | -   | 2.8   | 1.2   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |       |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Int Delay, s/veh         | 11.9  |      |       |      |       |      |       |      |       |      |       |      |
| Movement                 | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
| Lane Configurations      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      | ↔ ↗ ↘ |      |
| Traffic Vol, veh/h       | 73    | 664  | 34    | 61   | 768   | 64   | 64    | 5    | 93    | 29   | 5     | 50   |
| Future Vol, veh/h        | 73    | 664  | 34    | 61   | 768   | 64   | 64    | 5    | 93    | 29   | 5     | 50   |
| Conflicting Peds, #/hr   | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Sign Control             | Free  | Free | Free  | Free | Free  | Free | Stop  | Stop | Stop  | Stop | Stop  | Stop |
| RT Channelized           | -     | -    | None  | -    | -     | None | -     | -    | None  | -    | -     | None |
| Storage Length           | 130   | -    | -     | 125  | -     | -    | 165   | -    | -     | 80   | -     | -    |
| Veh in Median Storage, # | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Grade, %                 | -     | 0    | -     | -    | 0     | -    | -     | 0    | -     | -    | 0     | -    |
| Peak Hour Factor         | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   | 85    | 85   |
| Heavy Vehicles, %        | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    | 2     | 2    |
| Mvmt Flow                | 86    | 781  | 40    | 72   | 904   | 75   | 75    | 6    | 109   | 34   | 6     | 59   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 979    | 0      | 0      | 821    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 401    | -      | -      | 477    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 401    | -      | -      | 477    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 1.6 | 0.9 | 94.4 | 63.2 |
| HCM LOS              |     |     | F    | F    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 75    | 296   | 401   | -   | -   | 477  | -   | -   | 59    | 216   |
| HCM Lane V/C Ratio    | 1.004 | 0.39  | 0.214 | -   | -   | 0.15 | -   | -   | 0.578 | 0.3   |
| HCM Control Delay (s) | 201.1 | 24.7  | 16.4  | -   | -   | 13.9 | -   | -   | 128.9 | 28.6  |
| HCM Lane LOS          | F     | C     | C     | -   | -   | B    | -   | -   | F     | D     |
| HCM 95th %tile Q(veh) | 5.3   | 1.8   | 0.8   | -   | -   | 0.5  | -   | -   | 2.3   | 1.2   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

14: Aviano Way & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔↔↔  |      | ↔↔↔  |      |      | ↔↔   |      |      | ↔↔   |      | ↔↔   |      |
| Traffic Vol, veh/h       | 52   | 595  | 46   | 44   | 536  | 51   | 9    | 5    | 41   | 31   | 11   | 33   |
| Future Vol, veh/h        | 52   | 595  | 46   | 44   | 536  | 51   | 9    | 5    | 41   | 31   | 11   | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 130  | -    | -    | 125  | -    | -    | 165  | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   | 74   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 70   | 804  | 62   | 59   | 724  | 69   | 12   | 7    | 55   | 42   | 15   | 45   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 793    | 0      | 0      | 866    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 5.34   | -      | -      | 5.34   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 3.12   | -      | -      | 3.12   |
| Pot Cap-1 Maneuver   | 492    | -      | -      | 454    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 492    | -      | -      | 454    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB   |
|----------------------|----|----|------|------|
| HCM Control Delay, s | 1  | 1  | 28.4 | 49.3 |
| HCM LOS              |    |    | D    | E    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 87    | 255   | 492   | -   | -   | 454   | -   | -   | 103   | 160   |
| HCM Lane V/C Ratio    | 0.14  | 0.244 | 0.143 | -   | -   | 0.131 | -   | -   | 0.407 | 0.372 |
| HCM Control Delay (s) | 53    | 23.6  | 13.5  | -   | -   | 14.1  | -   | -   | 62.1  | 40.2  |
| HCM Lane LOS          | F     | C     | B     | -   | -   | B     | -   | -   | F     | E     |
| HCM 95th %tile Q(veh) | 0.5   | 0.9   | 0.5   | -   | -   | 0.4   | -   | -   | 1.7   | 1.6   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 170  | 21   | 47   | 56   | 26   | 267  |
| Future Vol, veh/h        | 170  | 21   | 47   | 56   | 26   | 267  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 189  | 23   | 52   | 62   | 29   | 297  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 195    | 29     | 326    |
| Stage 1              | 29     | -      | -      |
| Stage 2              | 166    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  |
| Pot Cap-1 Maneuver   | 794    | 1046   | 1234   |
| Stage 1              | 994    | -      | -      |
| Stage 2              | 863    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 761    | 1046   | 1234   |
| Mov Cap-2 Maneuver   | 761    | -      | -      |
| Stage 1              | 952    | -      | -      |
| Stage 2              | 863    | -      | -      |

| Approach             | EB | NB  | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 11 | 3.7 | 0  |
| HCM LOS              | B  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1234  | -   | 761   | 1046  | -   | -   |
| HCM Lane V/C Ratio    | 0.042 | -   | 0.248 | 0.022 | -   | -   |
| HCM Control Delay (s) | 8     | -   | 11.3  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 1     | 0.1   | -   | -   |



22-1270: Black Mountain Village  
2029 Total PM Mitigated

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.8  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 104  | 43   | 30   | 47   | 62   | 163  |
| Future Vol, veh/h        | 104  | 43   | 30   | 47   | 62   | 163  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 116  | 48   | 33   | 52   | 69   | 181  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 187    | 69     | 250    | 0 | - | 0 |
| Stage 1              | 69     | -      | -      | - | - | - |
| Stage 2              | 118    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 802    | 994    | 1316   | - | - | - |
| Stage 1              | 954    | -      | -      | - | - | - |
| Stage 2              | 907    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 782    | 994    | 1316   | - | - | - |
| Mov Cap-2 Maneuver   | 782    | -      | -      | - | - | - |
| Stage 1              | 930    | -      | -      | - | - | - |
| Stage 2              | 907    | -      | -      | - | - | - |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 3  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1316  | -   | 782   | 994   | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | 0.148 | 0.048 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 10.4  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.5   | 0.2   | -   | -   |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

15: 40th St. & Mayo Blvd.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 125  | 25   | 28   | 53   | 52   | 127  |
| Future Vol, veh/h        | 125  | 25   | 28   | 53   | 52   | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 335  | 0    | 175  | -    | -    | 300  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 70   | 70   | 70   | 70   | 70   | 70   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 179  | 36   | 40   | 76   | 74   | 181  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 230    | 74     | 255    | 0 | - | 0 |
| Stage 1              | 74     | -      | -      | - | - | - |
| Stage 2              | 156    | -      | -      | - | - | - |
| Critical Hdwy        | 6.42   | 6.22   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.518  | 3.318  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 758    | 988    | 1310   | - | - | - |
| Stage 1              | 949    | -      | -      | - | - | - |
| Stage 2              | 872    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 735    | 988    | 1310   | - | - | - |
| Mov Cap-2 Maneuver   | 735    | -      | -      | - | - | - |
| Stage 1              | 920    | -      | -      | - | - | - |
| Stage 2              | 872    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 2.7 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1310  | -   | 735   | 988   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | 0.243 | 0.036 | -   | -   |
| HCM Control Delay (s) | 7.8   | -   | 11.5  | 8.8   | -   | -   |
| HCM Lane LOS          | A     | -   | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.9   | 0.1   | -   | -   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    | W    | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 22   | 69   | 164  | 2    | 81   | 396  |
| Future Vol, veh/h        | 22   | 69   | 164  | 2    | 81   | 396  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 24   | 77   | 182  | 2    | 90   | 440  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 803    | 183    | 0 0 184 0   |
| Stage 1              | 183    | -      | - - - -     |
| Stage 2              | 620    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 353    | 859    | - - 1391 -  |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 536    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 323    | 859    | - - 1391 -  |
| Mov Cap-2 Maneuver   | 323    | -      | - - - -     |
| Stage 1              | 848    | -      | - - - -     |
| Stage 2              | 490    | -      | - - - -     |

| Approach             | WB | NB | SB  |
|----------------------|----|----|-----|
| HCM Control Delay, s | 12 | 0  | 1.3 |
| HCM LOS              | B  |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 613   | 1391  |
| HCM Lane V/C Ratio    | -   | -        | 0.165 | 0.065 |
| HCM Control Delay (s) | -   | -        | 12    | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.7  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | W    | W    | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 26   | 82   | 29   | 2    | 90   | 24   |
| Future Vol, veh/h        | 26   | 82   | 29   | 2    | 90   | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 32   | 2    | 100  | 27   |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 260    | 33     | 0 0 34 0    |
| Stage 1              | 33     | -      | - - - -     |
| Stage 2              | 227    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 729    | 1041   | - - 1578 -  |
| Stage 1              | 989    | -      | - - - -     |
| Stage 2              | 811    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 682    | 1041   | - - 1578 -  |
| Mov Cap-2 Maneuver   | 682    | -      | - - - -     |
| Stage 1              | 989    | -      | - - - -     |
| Stage 2              | 759    | -      | - - - -     |

| Approach             | WB  | NB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.5 | 0  | 5.9 |
| HCM LOS              | A   |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT   |
|-----------------------|-----|----------|------|-------|
| Capacity (veh/h)      | -   | -        | 924  | 1578  |
| HCM Lane V/C Ratio    | -   | -        | 0.13 | 0.063 |
| HCM Control Delay (s) | -   | -        | 9.5  | 7.4   |
| HCM Lane LOS          | -   | -        | A    | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.4  | 0.2   |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

16: 34th St. & Access C  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.9  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 26   | 82   | 180  | 2    | 90   | 104  |
| Future Vol, veh/h        | 26   | 82   | 180  | 2    | 90   | 104  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 91   | 200  | 2    | 100  | 116  |

| Major/Minor          | Minor1 | Major1 | Major2      |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 517    | 201    | 0 0 202 0   |
| Stage 1              | 201    | -      | - - - -     |
| Stage 2              | 316    | -      | - - - -     |
| Critical Hdwy        | 6.42   | 6.22   | - - 4.12 -  |
| Critical Hdwy Stg 1  | 5.42   | -      | - - - -     |
| Critical Hdwy Stg 2  | 5.42   | -      | - - - -     |
| Follow-up Hdwy       | 3.518  | 3.318  | - - 2.218 - |
| Pot Cap-1 Maneuver   | 518    | 840    | - - 1370 -  |
| Stage 1              | 833    | -      | - - - -     |
| Stage 2              | 739    | -      | - - - -     |
| Platoon blocked, %   | -      | -      | - - - -     |
| Mov Cap-1 Maneuver   | 478    | 840    | - - 1370 -  |
| Mov Cap-2 Maneuver   | 478    | -      | - - - -     |
| Stage 1              | 833    | -      | - - - -     |
| Stage 2              | 681    | -      | - - - -     |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 11.1 | 0  | 3.6 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 710   | 1370  |
| HCM Lane V/C Ratio    | -   | -        | 0.169 | 0.073 |
| HCM Control Delay (s) | -   | -        | 11.1  | 7.8   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   | 0.2   |

22-1270: Black Mountain Village  
2029 Total AM Mitigated

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔↔↔  | ↔    | ↔    | ↔↔↔  | ↔    | ↔    |
| Traffic Vol, veh/h       | 1238 | 114  | 0    | 687  | 0    | 127  |
| Future Vol, veh/h        | 1238 | 114  | 0    | 687  | 0    | 127  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1376 | 127  | 0    | 763  | 0    | 141  |

| Major/Minor          | Major1 | Major2 | Minor1     |
|----------------------|--------|--------|------------|
| Conflicting Flow All | 0      | 0      | - - - 688  |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |
| Critical Hdwy        | -      | -      | - - - 7.14 |
| Critical Hdwy Stg 1  | -      | -      | - - - -    |
| Critical Hdwy Stg 2  | -      | -      | - - - -    |
| Follow-up Hdwy       | -      | -      | - - - 3.92 |
| Pot Cap-1 Maneuver   | -      | -      | 0 - 0 333  |
| Stage 1              | -      | -      | 0 - 0 -    |
| Stage 2              | -      | -      | 0 - 0 -    |
| Platoon blocked, %   | -      | -      | - - - -    |
| Mov Cap-1 Maneuver   | -      | -      | - - - 333  |
| Mov Cap-2 Maneuver   | -      | -      | - - - -    |
| Stage 1              | -      | -      | - - - -    |
| Stage 2              | -      | -      | - - - -    |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 23.5 |
| HCM LOS              |    |    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 333   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.424 | -   | -   | -   |
| HCM Control Delay (s) | 23.5  | -   | -   | -   |
| HCM Lane LOS          | C     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 2     | -   | -   | -   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 586  | 117  | 0    | 810  | 0    | 148  |
| Future Vol, veh/h        | 586  | 117  | 0    | 810  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 651  | 130  | 0    | 900  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 326    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *778 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *778   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 778   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

17: Access D & Deer Valley Dr.  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑↑  | ↑    |      | ↑↑↑  |      | ↑    |
| Traffic Vol, veh/h       | 664  | 117  | 0    | 658  | 0    | 148  |
| Future Vol, veh/h        | 664  | 117  | 0    | 658  | 0    | 148  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 150  | -    | -    | -    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 738  | 130  | 0    | 731  | 0    | 164  |

| Major/Minor          | Major1 | Major2 | Minor1   |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0      | 0      | - 369    |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |
| Critical Hdwy        | -      | -      | - 7.14   |
| Critical Hdwy Stg 1  | -      | -      | -        |
| Critical Hdwy Stg 2  | -      | -      | -        |
| Follow-up Hdwy       | -      | -      | - 3.92   |
| Pot Cap-1 Maneuver   | -      | - 0    | - 0 *778 |
| Stage 1              | -      | - 0    | - 0      |
| Stage 2              | -      | - 0    | - 0      |
| Platoon blocked, %   | -      | -      | - 1      |
| Mov Cap-1 Maneuver   | -      | -      | - *778   |
| Mov Cap-2 Maneuver   | -      | -      | -        |
| Stage 1              | -      | -      | -        |
| Stage 2              | -      | -      | -        |

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

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h)      | 778   | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.211 | -   | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | -   |
| HCM Lane LOS          | B     | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 403  | 226  | 29   | 13   | 7    |
| Future Vol, veh/h        | 2    | 403  | 226  | 29   | 13   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 448  | 251  | 32   | 14   | 8    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 283    | 0      | 0      | 495   | 267   |
| Stage 1              | -      | -      | -      | 267   | -     |
| Stage 2              | -      | -      | -      | 228   | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1278   | -      | -      | 519   | 771   |
| Stage 1              | -      | -      | -      | 777   | -     |
| Stage 2              | -      | -      | -      | 789   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1278   | -      | -      | 518   | 771   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 518   | -     |
| Stage 1              | -      | -      | -      | 775   | -     |
| Stage 2              | -      | -      | -      | 789   | -     |

| Approach             | EB | WB | SB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 0  | 11.4 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1278  | -   | -   | -   | 585   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.038 |
| HCM Control Delay (s) | 7.8   | 0   | -   | -   | 11.4  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total PM Mitigated

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 59   | 68   | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 59   | 68   | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 66   | 76   | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 113    | 0      | 0      | 134   | 95    |
| Stage 1              | -      | -      | -      | 95    | -     |
| Stage 2              | -      | -      | -      | 39    | -     |
| Critical Hdwy        | 4.13   | -      | -      | 6.63  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.43  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.83  | -     |
| Follow-up Hdwy       | 2,219  | -      | -      | 3,519 | 3,319 |
| Pot Cap-1 Maneuver   | 1545   | -      | -      | 936   | 1048  |
| Stage 1              | -      | -      | -      | 989   | -     |
| Stage 2              | -      | -      | -      | 979   | -     |
| Platoon blocked, %   | 1      | -      | -      | 1     | 1     |
| Mov Cap-1 Maneuver   | 1545   | -      | -      | 934   | 1048  |
| Mov Cap-2 Maneuver   | -      | -      | -      | 934   | -     |
| Stage 1              | -      | -      | -      | 987   | -     |
| Stage 2              | -      | -      | -      | 979   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 8.8 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1545  | -   | -   | -   | 963   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.025 |
| HCM Control Delay (s) | 7.3   | 0   | -   | -   | 8.8   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

18: Mayo Blvd. & Access E  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕↕   | ↕    |      | ↕↕   |      |
| Traffic Vol, veh/h       | 3    | 207  | 173  | 33   | 16   | 6    |
| Future Vol, veh/h        | 3    | 207  | 173  | 33   | 16   | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 230  | 192  | 37   | 18   | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 229    | 0      | 332    |
| Stage 1              | -      | -      | 211    |
| Stage 2              | -      | -      | 121    |
| Critical Hdwy        | 4.13   | -      | 6.63   |
| Critical Hdwy Stg 1  | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | 5.83   |
| Follow-up Hdwy       | 2.219  | -      | 3.519  |
| Pot Cap-1 Maneuver   | *1415  | -      | *892   |
| Stage 1              | -      | -      | *892   |
| Stage 2              | -      | -      | *892   |
| Platoon blocked, %   | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *1415  | -      | *890   |
| Mov Cap-2 Maneuver   | -      | -      | *890   |
| Stage 1              | -      | -      | *890   |
| Stage 2              | -      | -      | *892   |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.1 | 0  | 9.1 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | *1415 | -   | -   | -   | 904   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.027 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.1   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      | ↕↕↕↕ | ↕↕↕  |      |
| Traffic Vol, veh/h       | 0    | 37   | 0    | 1046 | 1423 | 61   |
| Future Vol, veh/h        | 0    | 37   | 0    | 1046 | 1423 | 61   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 41   | 0    | 1162 | 1581 | 68   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 825    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 7.14   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.92   | -      |
| Pot Cap-1 Maneuver   | 0      | *580   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   |        | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *580   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 11.7 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT | SBR |
|-----------------------|-----|-------|-----|-----|
| Capacity (veh/h)      | -   | 580   | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.071 | -   | -   |
| HCM Control Delay (s) | -   | 11.7  | -   | -   |
| HCM Lane LOS          | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 955  | 787  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 955  | 787  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 1061 | 874  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 470  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 7.14 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.92 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *734 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *734 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 734     | - - | - - |
| HCM Lane V/C Ratio    | - 0.067   | - - | - - |
| HCM Control Delay (s) | - 10.3    | - - | - - |
| HCM Lane LOS          | - B       | - - | - - |
| HCM 95th %tile Q(veh) | - 0.2     | - - | - - |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

19: Black Mountain Pkwy. & Access F  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    |      | ↖↖↖↖ | ↗↗   |      |
| Traffic Vol, veh/h       | 0    | 44   | 0    | 859  | 842  | 59   |
| Future Vol, veh/h        | 0    | 44   | 0    | 859  | 842  | 59   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 49   | 0    | 954  | 936  | 66   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - 501  | - 0    | - 0    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |
| Critical Hdwy        | - 7.14 | - -    | - -    |
| Critical Hdwy Stg 1  | - -    | - -    | - -    |
| Critical Hdwy Stg 2  | - -    | - -    | - -    |
| Follow-up Hdwy       | - 3.92 | - -    | - -    |
| Pot Cap-1 Maneuver   | 0 *734 | 0 -    | - -    |
| Stage 1              | 0 -    | 0 -    | - -    |
| Stage 2              | 0 -    | 0 -    | - -    |
| Platoon blocked, %   | - 1    | - -    | - -    |
| Mov Cap-1 Maneuver   | - *734 | - -    | - -    |
| Mov Cap-2 Maneuver   | - -    | - -    | - -    |
| Stage 1              | - -    | - -    | - -    |
| Stage 2              | - -    | - -    | - -    |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
|-----------------------|-----------|-----|-----|
| Capacity (veh/h)      | - 734     | - - | - - |
| HCM Lane V/C Ratio    | - 0.067   | - - | - - |
| HCM Control Delay (s) | - 10.3    | - - | - - |
| HCM Lane LOS          | - B       | - - | - - |
| HCM 95th %tile Q(veh) | - 0.2     | - - | - - |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔↔   |
| Traffic Vol, veh/h       | 133  | 32   | 83   | 913  | 1350 | 110  |
| Future Vol, veh/h        | 133  | 32   | 83   | 913  | 1350 | 110  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 148  | 36   | 92   | 1014 | 1500 | 122  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 2151   | 811    | 1622   |
| Stage 1              | 1561   | -      | -      |
| Stage 2              | 590    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *407   | *602   | 671    |
| Stage 1              | *601   | -      | -      |
| Stage 2              | *731   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *351   | *602   | 671    |
| Mov Cap-2 Maneuver   | *351   | -      | -      |
| Stage 1              | *519   | -      | -      |
| Stage 2              | *731   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.3 | 0.9 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 671   | -   | 351   | 602   | -   | -   |
| HCM Lane V/C Ratio    | 0.137 | -   | 0.421 | 0.059 | -   | -   |
| HCM Control Delay (s) | 11.2  | -   | 22.5  | 11.4  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.5   | -   | 2     | 0.2   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔↔   |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 803  | 719  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 803  | 719  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 892  | 799  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1410   | 462    | 923    |
| Stage 1              | 861    | -      | -      |
| Stage 2              | 549    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *450   | *756   | 802    |
| Stage 1              | *693   | -      | -      |
| Stage 2              | *753   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *396   | *756   | 802    |
| Mov Cap-2 Maneuver   | *396   | -      | -      |
| Stage 1              | *610   | -      | -      |
| Stage 2              | *753   | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 18.9 | 1  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 802   | -   | 396   | 756   | -   | -   |
| HCM Lane V/C Ratio    | 0.119 | -   | 0.426 | 0.044 | -   | -   |
| HCM Control Delay (s) | 10.1  | -   | 20.7  | 10    | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 2.1   | 0.1   | -   | -   |

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



22-1270: Black Mountain Village  
2029 Total School PM Mitigated

20: Black Mountain Pkwy. & Access G  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔↔  | ↔↔↔  | ↔    |
| Traffic Vol, veh/h       | 152  | 30   | 86   | 707  | 774  | 112  |
| Future Vol, veh/h        | 152  | 30   | 86   | 707  | 774  | 112  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 169  | 33   | 96   | 786  | 860  | 124  |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1428   | 492    | 984    |
| Stage 1              | 922    | -      | -      |
| Stage 2              | 506    | -      | -      |
| Critical Hdwy        | 5.74   | 7.14   | 5.34   |
| Critical Hdwy Stg 1  | 6.64   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.82   | 3.92   | 3.12   |
| Pot Cap-1 Maneuver   | *394   | *734   | 824    |
| Stage 1              | *725   | -      | -      |
| Stage 2              | *776   | -      | -      |
| Platoon blocked, %   | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *348   | *734   | 824    |
| Mov Cap-2 Maneuver   | *348   | -      | -      |
| Stage 1              | *640   | -      | -      |
| Stage 2              | *776   | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 22.3 | 1.1 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 824   | -   | 348   | 734   | -   | -   |
| HCM Lane V/C Ratio    | 0.116 | -   | 0.485 | 0.045 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | 24.7  | 10.1  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 2.5   | 0.1   | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total AM Mitigated

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      | ↔↔↔  | ↔↔↔  |      |
| Traffic Vol, veh/h       | 0    | 40   | 0    | 997  | 1351 | 31   |
| Future Vol, veh/h        | 0    | 40   | 0    | 997  | 1351 | 31   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 44   | 0    | 1108 | 1501 | 34   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 768    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *502   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   |        | 1      |        |
| Mov Cap-1 Maneuver   | -      | *502   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 12.9 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBL | NBT   | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | -   | 502   | -     | -     | -   | -   |
| HCM Lane V/C Ratio    | -   | 0.089 | -     | -     | -   | -   |
| HCM Control Delay (s) | -   | 12.9  | -     | -     | -   | -   |
| HCM Lane LOS          | -   | B     | -     | -     | -   | -   |
| HCM 95th %tile Q(veh) | -   | 0.3   | -     | -     | -   | -   |

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

22-1270: Black Mountain Village  
2029 Total PM Mitigated

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↕    | ↖    | ↗    | ↖    |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 888  | 716  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 888  | 716  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 987  | 796  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 417    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *789   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *789   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.9 | 0  | 0  |
| HCM LOS              | A   |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT  | SBR |
|-----------------------|-----------|------|-----|
| Capacity (veh/h)      | -         | 789  | -   |
| HCM Lane V/C Ratio    | -         | 0.07 | -   |
| HCM Control Delay (s) | -         | 9.9  | -   |
| HCM Lane LOS          | -         | A    | -   |
| HCM 95th %tile Q(veh) | -         | 0.2  | -   |

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

22-1270: Black Mountain Village  
2029 Total School PM Mitigated

21: Black Mountain Pkwy. & Access H  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      | ↗    | ↕    | ↖    | ↗    | ↖    |
| Traffic Vol, veh/h       | 0    | 50   | 0    | 792  | 771  | 33   |
| Future Vol, veh/h        | 0    | 50   | 0    | 792  | 771  | 33   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 90   | 90   | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 56   | 0    | 880  | 857  | 37   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 447    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | *763   | 0      |
| Stage 1              | 0      | -      | 0      |
| Stage 2              | 0      | -      | 0      |
| Platoon blocked, %   | -      | 1      | -      |
| Mov Cap-1 Maneuver   | -      | *763   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.1 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT   | SBR |
|-----------------------|-----------|-------|-----|
| Capacity (veh/h)      | -         | 763   | -   |
| HCM Lane V/C Ratio    | -         | 0.073 | -   |
| HCM Control Delay (s) | -         | 10.1  | -   |
| HCM Lane LOS          | -         | B     | -   |
| HCM 95th %tile Q(veh) | -         | 0.2   | -   |

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

**APPENDIX M**

**QUEUE STORAGE ANALYSIS**

DRAFT

# Black Mountain Village

# Queue Storage Calculations

## Signalized Intersections

2029 Total

Average Vehicle Length, VL (Per Table 9-23, AASHTO "Green Book" 2018, p 9-99)

Intersection Cycle Length (sec): 120

Cycles per Hour: 30      Queuing Cycles: 2

Truck % = 2%      VL (ft) = 25      Average Vehicle Length

| Truck% | VL (ft) |
|--------|---------|
| 0%     | 25      |
| 2%     | 25      |
| 10%    | 32      |
| 15%    | 35      |
| 20%    | 38      |
| 25%    | 41      |

Equation Used Storage Length, SL, = 2 x (vehicles/hour)/(cycles/hour) x Average Vehicle Length

| Intersection                           | Cycle Length | Movement | AM Peak (veh/hr) | Midday Peak (veh/hr) | PM Peak (veh/hr) | Max vehs per 2 cycles | AASHTO Storage Length (ft) |
|--|--------------|----------|------------------|----------------------|------------------|-----------------------|----------------------------|
| 32nd St. & Deer Valley Dr.             | 120          | NB Left  | 13               | 8                    | 7                | 1                     | 25'                        |
|  |              | SB Left  | 122              | 78                   | 89               | 9                     | 225'                       |
|  |              | EB Left  | 25               | 17                   | 33               | 3                     | 75'                        |
|  |              | WB Left  | 13               | 6                    | 17               | 2                     | 50'                        |
|  |              | SB Right | 22               | 20                   | 44               | 3                     | 75'                        |
| Black Mountain Blvd. & Deer Valley Dr. | 120          | NB Left  | 388              | 349                  | 267              | 26                    | 650'                       |
|  | 120          | SB Left  | 99               | 54                   | 85               | 7                     | 175'                       |
|  | 120          | EB Left  | 98               | 111                  | 72               | 8                     | 200'                       |
|  | 120          | WB Left  | 274              | 253                  | 280              | 19                    | 475'                       |
|  | 120          | NB Right | 294              | 241                  | 231              | 20                    | 500'                       |
| Black Mountain Blvd. & Mayo Blvd.      | 120          | EB Right | 497              | 302                  | 239              | 34                    | 850'                       |
|  |              | NB Left  | 98               | 119                  | 90               | 8                     | 200'                       |
|  |              | SB Left  | 48               | 107                  | 71               | 8                     | 200'                       |
|  |              | EB Left  | 348              | 167                  | 60               | 24                    | 600'                       |
|  |              | WB Left  | 316              | 123                  | 188              | 22                    | 550'                       |
|  |              | NB Right | 154              | 163                  | 156              | 11                    | 275'                       |
|  | SB Right     | 116      | 95               | 28                   | 8                | 200'                  |                            |
|  | WB Right     | 149      | 108              | 105                  | 10               | 250'                  |                            |

\*Note: Truck/Passenger Vehicle split is projected based on percentage and not reflective of actual vehicle classification counts.

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience

Unsignalized Intersections  
2029 Total

Left Turns (Per AASHTO "Green Book" 2018, pp 9-96 to 9-99)

| Equation 9-3  | Equation 9-4   |
|---|--|
| U.S. Customary  | U.S. Customary   |
| $c = \frac{V_o e^{-V_o t_c / 3600}}{1 - e^{-V_o t_f / 3600}}$ <p>where:<br/>                     c = left-turn capacity, veh/h<br/>                     V<sub>o</sub> = major-road volume conflicting with the minor movement, assumed to be equal to one-half of the two-way major-road volume, veh/h<br/>                     t<sub>c</sub> = critical gap, s<br/>                     t<sub>f</sub> = follow-up gap, s</p> | $SL = \left( \frac{\ln [P(n > N)]}{\ln \left[ \frac{v}{c} \right]} - 1 \right) \times VL$ <p>where:<br/>                     SL = storage length, ft<br/>                     P(n &gt; N) = probability of turn-lane overflow<br/>                     v = left-turn vehicle volume, veh/h<br/>                     c = left-turn capacity, veh/h<br/>                     VL = average length per vehicle, ft</p> |

| Truck% | VL (ft) |
|--------|---------|
| 0%     | 25      |
| 5%     | 28      |
| 10%    | 32      |
| 15%    | 35      |
| 20%    | 38      |
| 25%    | 41      |

Per Section 9.7.2.2 Storage Length

c (veh/hr) = *calculated* Left-Turn Capacity  
 V<sub>o</sub> (veh/hr) = Opposing Major Road Volume  
 t<sub>c</sub> (sec) = 6.25 85th %-ile Critical Gap  
 t<sub>f</sub> (sec) = 2.50 Follow-Up Gap  
 SL (ft) = *calculated* Storage Length  
 P(n > N) = 0.005 (a probability, no units)  
 v (veh/hr) = *enter below* Left-Turn Vehicle Volume

Truck % = 2%

VL (ft) = 25 Average Vehicle Length

Right Turns: Equation Used: storage length = 2 x (vehicles/hour)/(60 minutes/hour) x average vehicle length

| Intersection                           | Movement | AM Peak (veh/hr) | Midday Peak (veh/hr) | PM Peak (veh/hr) | Veh per 2 minutes | Opposing V <sub>o</sub> (veh/hr) | AASHTO Storage Length (ft) |
|--|----------|------------------|----------------------|------------------|-------------------|----------------------------------|----------------------------|
| 34th St. & Deer Valley Dr.             | NB Left  | 104              | 119                  | 106              | 4                 | 0                                | 100'                       |
|  | WB Left  | 94               | 33                   | 29               | 4                 | 1,217                            | 100'                       |
|  | NB Right | 148              | 167                  | 29               | 6                 | 0                                | 150'                       |
| Black Mountain Blvd. & Rough Rider Rd. | NB Left  | 26               | 27                   | 33               | 2                 | 234                              | 25'                        |
|  | SB Left  | 5                | 2                    | 10               | 1                 | 430                              | 25'                        |
|  | EB Left  | 31               | 13                   | 52               | 2                 | 22                               | 25'                        |
|  | WB Left  | 83               | 58                   | 78               | 3                 | 11                               | 25'                        |
|  | NB Right | 77               | 56                   | 61               | 3                 | 0                                | 75'                        |
| Black Mountain Blvd. & Bryce Ln.       | NB Left  | 100              | 98                   | 109              | 4                 | 324                              | 25'                        |
|  | SB Left  | 0                | 3                    | 3                | 1                 | 327                              | 25'                        |
| Black Mountain Blvd. & HS              | SB Right | 508              | 210                  | 48               | 17                | 0                                | 425'                       |
|  | EB Left  | 190              | 127                  | 89               | 7                 | 187                              | 50'                        |
| Lone Cactus Dr. & Mayo Blvd.           | WB Left  | 15               | 14                   | 26               | 1                 | 159                              | 25'                        |
|  | NB Left  | 51               | 9                    | 64               | 3                 | 5                                | 25'                        |
| Aviano Way & Deer Valley Dr.           | SB Left  | 43               | 31                   | 29               | 2                 | 7                                | 25'                        |
|  | EB Left  | 51               | 52                   | 73               | 3                 | 768                              | 50'                        |
|  | WB Left  | 65               | 44                   | 61               | 3                 | 942                              | 50'                        |
|  | NB Left  | 47               | 28                   | 30               | 2                 | 26                               | 25'                        |
| 40th St. & May Blvd.                   | EB Left  | 170              | 125                  | 104              | 6                 | 0                                | 150'                       |
|  | EB Right | 114              | 117                  | 117              | 4                 | 0                                | 100'                       |
| Black Mountain Blvd. & Access          | NB Left  | 83               | 86                   | 86               | 3                 | 774                              | 50'                        |

\*Note: Truck/Passenger Vehicle split is projected based on percentage and not reflective of actual vehicle classification counts.

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.

**APPENDIX N**

**SIGHT DISTANCE ANALYSIS**

DRAFT

**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access A

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |           |                           |
|--|-----------|---------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 20        | MPH                       |
| Grades - Approaching Minor Street from: (- = approaching downhill) |           |                           |
| Left (G <sub>L</sub> )   |           | %                         |
| Right (G <sub>R</sub> )  |           | %                         |
| Approach Grade Adjustment Factor                                   | Left 1.0  | Tbl 9-5, p 9-42           |
|  | Right 1.0 |                           |
| Major Road Through Lanes on Each Approach                          | 1.0       | (Use 1 for RI/RO/LI only) |
| Median Width (in "Lane Equivalents")                               |           | (Use 0 for RI/RO/LI only) |
| Minor Road Approach Upgrade, if >3%                                |           | %                         |
| Minor Road Access (check restricted)                               |           |                           |
|  | LI        | LO/Th                     |
|  |           | RO                        |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade  $d = 1.47Vt + 1.075 \frac{V^2}{a}$  Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 111.9 ft |
| Design d=     | 115 ft   |

With Effect of Grade

$d = 1.47Vt + \frac{V^2}{30((\frac{a}{32.2}) \pm G)}$  Eq 3-3, p 3-5

|               |                 |
|---------------|-----------------|
| Calculated d= | 112.3 ft - left |
|               | 115 ft - right  |
| Design d=     | 112.3 ft - left |
|               | 115 ft - right  |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access A

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** AASHTO Ref §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

| Time gap adjustments                              |         |                 |
|---|---------|-----------------|
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.2 sec | Tbl 9-5, p 9-37 |

| Site data                           |     | AASHTO Ref         |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 1.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

| Time Gap based on site data  |          |  |
|--|----------|--|
| Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median |          |  |
| Passenger Car  | 7.5 sec  |  |
| Single-Unit Truck  | 9.5 sec  |  |
| Combination Truck  | 11.5 sec |  |

ISD to left & right along Major Road  $ISD = 1.47V_{major}t_g$  (ft) Eq 9-1, p 9-45

|                   |                 | ISD to Left and Right |
|-------------------|-----------------|-----------------------|
| Passenger Car     | calculated ISD= | 220.5 ft              |
|                   | design ISD=     | 225 ft                |
| Single-Unit Truck | calculated ISD= | 279.3 ft              |
|                   | design ISD=     | 280 ft                |
| Combination Truck | calculated ISD= | 338.1 ft              |
|                   | design ISD=     | 340 ft                |



**22-1270: Black Mountain Village**

Location: Access A

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | <i>AASHTO Ref</i>  |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.2, p 9-47 |  |
|  |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Truck  | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            | See Notes          |  |
| Passenger Car  | 0.5 sec                    | below              |  |
| Trucks   | 0.7 sec                    |                    |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 1.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

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

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                  |
|-------------------|-----------------|----------------------|------------------|
|                   |                 | ISD to Left          | ISD to right     |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u> |
| Passenger Car     | calculated ISD= | 191.1                | 191.1            |
|                   | design ISD=     | 195                  | 195              |
| Single-Unit Truck | calculated ISD= | 249.9                | 249.9            |
|                   | design ISD=     | 250                  | 250              |
| Combination Truck | calculated ISD= | 308.7                | 308.7            |
|                   | design ISD=     | 310                  | 310              |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access A

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |                |
|--|--|-------------------|----------------|
| <u>Case F—Left Turns from the Major Road</u>           |  | <i>AASHTO Ref</i> |                |
|  |  | §9.5.3.6, p 9-56  |                |
| Design Vehicle   | Time Gap (t <sub>g</sub> )                     |                   |                |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |                |
| Single-Unit Truck                                      | 6.5 sec  | Tbl 9-16, p 9-57  |                |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |                |
| Time gap adjustments                                   |  |                   |                |
| Add'l lanes to cross (1 assumed)                       |  |                   |                |
| Passenger Car  | 0.5 sec  | See Notes to      |                |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |                |
| Site data  |  |                   |                |
| Opposing Lanes (adj'd for x-wide median)               | 0.0  |                   |                |
| Time Gap based on site data                            |  |                   |                |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |                |
| Passenger Car  | 5.5 sec  |                   |                |
| Single-Unit Truck                                      | 6.5 sec  |                   |                |
| Combination Truck                                      | 7.5 sec  |                   |                |
| ISD to front along Major Road                          | ISD=1.47V <sub>major</sub> t <sub>g</sub> (ft) |                   | Eq 9-1, p 9-45 |
| Passenger Car  | calculated ISD=                                | 161.7 ft          |                |
|  | design ISD=                                    | 165 ft            |                |
| Single-Unit Truck                                      | calculated ISD=                                | 191.1 ft          |                |
|  | design ISD=                                    | 195 ft            |                |
| Combination Truck                                      | calculated ISD=                                | 220.5 ft          |                |
|  | design ISD=                                    | 225 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| Stopping                      |                |     |          |             |
| Without effect of grade       |                | 115 | N/A      | N/A         |
| With effect of grade on left  |                | 115 | N/A      | N/A         |
| With effect of grade on right |                | 115 | N/A      | N/A         |
| Intersection                  |                |     |          |             |
| To Right                      | B1             | 225 | 280      | 340         |
| To Left                       | B2/B3          | 195 | 250      | 310         |
| On Major Road                 | F              | 165 | 195      | 225         |





**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access B

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |                       |                             |
|--|-----------------------|-----------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 20                    | MPH                         |
| Grades - Approaching Minor Street from: (- = approaching downhill) |                       |                             |
| Left (G <sub>L</sub> )   |                       | %                           |
| Right (G <sub>R</sub> )  |                       | %                           |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-5, p 9-42             |
| Major Road Through Lanes on Each Approach                          | 1.0                   | (Use 1 for RI/RO/[LI] only) |
| Median Width (in "Lane Equivalents")                               |                       | (Use 0 for RI/RO/[LI] only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                           |
| Minor Road Access (check restricted)                               | LI LO/Th RO           |                             |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade  $d = 1.47Vt + 1.075 \frac{V^2}{a}$  Eq 3-2, p 3-5

Calculated d= 111.9 ft  
Design d= 115 ft

With Effect of Grade  $d = 1.47Vt + \frac{V^2}{30((\frac{a}{32.2}) \pm G)}$  Eq 3-3, p 3-5

Calculated d= 112.3 ft - left  
115 ft - right  
Design d= 112.3 ft - left  
115 ft - right

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access B

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** AASHTO Ref §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

| Time gap adjustments                              |         |                 |
|---|---------|-----------------|
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.2 sec | Tbl 9-5, p 9-37 |

| Site data                           |     | AASHTO Ref         |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 1.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

| Time Gap based on site data  |          |  |
|--|----------|--|
| Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median |          |  |
| Passenger Car  | 7.5 sec  |  |
| Single-Unit Truck  | 9.5 sec  |  |
| Combination Truck  | 11.5 sec |  |

ISD to left & right along Major Road  $ISD = 1.47V_{major}t_g$  (ft) Eq 9-1, p 9-45

|                   |  | ISD to Left and Right |
|-------------------|--|-----------------------|
| Passenger Car     | calculated ISD= 220.5 ft<br>design ISD= 225 ft |                       |
| Single-Unit Truck | calculated ISD= 279.3 ft<br>design ISD= 280 ft |                       |
| Combination Truck | calculated ISD= 338.1 ft<br>design ISD= 340 ft |                       |



**22-1270: Black Mountain Village**

Location: Access B

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | <i>AASHTO Ref</i>  |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.2, p 9-47 |  |
|  |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            | See Notes          |  |
| Passenger Car  | 0.5 sec                    |                    |  |
| Trucks   | 0.7 sec                    | below              |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 1.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

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

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                  |
|-------------------|-----------------|----------------------|------------------|
|                   |                 | ISD to Left          | ISD to right     |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u> |
| Passenger Car     | calculated ISD= | 191.1                | 191.1            |
|                   | design ISD=     | 195                  | 195              |
| Single-Unit Tuck  | calculated ISD= | 249.9                | 249.9            |
|                   | design ISD=     | 250                  | 250              |
| Combination Truck | calculated ISD= | 308.7                | 308.7            |
|                   | design ISD=     | 310                  | 310              |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access B

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

*Case F—Left Turns from the Major Road* §9.5.3.6, p 9-56

|                   |                            |                  |
|-------------------|----------------------------|------------------|
| Design Vehicle    | Time Gap (t <sub>g</sub> ) |                  |
| Passenger Car     | 5.5 sec                    | Tbl 9-16, p 9-57 |
| Single-Unit Tuck  | 6.5 sec                    | Tbl 9-16, p 9-57 |
| Combination Truck | 7.5 sec                    | Tbl 9-16, p 9-57 |

|                                  |         |                  |
|----------------------------------|---------|------------------|
| Time gap adjustments             |         |                  |
| Add'l lanes to cross (1 assumed) |         |                  |
| Passenger Car                    | 0.5 sec | See Notes to     |
| Trucks                           | 0.7 sec | Tbl 9-16, p 9-57 |

|  |     |  |
|--|-----|--|
| Site data                                |     |  |
| Opposing Lanes (adj'd for x-wide median) | 0.0 |  |

|  |         |  |
|--|---------|--|
| Time Gap based on site data                            |         |  |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |         |  |
| 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 <sub>major</sub> t <sub>g</sub> (ft) | Eq 9-1, p 9-45 |
| Passenger Car                 | calculated ISD= 161.7 ft                       |                |
|                               | design ISD= 165 ft                             |                |
| Single-Unit Tuck              | calculated ISD= 191.1 ft                       |                |
|                               | design ISD= 195 ft                             |                |
| Combination Truck             | calculated ISD= 220.5 ft                       |                |
|                               | design ISD= 225 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| Stopping                      |                |     |          |             |
| Without effect of grade       |                | 115 | N/A      | N/A         |
| With effect of grade on left  |                | 115 | N/A      | N/A         |
| With effect of grade on right |                | 115 | N/A      | N/A         |
| Intersection                  |                |     |          |             |
| To Right                      | B1             | 225 | 280      | 340         |
| To Left                       | B2/B3          | 195 | 250      | 310         |
| On Major Road                 | F              | 165 | 195      | 225         |



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access C

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |                       |                           |
|--|-----------------------|---------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 20                    | MPH                       |
| Grades - Approaching Minor Street from: (- = approaching downhill) |                       |                           |
| Left (G <sub>L</sub> )   |                       | %                         |
| Right (G <sub>R</sub> )  |                       | %                         |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-5, p 9-42           |
| Major Road Through Lanes on Each Approach                          | 1.0                   | (Use 1 for RI/RO/LI only) |
| Median Width (in "Lane Equivalents")                               |                       | (Use 0 for RI/RO/LI only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                         |
| Minor Road Access (check restricted)                               | LI LO/Th RO           |                           |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade  $d = 1.47Vt + 1.075 \frac{V^2}{a}$  Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 111.9 ft |
| Design d=     | 115 ft   |

With Effect of Grade

$d = 1.47Vt + \frac{V^2}{30((\frac{a}{32.2}) \pm G)}$  Eq 3-3, p 3-5

|               |                                   |
|---------------|-----------------------------------|
| Calculated d= | 112.3 ft - left<br>115 ft - right |
| Design d=     | 112.3 ft - left<br>115 ft - right |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access C

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** AASHTO Ref §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

| Time gap adjustments                              |         |                 |
|---|---------|-----------------|
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.2 sec | Tbl 9-5, p 9-37 |

| Site data                           |     | AASHTO Ref         |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 1.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

| Time Gap based on site data  |          |  |
|--|----------|--|
| Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median |          |  |
| Passenger Car  | 7.5 sec  |  |
| Single-Unit Truck  | 9.5 sec  |  |
| Combination Truck  | 11.5 sec |  |

ISD to left & right along Major Road  $ISD = 1.47V_{major}t_g$  (ft) Eq 9-1, p 9-45

|                   |                 | ISD to Left and Right |
|-------------------|-----------------|-----------------------|
| Passenger Car     | calculated ISD= | 220.5 ft              |
|                   | design ISD=     | 225 ft                |
| Single-Unit Truck | calculated ISD= | 279.3 ft              |
|                   | design ISD=     | 280 ft                |
| Combination Truck | calculated ISD= | 338.1 ft              |
|                   | design ISD=     | 340 ft                |



**22-1270: Black Mountain Village**

Location: Access C

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
|  |                            | <i>AASHTO Ref</i>  |  |
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | §9.5.3.2.2, p 9-47 |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            |                    |  |
| Passenger Car  | 0.5 sec                    | See Notes          |  |
| Trucks   | 0.7 sec                    | below              |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 1.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

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

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                     |
|-------------------|-----------------|----------------------|---------------------|
|                   |                 | <u>ISD to Left</u>   | <u>ISD to right</u> |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u>    |
| Passenger Car     | calculated ISD= | 191.1                | 191.1               |
|                   | design ISD=     | 195                  | 195                 |
| Single-Unit Tuck  | calculated ISD= | 249.9                | 249.9               |
|                   | design ISD=     | 250                  | 250                 |
| Combination Truck | calculated ISD= | 308.7                | 308.7               |
|                   | design ISD=     | 310                  | 310                 |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access C

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |                |
|--|--|-------------------|----------------|
|  |  | <i>AASHTO Ref</i> |                |
| <u>Case F—Left Turns from the Major Road</u>           |  | §9.5.3.6, p 9-56  |                |
| Design Vehicle   | Time Gap (t <sub>g</sub> )                     |                   |                |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |                |
| Single-Unit Tuck                                       | 6.5 sec  | Tbl 9-16, p 9-57  |                |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |                |
| Time gap adjustments                                   |  |                   |                |
| Add'l lanes to cross (1 assumed)                       |  |                   |                |
| Passenger Car  | 0.5 sec  | See Notes to      |                |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |                |
| Site data  |  |                   |                |
| Opposing Lanes (adj'd for x-wide median)               | 0.0  |                   |                |
| Time Gap based on site data                            |  |                   |                |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |                |
| 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 <sub>major</sub> t <sub>g</sub> (ft) |                   | Eq 9-1, p 9-45 |
| Passenger Car  | calculated ISD=                                | 161.7 ft          |                |
|  | design ISD=                                    | 165 ft            |                |
| Single-Unit Tuck                                       | calculated ISD=                                | 191.1 ft          |                |
|  | design ISD=                                    | 195 ft            |                |
| Combination Truck                                      | calculated ISD=                                | 220.5 ft          |                |
|  | design ISD=                                    | 225 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| <b>Stopping</b>               |                |     |          |             |
| Without effect of grade       |                | 115 | N/A      | N/A         |
| With effect of grade on left  |                | 115 | N/A      | N/A         |
| With effect of grade on right |                | 115 | N/A      | N/A         |
| <b>Intersection</b>           |                |     |          |             |
| To Right                      | B1             | 225 | 280      | 340         |
| To Left                       | B2/B3          | 195 | 250      | 310         |
| On Major Road                 | F              | 165 | 195      | 225         |



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access D

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |                       |                           |
|--|-----------------------|---------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 50                    | MPH                       |
| Grades - Approaching Minor Street from: (- = approaching downhill) |                       |                           |
| Left (G <sub>L</sub> )   |                       | %                         |
| Right (G <sub>R</sub> )  |                       | %                         |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-5, p 9-42           |
| Major Road Through Lanes on Each Approach                          | 3.0                   | (Use 1 for RI/RO/LI only) |
| Median Width (in "Lane Equivalents")                               | 1.0                   | (Use 0 for RI/RO/LI only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                         |
| Minor Road Access (check restricted)                               | X X                   | LI LO/Th RO               |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade  $d=1.47Vt+1.075 \frac{V^2}{a}$  Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 423.8 ft |
| Design d=     | 425 ft   |

With Effect of Grade

$d=1.47Vt+\frac{V^2}{30((\frac{a}{32.2})\pm G)}$  Eq 3-3, p 3-5

|               |                                   |
|---------------|-----------------------------------|
| Calculated d= | 423.6 ft - left<br>425 ft - right |
| Design d=     | 423.6 ft - left<br>425 ft - right |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access D

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** AASHTO Ref §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

| Time gap adjustments                              |         |                 |
|---|---------|-----------------|
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.2 sec | Tbl 9-5, p 9-37 |

| Site data                           |     | AASHTO Ref         |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 3.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

| Time Gap based on site data  |          |  |
|--|----------|--|
| Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median |          |  |
| Passenger Car  | 9.0 sec  |  |
| Single-Unit Truck  | 11.6 sec |  |
| Combination Truck  | 13.6 sec |  |

ISD to left & right along Major Road  $ISD=1.47V_{major}t_g$  (ft) Eq 9-1, p 9-45

|                   |                 | ISD to Left and Right |
|-------------------|-----------------|-----------------------|
| Passenger Car     | calculated ISD= | 661.5 ft              |
|                   | design ISD=     | 665 ft                |
| Single-Unit Truck | calculated ISD= | 852.6 ft              |
|                   | design ISD=     | 855 ft                |
| Combination Truck | calculated ISD= | 999.6 ft              |
|                   | design ISD=     | 1000 ft               |



**22-1270: Black Mountain Village**

Location: Access D

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | <i>AASHTO Ref</i>  |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.2, p 9-47 |  |
|  |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            |                    |  |
| Passenger Car  | 0.5 sec                    | See Notes          |  |
| Trucks   | 0.7 sec                    | below              |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 3.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

|   |                    |                |
|---|--------------------|----------------|
| Time Gap based on site data (sec)   | <u>B2 &amp; B3</u> | <u>B3 Only</u> |
| <i>Design Vehicle Gap+Adj for Approach Grade&gt;3%(+Adjs for Add'l Lanes &amp; Median for B3)</i> |                    |                |
| Passenger Car   | 8.0                | 9.0            |
| Single-Unit Tuck  | 10.6               | 12.0           |
| Combination Truck   | 12.6               | 14.0           |

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                  |
|-------------------|-----------------|----------------------|------------------|
|                   |                 | ISD to Left          | ISD to right     |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u> |
| Passenger Car     | calculated ISD= | 588.0                | 661.5            |
|                   | design ISD=     | 590                  | 665              |
| Single-Unit Tuck  | calculated ISD= | 779.1                | 882.0            |
|                   | design ISD=     | 780                  | 885              |
| Combination Truck | calculated ISD= | 926.1                | 1029.0           |
|                   | design ISD=     | 930                  | 1030             |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access D

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |                |
|--|--|-------------------|----------------|
| <u>Case F—Left Turns from the Major Road</u>           |  | <i>AASHTO Ref</i> |                |
|  |  | §9.5.3.6, p 9-56  |                |
| Design Vehicle   | Time Gap (t <sub>g</sub> )                     |                   |                |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |                |
| Single-Unit Tuck                                       | 6.5 sec  | Tbl 9-16, p 9-57  |                |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |                |
| Time gap adjustments                                   |  |                   |                |
| Add'l lanes to cross (1 assumed)                       |  |                   |                |
| Passenger Car  | 0.5 sec  | See Notes to      |                |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |                |
| Site data  |  |                   |                |
| Opposing Lanes (adj'd for x-wide median)               | 3.0  |                   |                |
| Time Gap based on site data                            |  |                   |                |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |                |
| Passenger Car  | 7.0 sec  |                   |                |
| Single-Unit Tuck                                       | 8.6 sec  |                   |                |
| Combination Truck                                      | 9.6 sec  |                   |                |
| ISD to front along Major Road                          | ISD=1.47V <sub>major</sub> t <sub>g</sub> (ft) |                   | Eq 9-1, p 9-45 |
| Passenger Car  | calculated ISD=                                | 514.5 ft          |                |
|  | design ISD=                                    | 515 ft            |                |
| Single-Unit Tuck                                       | calculated ISD=                                | 632.1 ft          |                |
|  | design ISD=                                    | 635 ft            |                |
| Combination Truck                                      | calculated ISD=                                | 705.6 ft          |                |
|  | design ISD=                                    | 710 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car        | SU Truck   | Combo Truck |
|-------------------------------|----------------|------------|------------|-------------|
| Stopping                      |                |            |            |             |
| Without effect of grade       |                | 425        | N/A        | N/A         |
| With effect of grade on left  |                | 425        | N/A        | N/A         |
| With effect of grade on right |                | 425        | N/A        | N/A         |
| Intersection                  |                |            |            |             |
| To Right                      | B3             | Restricted | Restricted | Restricted  |
| To Left                       | B2/B3          | 590        | 780        | 930         |
| On Major Road                 | F              | Restricted | Restricted | Restricted  |



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access E

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |           |                           |
|--|-----------|---------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 20        | MPH                       |
| Grades - Approaching Minor Street from: (- = approaching downhill) |           |                           |
| Left (G <sub>L</sub> )   |           | %                         |
| Right (G <sub>R</sub> )  |           | %                         |
| Approach Grade Adjustment Factor                                   | Left 1.0  | Tbl 9-5, p 9-42           |
|  | Right 1.0 |                           |
| Major Road Through Lanes on Each Approach                          | 1.0       | (Use 1 for RI/RO/LI only) |
| Median Width (in "Lane Equivalents")                               |           | (Use 0 for RI/RO/LI only) |
| Minor Road Approach Upgrade, if >3%                                |           | %                         |
| Minor Road Access (check restricted)                               |           |                           |
|  | LI        | LO/Th                     |
|  |           | RO                        |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade  $d = 1.47Vt + 1.075 \frac{V^2}{a}$  Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 111.9 ft |
| Design d=     | 115 ft   |

With Effect of Grade

$d = 1.47Vt + \frac{V^2}{30((\frac{a}{32.2}) \pm G)}$  Eq 3-3, p 3-5

|               |                 |
|---------------|-----------------|
| Calculated d= | 112.3 ft - left |
|               | 115 ft - right  |
| Design d=     | 112.3 ft - left |
|               | 115 ft - right  |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access E

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** AASHTO Ref §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

| Time gap adjustments                              |         |                 |
|---|---------|-----------------|
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.2 sec | Tbl 9-5, p 9-37 |

| Site data                           |     | AASHTO Ref         |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 1.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

| Time Gap based on site data  |          |  |
|--|----------|--|
| Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median |          |  |
| Passenger Car  | 7.5 sec  |  |
| Single-Unit Truck  | 9.5 sec  |  |
| Combination Truck  | 11.5 sec |  |

ISD to left & right along Major Road  $ISD = 1.47V_{major}t_g$  (ft) Eq 9-1, p 9-45

|                   |                 | ISD to Left and Right |
|-------------------|-----------------|-----------------------|
| Passenger Car     | calculated ISD= | 220.5 ft              |
|                   | design ISD=     | 225 ft                |
| Single-Unit Truck | calculated ISD= | 279.3 ft              |
|                   | design ISD=     | 280 ft                |
| Combination Truck | calculated ISD= | 338.1 ft              |
|                   | design ISD=     | 340 ft                |



**22-1270: Black Mountain Village**

Location: Access E

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | <i>AASHTO Ref</i>  |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.2, p 9-47 |  |
|  |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            | See Notes          |  |
| Passenger Car  | 0.5 sec                    | below              |  |
| Trucks   | 0.7 sec                    |                    |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 1.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

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

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                  |
|-------------------|-----------------|----------------------|------------------|
|                   |                 | ISD to Left          | ISD to right     |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u> |
| Passenger Car     | calculated ISD= | 191.1                | 191.1            |
|                   | design ISD=     | 195                  | 195              |
| Single-Unit Tuck  | calculated ISD= | 249.9                | 249.9            |
|                   | design ISD=     | 250                  | 250              |
| Combination Truck | calculated ISD= | 308.7                | 308.7            |
|                   | design ISD=     | 310                  | 310              |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access E

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |  |
|--|--|-------------------|--|
| <u>Case F—Left Turns from the Major Road</u>           |  | <i>AASHTO Ref</i> |  |
|  |  | §9.5.3.6, p 9-56  |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> )                     |                   |  |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |  |
| Single-Unit Tuck                                       | 6.5 sec  | Tbl 9-16, p 9-57  |  |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |  |
| Time gap adjustments                                   |  |                   |  |
| Add'l lanes to cross (1 assumed)                       |  |                   |  |
| Passenger Car  | 0.5 sec  | See Notes to      |  |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |  |
| Site data  |  |                   |  |
| Opposing Lanes (adj'd for x-wide median)               | 0.0  |                   |  |
| Time Gap based on site data                            |  |                   |  |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |  |
| 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 <sub>major</sub> t <sub>g</sub> (ft) | Eq 9-1, p 9-45    |  |
| Passenger Car  | calculated ISD= 161.7 ft                       |                   |  |
|  | design ISD= 165 ft                             |                   |  |
| Single-Unit Tuck                                       | calculated ISD= 191.1 ft                       |                   |  |
|  | design ISD= 195 ft                             |                   |  |
| Combination Truck                                      | calculated ISD= 220.5 ft                       |                   |  |
|  | design ISD= 225 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| Stopping                      |                |     |          |             |
| Without effect of grade       |                | 115 | N/A      | N/A         |
| With effect of grade on left  |                | 115 | N/A      | N/A         |
| With effect of grade on right |                | 115 | N/A      | N/A         |
| Intersection                  |                |     |          |             |
| To Right                      | B1             | 225 | 280      | 340         |
| To Left                       | B2/B3          | 195 | 250      | 310         |
| On Major Road                 | F              | 165 | 195      | 225         |





**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access F

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |                       |                           |
|--|-----------------------|---------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 50                    | MPH                       |
| Grades - Approaching Minor Street from: (- = approaching downhill) |                       |                           |
| Left (G <sub>L</sub> )   |                       | %                         |
| Right (G <sub>R</sub> )  |                       | %                         |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-5, p 9-42           |
| Major Road Through Lanes on Each Approach                          | 3.0                   | (Use 1 for RI/RO/LI only) |
| Median Width (in "Lane Equivalents")                               | 1.0                   | (Use 0 for RI/RO/LI only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                         |
| Minor Road Access (check restricted)                               | X X                   | LI LO/Th RO               |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade

$$d = 1.47Vt + 1.075 \frac{V^2}{a}$$

Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 423.8 ft |
| Design d=     | 425 ft   |

With Effect of Grade

$$d = 1.47Vt + \frac{V^2}{30 \left( \left( \frac{a}{32.2} \right) \pm G \right)}$$

Eq 3-3, p 3-5

|               |                                   |
|---------------|-----------------------------------|
| Calculated d= | 423.6 ft - left<br>425 ft - right |
| Design d=     | 423.6 ft - left<br>425 ft - right |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access F

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

Time gap adjustments

Add'l lanes to cross (1<sup>st</sup> is assumed)

|   |         |                 |
|---|---------|-----------------|
| Passenger Car                           | 0.5 sec | See Notes       |
| Trucks                                  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%) | 0.2 sec | Tbl 9-5, p 9-37 |

Site data

|                                     |     |                    |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 3.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

Time Gap based on site data

Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median

|                   |          |
|-------------------|----------|
| Passenger Car     | 9.0 sec  |
| Single-Unit Truck | 11.6 sec |
| Combination Truck | 13.6 sec |

ISD to left & right along Major Road ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

| Vehicle           | ISD to Left and Right                           |
|-------------------|---|
| Passenger Car     | calculated ISD= 661.5 ft<br>design ISD= 665 ft  |
| Single-Unit Truck | calculated ISD= 852.6 ft<br>design ISD= 855 ft  |
| Combination Truck | calculated ISD= 999.6 ft<br>design ISD= 1000 ft |



**22-1270: Black Mountain Village**

Location: Access F

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | <i>AASHTO Ref</i>  |  |
|  |                            | §9.5.3.2.2, p 9-47 |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            | See Notes          |  |
| Passenger Car  | 0.5 sec                    |                    |  |
| Trucks   | 0.7 sec                    | below              |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 3.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

|   |                    |                |
|---|--------------------|----------------|
| Time Gap based on site data (sec)   | <u>B2 &amp; B3</u> | <u>B3 Only</u> |
| <i>Design Vehicle Gap+Adj for Approach Grade&gt;3%(+Adjs for Add'l Lanes &amp; Median for B3)</i> |                    |                |
| Passenger Car   | 8.0                | 9.0            |
| Single-Unit Tuck  | 10.6               | 12.0           |
| Combination Truck   | 12.6               | 14.0           |

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                  |
|-------------------|-----------------|----------------------|------------------|
|                   |                 | ISD to Left          | ISD to right     |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u> |
| Passenger Car     | calculated ISD= | 588.0                | 661.5            |
|                   | design ISD=     | 590                  | 665              |
| Single-Unit Tuck  | calculated ISD= | 779.1                | 882.0            |
|                   | design ISD=     | 780                  | 885              |
| Combination Truck | calculated ISD= | 926.1                | 1029.0           |
|                   | design ISD=     | 930                  | 1030             |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access F

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |                |
|--|--|-------------------|----------------|
| <u>Case F—Left Turns from the Major Road</u>           |  | <i>AASHTO Ref</i> |                |
|  |  | §9.5.3.6, p 9-56  |                |
| Design Vehicle   | Time Gap (t <sub>g</sub> )                     |                   |                |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |                |
| Single-Unit Tuck                                       | 6.5 sec  | Tbl 9-16, p 9-57  |                |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |                |
| Time gap adjustments                                   |  |                   |                |
| Add'l lanes to cross (1 assumed)                       |  |                   |                |
| Passenger Car  | 0.5 sec  | See Notes to      |                |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |                |
| Site data  |  |                   |                |
| Opposing Lanes (adj'd for x-wide median)               | 3.0  |                   |                |
| Time Gap based on site data                            |  |                   |                |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |                |
| Passenger Car  | 7.0 sec  |                   |                |
| Single-Unit Tuck                                       | 8.6 sec  |                   |                |
| Combination Truck                                      | 9.6 sec  |                   |                |
| ISD to front along Major Road                          | ISD=1.47V <sub>major</sub> t <sub>g</sub> (ft) |                   | Eq 9-1, p 9-45 |
| Passenger Car  | calculated ISD=                                | 514.5 ft          |                |
|  | design ISD=                                    | 515 ft            |                |
| Single-Unit Tuck                                       | calculated ISD=                                | 632.1 ft          |                |
|  | design ISD=                                    | 635 ft            |                |
| Combination Truck                                      | calculated ISD=                                | 705.6 ft          |                |
|  | design ISD=                                    | 710 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car        | SU Truck   | Combo Truck |
|-------------------------------|----------------|------------|------------|-------------|
| Stopping                      |                |            |            |             |
| Without effect of grade       |                | 425        | N/A        | N/A         |
| With effect of grade on left  |                | 425        | N/A        | N/A         |
| With effect of grade on right |                | 425        | N/A        | N/A         |
| Intersection                  |                |            |            |             |
| To Right                      | B3             | Restricted | Restricted | Restricted  |
| To Left                       | B2/B3          | 590        | 780        | 930         |
| On Major Road                 | F              | Restricted | Restricted | Restricted  |



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access G

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |                       |                           |
|--|-----------------------|---------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 50                    | MPH                       |
| Grades - Approaching Minor Street from: (- = approaching downhill) |                       |                           |
| Left (G <sub>L</sub> )   |                       | %                         |
| Right (G <sub>R</sub> )  |                       | %                         |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-5, p 9-42           |
| Major Road Through Lanes on Each Approach                          | 3.0                   | (Use 1 for RI/RO/LI only) |
| Median Width (in "Lane Equivalents")                               | 1.0                   | (Use 0 for RI/RO/LI only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                         |
| Minor Road Access (check restricted)                               | LI LO/Th RO           |                           |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade

$$d = 1.47Vt + 1.075 \frac{V^2}{a}$$

Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 423.8 ft |
| Design d=     | 425 ft   |

With Effect of Grade

$$d = 1.47Vt + \frac{V^2}{30 \left( \left( \frac{a}{32.2} \right) \pm G \right)}$$

Eq 3-3, p 3-5

|               |                                   |
|---------------|-----------------------------------|
| Calculated d= | 423.6 ft - left<br>425 ft - right |
| Design d=     | 423.6 ft - left<br>425 ft - right |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access G

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road**

AASHTO Ref  
§9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road**

§9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

Time gap adjustments

Add'l lanes to cross (1<sup>st</sup> is assumed)

|   |         |                 |
|---|---------|-----------------|
| Passenger Car                           | 0.5 sec | See Notes       |
| Trucks                                  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%) | 0.2 sec | Tbl 9-5, p 9-37 |

Site data

|                                     |     |                    |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 3.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

Time Gap based on site data

Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median

|                   |          |
|-------------------|----------|
| Passenger Car     | 9.0 sec  |
| Single-Unit Truck | 11.6 sec |
| Combination Truck | 13.6 sec |

ISD to left & right along Major Road ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

| Vehicle           | ISD to Left and Right                           |
|-------------------|---|
| Passenger Car     | calculated ISD= 661.5 ft<br>design ISD= 665 ft  |
| Single-Unit Truck | calculated ISD= 852.6 ft<br>design ISD= 855 ft  |
| Combination Truck | calculated ISD= 999.6 ft<br>design ISD= 1000 ft |



**22-1270: Black Mountain Village**

Location: Access G

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                                 |                    |  |
|--|---------------------------------|--------------------|--|
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                                 | <b>AASHTO Ref</b>  |  |
|  |                                 | §9.5.3.2.2, p 9-47 |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                                 | §9.5.3.2.3, p 9-48 |  |
| <b>Design Vehicle</b>  | <b>Time Gap (t<sub>g</sub>)</b> |                    |  |
| Passenger Car  | 6.5 sec                         | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                         | &                  |  |
| Combination Truck  | 10.5 sec                        | Tbl 9-10, p 9-49   |  |
| <b>Time gap adjustments</b>  |                                 |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                                 |                    |  |
| Passenger Car  | 0.5 sec                         | See Notes          |  |
| Trucks   | 0.7 sec                         | below              |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                                 |                    |  |
| Case B-2 Only  | 0.1 sec                         | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                         | Tbl 9-10, p 9-49   |  |
| <b>Site data</b>   |                                 |                    |  |
| Major Road Lanes on Left Approach                                  | 3.0                             | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                             | §9.5.3.2.2, p 9-47 |  |

|   |                    |                |
|---|--------------------|----------------|
| <b>Time Gap based on site data (sec)</b>  | <b>B2 &amp; B3</b> | <b>B3 Only</b> |
| <i>Design Vehicle Gap+Adj for Approach Grade&gt;3%(+Adjs for Add'l Lanes &amp; Median for B3)</i> |                    |                |
| Passenger Car   | 8.0                | 9.0            |
| Single-Unit Tuck  | 10.6               | 12.0           |
| Combination Truck   | 12.6               | 14.0           |

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                     |
|-------------------|-----------------|----------------------|---------------------|
|                   |                 | <b>ISD to Left</b>   | <b>ISD to right</b> |
|                   |                 | <b>(B2 &amp; B3)</b> | <b>(B3 Only)</b>    |
| Passenger Car     | calculated ISD= | 588.0                | 661.5               |
|                   | design ISD=     | 590                  | 665                 |
| Single-Unit Tuck  | calculated ISD= | 779.1                | 882.0               |
|                   | design ISD=     | 780                  | 885                 |
| Combination Truck | calculated ISD= | 926.1                | 1029.0              |
|                   | design ISD=     | 930                  | 1030                |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access G

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |                       |
|--|--|-------------------|-----------------------|
| <b>Case F—Left Turns from the Major Road</b>           |  | <b>AASHTO Ref</b> |                       |
|  |  | §9.5.3.6, p 9-56  |                       |
| <b>Design Vehicle</b>                                  | <b>Time Gap (t<sub>g</sub>)</b>                    |                   |                       |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |                       |
| Single-Unit Tuck                                       | 6.5 sec  | Tbl 9-16, p 9-57  |                       |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |                       |
| <b>Time gap adjustments</b>                            |  |                   |                       |
| Add'l lanes to cross (1 assumed)                       |  |                   |                       |
| Passenger Car  | 0.5 sec  | See Notes to      |                       |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |                       |
| <b>Site data</b>                                       |  |                   |                       |
| Opposing Lanes (adj'd for x-wide median)               | 3.0  |                   |                       |
| <b>Time Gap based on site data</b>                     |  |                   |                       |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |                       |
| Passenger Car  | 7.0 sec  |                   |                       |
| Single-Unit Tuck                                       | 8.6 sec  |                   |                       |
| Combination Truck                                      | 9.6 sec  |                   |                       |
| <b>ISD to front along Major Road</b>                   | <b>ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft)</b> |                   | <b>Eq 9-1, p 9-45</b> |
| Passenger Car  | calculated ISD=                                    | 514.5 ft          |                       |
|  | design ISD=  | 515 ft            |                       |
| Single-Unit Tuck                                       | calculated ISD=                                    | 632.1 ft          |                       |
|  | design ISD=  | 635 ft            |                       |
| Combination Truck                                      | calculated ISD=                                    | 705.6 ft          |                       |
|  | design ISD=  | 710 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| Stopping                      |                |     |          |             |
| Without effect of grade       |                | 425 | N/A      | N/A         |
| With effect of grade on left  |                | 425 | N/A      | N/A         |
| With effect of grade on right |                | 425 | N/A      | N/A         |
| Intersection                  |                |     |          |             |
| To Right                      | B1             | 665 | 885      | 1030        |
| To Left                       | B2/B3          | 590 | 780      | 930         |
| On Major Road                 | F              | 515 | 635      | 710         |



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access H

**Assumptions and/or Given**

| Elements of Design from AASHTO     | 6th Edition               | AASHTO Ref         |
|------------------------------------|---------------------------|--------------------|
| Driver Eye Height                  |                           |                    |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6.1, p 3-15   |
| Truck                              | 7.60 ft                   | §3.2.6.1, p 3-15   |
| Object Height                      |                           |                    |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6.2, p 3-15   |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6.2, p 3-15   |
| Vehicle Height                     | 4.25 ft                   | §3.2.6.1, p 3-15   |
| Driver Eye Location                |                           |                    |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | §9.5.3.2.1, p 9-43 |
| Deceleration Rate (a)              |                           |                    |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2.2, p 3-4    |
| Truck                              | N/A ft                    |                    |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2.1, p 3-3    |

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

|  |                       |                             |
|--|-----------------------|-----------------------------|
| Major Street Design Speed (V <sub>major</sub> )                    | 50                    | MPH                         |
| Grades - Approaching Minor Street from: (- = approaching downhill) |                       |                             |
| Left (G <sub>L</sub> )   |                       | %                           |
| Right (G <sub>R</sub> )  |                       | %                           |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-5, p 9-42             |
| Major Road Through Lanes on Each Approach                          | 2.0                   | (Use 1 for RI/RO/[LI] only) |
| Median Width (in "Lane Equivalents")                               | 1.0                   | (Use 0 for RI/RO/[LI] only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                           |
| Minor Road Access (check restricted)                               | X X                   | LI LO/Th RO                 |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade

$$d = 1.47Vt + 1.075 \frac{V^2}{a}$$

Eq 3-2, p 3-5

|               |          |
|---------------|----------|
| Calculated d= | 423.8 ft |
| Design d=     | 425 ft   |

With Effect of Grade

$$d = 1.47Vt + \frac{V^2}{30 \left( \left( \frac{a}{32.2} \right) \pm G \right)}$$

Eq 3-3, p 3-5

|               |                                   |
|---------------|-----------------------------------|
| Calculated d= | 423.6 ft - left<br>425 ft - right |
| Design d=     | 423.6 ft - left<br>425 ft - right |

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p 3-6



**22-1270: Black Mountain Village Sight Distance Analysis**

Location: Access H

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road** AASHTO Ref §9.5.3.2, p 9-42

**Case B1—Left Turn from the Minor Road** §9.5.3.2.1, p 9-43

| Design Vehicle    | Time Gap (t <sub>g</sub> ) | AASHTO Ref      |
|-------------------|----------------------------|-----------------|
| Passenger Car     | 7.5 sec                    | Tbl 9-6, p 9-44 |
| Single-Unit Truck | 9.5 sec                    | Tbl 9-6, p 9-44 |
| Combination Truck | 11.5 sec                   | Tbl 9-6, p 9-44 |

Time gap adjustments

Add'l lanes to cross (1<sup>st</sup> is assumed)

|   |         |                 |
|---|---------|-----------------|
| Passenger Car                           | 0.5 sec | See Notes       |
| Trucks                                  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%) | 0.2 sec | Tbl 9-5, p 9-37 |

Site data

|                                     |     |                    |
|-------------------------------------|-----|--------------------|
| Major Road Lanes on Left Approach   | 2.0 | §9.5.3.2.1, p 9-44 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |

Time Gap based on site data

Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median

|                   |          |
|-------------------|----------|
| Passenger Car     | 8.5 sec  |
| Single-Unit Truck | 10.9 sec |
| Combination Truck | 12.9 sec |

ISD to left & right along Major Road ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

| Vehicle           | ISD to Left and Right                          |
|-------------------|--|
| Passenger Car     | calculated ISD= 624.8 ft<br>design ISD= 625 ft |
| Single-Unit Truck | calculated ISD= 801.2 ft<br>design ISD= 805 ft |
| Combination Truck | calculated ISD= 948.2 ft<br>design ISD= 950 ft |



**22-1270: Black Mountain Village**

Location: Access H

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |                            |                    |  |
|--|----------------------------|--------------------|--|
|  |                            | <i>AASHTO Ref</i>  |  |
| <u>Case B2—Right Turn from the Minor Road &amp;</u>                |                            | §9.5.3.2.2, p 9-47 |  |
| <u>Case B3—Crossing Maneuver from the Minor Road</u>               |                            | §9.5.3.2.3, p 9-48 |  |
| Design Vehicle   | Time Gap (t <sub>g</sub> ) |                    |  |
| Passenger Car  | 6.5 sec                    | Tbl 9-8, p 9-47    |  |
| Single-Unit Tuck   | 8.5 sec                    | &                  |  |
| Combination Truck  | 10.5 sec                   | Tbl 9-10, p 9-49   |  |
| Time gap adjustments   |                            |                    |  |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) - Case B-3 Only* |                            |                    |  |
| Passenger Car  | 0.5 sec                    | See Notes          |  |
| Trucks   | 0.7 sec                    | below              |  |
| Minor Approach Upgrade (Per each 1%>3%)                            |                            |                    |  |
| Case B-2 Only  | 0.1 sec                    | Tbl 9-8, p 9-47    |  |
| Case B-3 Only  | 0.2 sec                    | Tbl 9-10, p 9-49   |  |
| Site data  |                            |                    |  |
| Major Road Lanes on Left Approach                                  | 2.0                        | §9.5.3.2.2, p 9-47 |  |
| Minor Road Approach Upgrade, if >3%                                | 0 %                        | §9.5.3.2.2, p 9-47 |  |

|   |                    |                |  |
|---|--------------------|----------------|--|
| Time Gap based on site data (sec)   | <u>B2 &amp; B3</u> | <u>B3 Only</u> |  |
| <i>Design Vehicle Gap+Adj for Approach Grade&gt;3%(+Adjs for Add'l Lanes &amp; Median for B3)</i> |                    |                |  |
| Passenger Car   | 7.5                | 8.0            |  |
| Single-Unit Tuck  | 9.9                | 10.6           |  |
| Combination Truck   | 11.9               | 12.6           |  |

ISD to left (B2/B3) & right (B3) along Major Rd ISD=1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-45

|                   |                 |                      |                  |
|-------------------|-----------------|----------------------|------------------|
|                   |                 | ISD to Left          | ISD to right     |
|                   |                 | <u>(B2 &amp; B3)</u> | <u>(B3 Only)</u> |
| Passenger Car     | calculated ISD= | 551.3                | 588.0            |
|                   | design ISD=     | 555                  | 590              |
| Single-Unit Tuck  | calculated ISD= | 727.7                | 779.1            |
|                   | design ISD=     | 730                  | 780              |
| Combination Truck | calculated ISD= | 874.7                | 926.1            |
|                   | design ISD=     | 875                  | 930              |

\*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. §9.5.3.2.3, p 9-48



**22-1270: Black Mountain Village**

Location: Access H

**Sight Distance Analysis**

Intersection Sight Distances (cont'd)

|  |  |                   |                |
|--|--|-------------------|----------------|
|  |  | <i>AASHTO Ref</i> |                |
| <u>Case F—Left Turns from the Major Road</u>           |  | §9.5.3.6, p 9-56  |                |
| Design Vehicle   | Time Gap (t <sub>g</sub> )                     |                   |                |
| Passenger Car  | 5.5 sec  | Tbl 9-16, p 9-57  |                |
| Single-Unit Tuck                                       | 6.5 sec  | Tbl 9-16, p 9-57  |                |
| Combination Truck                                      | 7.5 sec  | Tbl 9-16, p 9-57  |                |
| Time gap adjustments                                   |  |                   |                |
| Add'l lanes to cross (1 assumed)                       |  |                   |                |
| Passenger Car  | 0.5 sec  | See Notes to      |                |
| Trucks   | 0.7 sec  | Tbl 9-16, p 9-57  |                |
| Site data  |  |                   |                |
| Opposing Lanes (adj'd for x-wide median)               | 2.0  |                   |                |
| Time Gap based on site data                            |  |                   |                |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |  |                   |                |
| Passenger Car  | 6.5 sec  |                   |                |
| Single-Unit Tuck                                       | 7.9 sec  |                   |                |
| Combination Truck                                      | 8.9 sec  |                   |                |
| ISD to front along Major Road                          | ISD=1.47V <sub>major</sub> t <sub>g</sub> (ft) |                   | Eq 9-1, p 9-45 |
| Passenger Car  | calculated ISD=                                | 477.8 ft          |                |
|  | design ISD=                                    | 480 ft            |                |
| Single-Unit Tuck                                       | calculated ISD=                                | 580.7 ft          |                |
|  | design ISD=                                    | 585 ft            |                |
| Combination Truck                                      | calculated ISD=                                | 654.2 ft          |                |
|  | design ISD=                                    | 655 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. §9.5.3.6, p 9-58

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car        | SU Truck   | Combo Truck |
|-------------------------------|----------------|------------|------------|-------------|
| Stopping                      |                |            |            |             |
| Without effect of grade       |                | 425        | N/A        | N/A         |
| With effect of grade on left  |                | 425        | N/A        | N/A         |
| With effect of grade on right |                | 425        | N/A        | N/A         |
| Intersection                  |                |            |            |             |
| To Right                      | B3             | Restricted | Restricted | Restricted  |
| To Left                       | B2/B3          | 555        | 730        | 875         |
| On Major Road                 | F              | Restricted | Restricted | Restricted  |

